Brown University is a leading Ivy League institution and the only major research university in the nation where undergraduates are the architects of their own course of study. Brown is distinguished by its unique undergraduate academic program, a world-class faculty, outstanding graduate and medical students, and a tradition of innovative and rigorous multidisciplinary study.

The University’s mission—to serve the community, the nation, and the world by educating and preparing students (in the words of the College charter) to “discharge the offices of life with usefulness and reputation”—is fulfilled through a strong partnership of students and teachers.

The seventh oldest university in America, Brown was established in 1764 as Rhode Island College in the town of Warren, Rhode Island, and enrolled its first students in 1765. In 1770 the College moved to its present location, and in 1804 it was renamed Brown University to honor a $5,000 donation from local merchant Nicholas Brown. Today the University’s main campus covers nearly 140 acres on a historic residential hill overlooking downtown Providence, a vibrant city of some 170,000 people and the capital of Rhode Island.

Brown draws men and women from all over the United States and many other countries. Distinguished by their academic excellence, creativity, self-direction, leadership, and enthusiasm for a collaborative style of learning, these students work in partnership with a faculty known for its prize-winning multidisciplinary scholarship and dedication to teaching. By providing a rich undergraduate experience together with strong graduate and medical programs, the University fosters internal and external discovery at every level of the academic enterprise.

Brown is internationally known for its dynamic undergraduate curriculum, implemented by faculty vote in 1969. Undergraduates must pass 30 courses and complete the requirements for a concentration, or major, in order to receive a bachelor’s degree. The curriculum does not require distribution or core courses outside the concentration. More than 2,000 undergraduate courses support just under 80 concentrations, many of them interdisciplinary, and a wide variety of independent studies.

At the heart of the Brown curriculum are three basic principles: that students are active participants in learning; that acquiring analytical and critical skills is as important as mastering factual knowledge; and that learning requires opportunities for experimentation and cross-disciplinary synthesis.

The Graduate School at Brown is a national leader in the creation and dissemination of new knowledge. In 2003, Brown celebrated the centennial of the Graduate Department, formally established in 1903 to confer advanced degrees.

Brown Medical School, which awarded its first M.D. degrees in 1975, is renowned for innovation in medical education and for its programs in family medicine and primary care. The Medical School now enrolls some 400 students, most of whom are accepted through Brown’s unique Program in Liberal Medical Education (PLME), which combines undergraduate study with professional studies in medicine.

Beginning in 2002, fortified by vigorous leadership, prudent planning, and new ideas, the University launched an exciting program for academic enrichment to enlarge its faculty by 100 members over the next five to ten years, improve support for graduate students, and invest in libraries, information technology, and academic facilities. As part of this extensive program of improvements, the University instituted a need-blind undergraduate admission
process to ensure all worthy applicants access to the University, regardless of their ability to pay.

***

Brown University is accredited by the New England Association of Schools and Colleges. In addition, the Alpert Medical School is accredited by the Liaison Committee on Medical Education. The School of Engineering has received accreditation from the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology for its bachelor of science programs in civil, chemical, electrical, materials, and mechanical engineering.
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Mission Statement

The mission of Brown University is to serve the community, the nation, and the world by discovering, communicating, and preserving knowledge and understanding in a spirit of free inquiry, and by educating and preparing students to discharge the offices of life with usefulness and reputation. We do this through a partnership of students and teachers in a unified community known as a university-college.
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MARISA ALLEGRA, Clinical Assistant Professor of Psychiatry and Human Behavior
GEOFFREY ALLEN, Associate Professor of Pediatrics (Clinical)
JAMES ALLEN, Charles Edwin Wilbour Professor of Egyptology
REBECCA ALLEN, Assistant Professor of Obstetrics and Gynecology
SCOTT ALLEN, Clinical Associate Professor of Medicine
SUSAN ALLEN, Professor of Medical Science, Professor of Sociology
PAUL ALLOPENNA, Assistant Professor (Research) of Cognitive and Linguistic Sciences
ONESIMO ALMEIDA, Professor of Portuguese and Brazilian Studies
AHMAD AL-RAQQAD, Clinical Assistant Professor of Medicine
ELIZABETH ALLENHEIN, Clinical Assistant Professor of Surgery
RACHEL ALTURA, Associate Professor of Pediatrics
BRIAN ALVERSON, Assistant Professor of Pediatrics
JAMES ALVES, Senior Teaching Associate of Psychiatry and Human Behavior
JOYCE ALVES, Clinical Assistant Professor of Family Medicine
MOTASEM AL-YACOUB, Clinical Assistant Professor of Neurology
ELSA AMANATIDOU, Senior Lecturer in Classics
SIRAJ AMANULLAH, Assistant Professor of Emergency Medicine, Assistant Professor of Pediatrics
LINDA AMARAL-ZETTLER, Assistant Professor (MBL) of Ecology and Evolutionary Biology
MELISSA AMICK, Clinical Assistant Professor of Psychiatry and Human Behavior
KIM AMIN, Clinical Assistant Professor of Medicine
DIMAS AMSO, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences
GOWRI ANANDARAJAH, Professor of Family Medicine (Clinical)
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THOMAS ANDERS, Adjunct Professor of Psychiatry and Human Behavior
ANGELA ANDERSON, Associate Professor of Pediatrics (Clinical), Associate Professor of Emergency Medicine (Clinical)
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DOUGLAS ANDERSON, Professor of Anthropology
JAMES ANDERSON, Professor of Cognitive, Linguistic, and Psychological Sciences and Professor of Neuroscience
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NICOLE ANDERSON, Assistant Professor of Radiation Oncology
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RICHARD ARCHAMBAULT, Clinical Assistant Professor of Psychiatry and Human Behavior
ANDREA ARENA, Clinical Assistant Professor of Family Medicine
IRINA ARKHIPOVA, Assistant Professor (MBL) of Molecular Biology, Cell Biology and Biochemistry
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KATHLEEN ASKLAND, Assistant Professor of Psychiatry and Human Behavior
KAREN ASPRY, Assistant Professor of Medicine (Clinical)
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TIMOTHY BABINEAU, Professor of Surgery (Clinical)
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JAMES BAKER, Clinical Assistant Professor of Psychiatry and Human Behavior
DAVID BADRE, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences
RUTH BAHAR, Associate Professor of Engineering
ROBERT BAHR, Clinical Assistant Professor of Surgery (Ophthalmology)
DAVID BAIER, Adjunct Assistant Professor of Ecology and Evolutionary Biology
ROSALIND BAIER, Teaching Associate of Community Health
GENIE BAILEY, Clinical Assistant Professor of Psychiatry and Human Behavior
GIAMPAOLO BAIOCCHI, Associate Professor of Sociology
JAMES BAIRD, Professor of Chemistry and Physics
JANETTE BAIRD, Assistant Professor of Emergency Medicine (Research)
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RICHARD BAKER, Clinical Assistant Professor of Surgery
ELIZABETH BAKEWELL, Assistant Professor of Latin American Studies (Research)
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CHRISTINA BANDERA, Assistant Professor of Obstetrics and Gynecology
UTPALA BANDYOPADHYAY, Clinical Assistant Professor of Community Health
MARILYN BARBOUR, Adjunct Associate Professor of Medicine
BARBARA BARKER, Associate Professor of Pathology and Laboratory Medicine
GILAD BARNEA, Assistant Professor of Neuroscience
NANCY BARNETT, Associate Professor of Community Health (Research)
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DAVID BARRALL, Clinical Assistant Professor of Surgery (Plastic Surgery)
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ROWLAND BARRETT, Associate Professor of Psychiatry and Human Behavior
CHRISTINE BARRON, Assistant Professor of Pediatrics (Clinical)
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ORAZIO BASILE, Clinical Assistant Professor of Dermatology
WILLIAM BASTAN, Clinical Instructor in Pathology and Laboratory Medicine
AMIT BASU, Associate Professor of Chemistry
KIM BASU, Clinical Instructor in Medicine
DALIA BATISTA, Clinical Assistant Professor of Pediatrics
KERRI BATRA, Assistant Professor of Medicine
CYNTHIA BATTLE, Assistant Professor of Psychiatry and Human Behavior (Research)
BETH BAUER, Senior Lecturer in Hispanic Studies
NATHANIEL BAUM-SNOW, Assistant Professor of Economics
ANA BAYLIN, Adjunct Assistant Professor of Community Health
GEORGE BAYLISS, Assistant Professor of Medicine
CARTHENE BAZEMORE-WALKER, Assistant Professor of Chemistry
PETER BAZIOTIS, Clinical Assistant Professor of Surgery (Anesthesiology)
COURTNEY BEARD, Research Associate of Psychiatry and Human Behavior
FRANCESCA BEAUDOIN, Assistant Professor of Emergency Medicine
BRUCE BECKER, Professor of Emergency Medicine, Professor of Community Health
DIANE BECKER, Adjunct Professor of Community Health
TANYA BECKER, Clinical Instructor in Pediatrics
CURT BECKWITH, Assistant Professor of Medicine
PATRICK BEDARD, Investigator in Neuroscience
MEGAN BEERS, Assistant Professor of Psychiatry and Human Behavior (Clinical)
JOSE BEHAR, Professor of Medicine
VIKRAM BEHERA, Clinical Instructor in Medicine
M. DAVID BEITLE, Clinical Assistant Professor of Obstetrics and Gynecology
MICHAEL BELAND, Assistant Professor of Diagnostic Imaging
MICHAEL BELANGER, Clinical Instructor in Orthopaedics
CHRISTINA BELLANTI, Clinical Assistant Professor of Psychiatry and Human Behavior
JOSEPH BELLINO, Clinical Assistant Professor of Surgery (Otolaryngology)
ARKADY BELOZOVSKY, Lecturer in Language Studies
IRENE BELSKY, Clinical Assistant Professor of Family Medicine
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JUDITH BENDER, Professor of Biology
KATHERINE BENEVIDES, Teaching Associate of Family Medicine
JABBAR BENNETT, Clinical Assistant Professor of Medicine
RICHARD BENNETT, Assistant Professor of Biology
REDA BENSMAIA, University Professor of French Studies
JUDITH BENTKOVER, Adjunct Professor of Community Health
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SCOTT BENZULY, Clinical Assistant Professor of Surgery (Anesthesiology)
NATHAN BERAHA, Clinical Assistant Professor of Pediatrics
LIONEL BERCOVITCH, Clinical Professor of Dermatology
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ALEXANDER BEREZIN, Clinical Assistant Professor of Surgery (Anesthesiology)
GEOFFREY BERG, Clinical Instructor in Medicine
ERIC BERGER, Clinical Assistant Professor of Medicine
JACOB BERGER, Assistant Professor of Neurology (Clinical)
JUDITH BERGER, Teaching Associate of Psychiatry and Human Behavior
KATHERINE BERGERON, Professor of Music
ARNALDO BERGES, Clinical Assistant Professor of Psychiatry and Human Behavior
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NATHANIEL BERMAN, Rahel Varnhagen Professor of International Affairs, Law, and Modern Culture (research)
AMIR BERNABA, Clinical Instructor in Emergency Medicine
DOUGLAS BERNON, Clinical Assistant Professor of Psychiatry and Human Behavior
SCOTT BERNON, Clinical Professor of Pediatrics
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SUSAN BERNSTEIN, Clinical Professor of Biology
STEVEN BERSKIND, Clinical Associate Professor of Pediatrics
LINDA BERTSCH, Clinical Assistant Professor of Surgery (Anesthesiology)
GEOFFREY BERT, Clinical Assistant Professor of Surgery (Anesthesiology)
JOHN BERT, Clinical Assistant Professor of Obstetrics and Gynecology
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ELIE BIENENSTOCK, Associate Professor of Applied Mathematics and Associate Professor of Neuroscience
ROSEMARIE BIGSBY, Associate Professor of Obstetrics and Gynecology (Clinical)
BAHAR BILGEN, Instructor in Orthopaedics (Research)
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ARIEL BIRNBAUM, Assistant Professor of Medicine
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KAREN BLACKMER, Clinical Assistant Professor of Family Medicine
THEODORE BLAINE, Associate Professor of Orthopaedics
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DOUGLAS BLAKE, Clinical Assistant Professor of Surgery (Ophthalmology)
KARYN BLANE, Clinical Assistant Professor of Psychiatry and Human Behavior
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JOSEPH BLISS, Assistant Professor of Pediatrics
THOMAS BLISS, Clinical Assistant Professor of Orthopaedics
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STANLEY BLOCK, Clinical Associate Professor of Pediatrics, Clinical Associate Professor of Community Health
DONALD BLOUGH, Professor of Cognitive, Linguistic, and Psychological Sciences (Research)
ANDREW BLUM, Associate Professor of Neurology
JANET BLUME, Associate Professor of Engineering
SHEILA BLUMSTEIN, Albert D. Mead Professor of Cognitive and Linguistic Sciences
MARK BLYTH, Professor of Political Science
BETH BOCK, Associate Professor of Psychiatry and Human Behavior (Research)
JOHN BODEL, Professor of Classics
JOHN BOEKAMP, Clinical Assistant Professor of Psychiatry and Human Behavior
KIM BOEKELHEIDE, Professor of Medical Science
DANIELA BOERESCU, Clinical Assistant Professor of Psychiatry and Human Behavior
JULIE BOERGERS, Associate Professor of Psychiatry and Human Behavior (Clinical), Associate Professor of Pediatrics (Clinical)
BARRYMORE BOGUES, Harmon Family Professor of African Studies
ROBERT BOLAND, Professor of Psychiatry and Human Behavior
DALE BOND, Assistant Professor of Psychiatry and Human Behavior (Research)
TAMARA BOND, Instructor in Psychiatry and Human Behavior (Research)
PRAVEEN BONDALAPATI, Clinical Instructor in Medicine
SHEILA BONDE, Royce Family Professor of Teaching Excellence, Professor of History of Art and Architecture and Professor of Archaeology
CHARLOTTE BONEY, Associate Professor of Pediatrics
ALICE BONITATI, Associate Professor of Medicine (Clinical)
M.CHristopher BORDEN, Clinical Assistant Professor of Psychiatry and Human Behavior
SETH BORDENSTEIN, Assistant Professor (MLB) Biology
JEFFREY BORKAN, Professor of Family Medicine
CHRISTOPHER BORN, Professor of Orthopaedics
BELINDA BORRELLI, Professor of Psychiatry and Human Behavior (Research)
BRIAN BORSARI, Associate Professor of Psychiatry and Human Behavior (Research), Associate Professor of Community Health (Research)
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LESLIE BOSTROM, Associate Professor of Art
PAUL BOTELHO, Clinical Assistant Professor of Surgery (Ophthalmology)
ENRIC BOU, Professor of Hispanic Studies
GHADA BOURJEILY-HABR, Assistant Professor of Medicine
GERALD BOVÉ, Research Associate of Community Health
LAWRENCE BOWEN, Clinical Assistant Professor of Surgery
WAYNE BOWEN, Upjohn Professor of Pharmacology, Professor of Biology
ALLAN BOWER, Professor of Engineering
LISA BOWIE, Clinical Assistant Professor of Family Medicine
KATHLEEN BOWLING, Clinical Associate Professor of Obstetrics and Gynecology
JERROLD BOXERMAN, Assistant Professor of Diagnostic Imaging
JOAN BOYLAN, Senior Research Associate of Pediatrics
JENNIFER BOYLE, Clinical Instructor in Obstetrics and Gynecology
LISA BOYLE, Clinical Assistant Professor of Obstetrics and Gynecology
MICHELLE BOYLE, Clinical Assistant Professor of Family Medicine
WILLIAM BRADEN, Clinical Assistant Professor of Psychiatry and Human Behavior
LINDA BRADLEY, Associate Professor of Pathology and Laboratory Medicine (Research)
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LUNDY BRAUN, Royce Family Professor in Teaching Excellence of Medical Science, Professor of Africana Studies
ALEXANDER BRAVERMAN, Professor of Mathematics
PAUL BREIDING, Clinical Assistant Professor of Medicine
DEBRA BRENDEL, Clinical Assistant Professor of Obstetrics and Gynecology
CONSTANCE BRENNAN, Clinical Instructor in Obstetrics and Gynecology
JASON BRENNAN, Assistant Professor of Philosophy (Research)
COREY BRETTSCHEIDER, Associate Professor of Political Science
KENNETH BREUER, Professor of Engineering
CLYDE BRIANT, Otis Everett Randall University Professor of Engineering
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STEVEN BRIN, Clinical Assistant Professor of Medicine
MARCY BRINK-DANAN, Dorot Assistant Professor of Judaic Studies
DEBORAH BRITT, Adjunct Assistant Professor of Pathology and Laboratory Medicine (Research)
WILLOUGHBY BRITTON, Research Associate of Psychiatry and Human Behavior
JUSTIN BROACKES, Associate Professor of Philosophy
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ALEXANDER BRODSKY, Assistant Professor of Medical Science
CHERYL BRODSKY, Clinical Assistant Professor of Obstetrics and Gynecology
JEFFREY BRODY, Associate Professor of Diagnostic Imaging (Clinical)
JULIA BRODY, Adjunct Assistant Professor of Pathology and Laboratory Medicine
CYNTHIA BROKAW, Professor of History
JULIE BROMBERG, Research Associate of Emergency Medicine
FRED BROSCO, Clinical Assistant Professor of Obstetrics and Gynecology
LAURENT BROSSAY, Associate Professor of Medical Science
E. CHRISTINE BROSSEAU, Clinical Instructor in Obstetrics and Gynecology
DANIEL BROWN, Clinical Assistant Professor of Family Medicine
EDWARD BROWN, Clinical Associate Professor of Psychiatry and Human Behavior
GAIL BROWN, Clinical Assistant Professor of Pediatrics
JOANNA BROWN, Clinical Assistant Professor of Family Medicine
KEITH BROWN, Associate Professor of International Studies (Research)
LARRY BROWN, Professor of Psychiatry and Human Behavior
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PHIL BROWN, Professor of Sociology and Professor of Environmental Studies
RICHARD BROWN, Professor of Psychiatry and Human Behavior
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WALTER BROWN, Clinical Professor of Psychiatry and Human Behavior
WILLIAM BROWN, Associate Professor of Neurology (Clinical), Associate Professor of Pediatrics (Clinical)
RICHARD BROWNING, Clinical Professor of Surgery (Anesthesiology)
HUGO BRUGGEMAN, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences (Research)
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RICHARD BRYAN, Clinical Instructor in Surgery (Ophthalmology)
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MARIA BUCKLEY, Clinical Assistant Professor of Psychiatry and Human Behavior
GEORGE BUCZKO, Clinical Associate Professor of Surgery
STEPHEN BUKA, Professor of Community Health
RICHARD BUNGIRO, Lecturer in Biology
JASMINA BURDZOVIC ANDREAS, Assistant Professor of Community Health (Research)
FREDERICK BURGESS, Clinical Professor of Surgery (Anesthesiology)
ROBERT BURKE, Associate Professor of Pediatrics (Clinical)
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DOUGLAS BURTT, Clinical Assistant Professor of Medicine
REBECCA BURWELL, Professor of Cognitive, Linguistic, and Psychological Sciences
STEPHEN BUSH, Assistant Professor of Religious Studies
JOHN BUSTER, Professor of Obstetrics and Gynecology
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MURRAY BUTTNER, Clinical Assistant Professor of Family Medicine
ALFRED BUXTON, Levinger Family Professor of Cardiology, Professor of Medicine
CLAUDIA CABRERA, Adjunct Assistant Professor of Medicine
RICHARD CAESAR, Clinical Instructor in Surgery (Urology)
DEBORAH CAHILL, Clinical Assistant Professor of Surgery (Anesthesiology)
JOHN CAHILL, Adjunct Assistant Professor of Emergency Medicine
TERRENCE CAHILL, Clinical Associate Professor of Obstetrics and Gynecology
SHUBING CAI, Investigator in Community Health
JOSEPH CAIATI, Clinical Assistant Professor of Surgery (Anesthesiology)
RACHAEL CAIATI, Assistant Professor of Diagnostic Imaging
ANTHONY CALDAMONE, Professor of Surgery (Urology), Professor of Pediatrics
NICHOLAS CALIFANO, Clinical Associate Professor of Medicine
CHARLES CALLAHAN, Assistant Professor of Emergency Medicine (Clinical),
  Assistant Professor of Pediatrics (Clinical)
KEITH CALLAHAN, Clinical Assistant Professor of Family Medicine
CARLOS CAMARGO, Adjunct Associate Professor of Pediatrics
MELANI CAMMETT, Associate Professor of Political Science
KAREN CAMMUSO, Clinical Assistant Professor of Psychiatry and Human Behavior
CHRISTOPHER CAMPAGNARI, Clinical Assistant Professor of Family Medicine
CHRISTOPHER CAMPANILE, Clinical Associate Professor of Family Medicine
ANDREW CAMPBELL, Associate Professor of Medical Science
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JACOB CANICK, Professor of Pathology and Laboratory Medicine
ANTHONY CANNISTRA, Clinical Assistant Professor of Medicine
LAURALYN CANNISTRA, Clinical Associate Professor of Medicine
YEIBIAO CAO, Assistant Professor of Medicine (Research)
FRANK CAPIZZO, Clinical Assistant Professor of Medicine
CHRISTY CAPONE, Assistant Professor of Psychiatry and Human Behavior
TARA CAPUANO, Teaching Associate of Obstetrics and Gynecology
CASSANDRA CARBERRY, Clinical Assistant Professor of Obstetrics and Gynecology
DAVID CARCIERI, Clinical Assistant Professor of Obstetrics and Gynecology
ESTEBAN CARDEMIL, Adjunct Assistant Professor of Psychiatry and Human Behavior
ZOE CARDON, Professor (MBL) of Geological Sciences
CLAUDIA CAREY, Associate Professor of Slavic Languages
KATHERINE CAREY BAKER, Teaching Associate of Medicine
GERARDO CARINO, Assistant Professor of Medicine
JAMES CARLSTEN, Assistant Professor of Pathology and Laboratory Medicine  
  (Clinical)
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WILFRED CARNEY, Clinical Associate Professor of Surgery
KATHLEEN CARNEY-GODLEY, Clinical Assistant Professor of Dermatology
MARK CAROL, Adjunct Assistant Professor of Radiation Oncology
COLLEEN CARON, Clinical Assistant Professor of Community Health
CHARLES CARPENTER, Professor of Medicine
LINDA CARPENTER, Associate Professor of Psychiatry and Human Behavior
STEPHEN CARR, Professor of Obstetrics and Gynecology
MARY CARSADON, Professor of Psychiatry and Human Behavior
SANDRA CARSON, Professor of Obstetrics and Gynecology
DAVID CARTER, Clinical Associate Professor of Family Medicine
E. JANE CARTER, Associate Professor of Medicine
LESLIE CASHEL, Clinical Instructor in Medicine
WILLIAM CASHORE, Professor of Pediatrics
JOHN CASSESE, Assistant Professor of Diagnostic Imaging (Clinical), Assistant Professor of Pediatrics (Clinical)
CAROLINE CASTIGLIONE, Associate Professor of Italian Studies
JORGE CASTILLO, Assistant Professor of Medicine
BRUCE CASWELL, Professor of Engineering (Research)
THOMAS CATALDO, Assistant Professor of Surgery
JOHN CAVA, Clinical Instructor in Medicine
COLLEEN CAVANAUGH, Clinical Assistant Professor of Obstetrics and Gynecology
THOMAS CATALDO, Assistant Professor of Surgery
JOHN CAVA, Clinical Instructor in Medicine
COLLEEN CAVANAUGH, Clinical Assistant Professor of Obstetrics and Gynecology
TIMOTHY CAVANAUGH, Clinical Assistant Professor of Family Medicine
STEFANO CAZZANIGA, Clinical Assistant Professor of Medicine
CAROLINA CEREZO, Clinical Assistant Professor of Pediatrics
JOSELYN CEREZO, Research Associate of Diagnostic Imaging
DILEK CERMIK, Clinical Instructor in Obstetrics and Gynecology
HILARY CERULLO, Clinical Assistant Professor of Psychiatry and Human Behavior
UGUR CETINTEMEL, Associate Professor of Computer Science
STEPHEN CHABOT, Clinical Assistant Professor of Family Medicine
JOHN CHAFFEY, Clinical Instructor in Medicine
RABIN CHANDRAN, Associate Professor of Family Medicine (Clinical)
JOYCE CHANG, Clinical Instructor in Medicine
KEVIN CHANG, Assistant Professor of Diagnostic Imaging
KYUNGHEE CHANG, Assistant Professor of Dermatology
VICTORIA CHANG, Assistant Professor of Neurology (Clinical)
KIMBERLE CHAPIN, Associate Professor of Pathology and Laboratory Medicine,
HEATHER CHAPMAN, Clinical Instructor in Pediatrics
LAURA CHAPMAN, Assistant Professor of Emergency Medicine (Clinical)
AMOS CHARLES, Clinical Associate Professor of Medicine
EUGENE CHARNIAK, University Professor of Computer Science
KEVIN CHARPENTIER, Assistant Professor of Surgery
ERIC CHASON, Professor of Engineering
DAVID CHATELET, Research Associate of Ecology and Evolutionary Biology
DEVASIS CHATTERJEE, Assistant Professor of Medicine (Research)
ANJULIKA CHAWLA, Assistant Professor of Pediatrics (Clinical)
KENNETH CHAY, Professor of Economics
ERIKA CHEESBRO, Teaching Associate of Family Medicine
ROSS CHEIT, Associate Professor of Political Science and Public Policy
IWONA CHELMINSKI, Clinical Assistant Professor of Psychiatry and Human Behavior
QIAN CHEN, Michael G. Ehrlich, M.D. Professor of Orthopedic Research
XIAODI CHEN, Research Associate of Pediatrics
YUPENG CHEN, Research Associate of Orthopaedics
EDWARD CHERNESKY, Clinical Instructor in Diagnostic Imaging
JOHN CHERRY, Professor of Classics and Anthropology
EDWARD CHIEN, Assistant Professor of Obstetrics and Gynecology
MICHAEL CHIN, Clinical Assistant Professor of Family Medicine
Y EUGENE CHIN, Associate Professor of Surgery (Research)
ROSA CHO, Assistant Professor of Education
ADAM CHODOBSKI, Associate Professor of Emergency Medicine (Research)
BUM-RAK CHOI, Assistant Professor of Medicine (Research)
KUE CHOI, Clinical Assistant Professor of Obstetrics and Gynecology
TZE TEC CHONG, Assistant Professor of Surgery (Clinical)
ESTHER CHOO, Assistant Professor of Emergency Medicine
PRADEEP CHOPRA, Assistant Professor of Medicine (Clinical)
NITSAN CHOREV, Assistant Professor of Sociology
GAURAV CHAUDHARY, Assistant Professor of Medicine
EIRINI CHRISTAKI, Research Associate of Medicine
DAVID CHRISTENSEN, Professor of Philosophy
FREDRIC CHRISTIAN, Clinical Assistant Professor of Medicine
JENNIFER CHRISTIAN, Adjunct Assistant Professor of Community Health
MIRENA CHRISTOFF, Senior Lecturer in Language Studies
LOUIS CHU, Research Associate of Surgery (Cardiothoracic Surgery)
CHENG-CHIEH CHUANG, Clinical Assistant Professor of Family Medicine
HOWARD CHUDACOFF, George L. Littlefield Professor of American History
THOMAS CHUN, Associate Professor of Emergency Medicine, Associate Professor of Pediatrics
CHUN-SHIANG CHUNG, Assistant Professor of Surgery (Research)
MAUREEN CHUNG, Associate Professor of Surgery
JAMES CHUNG-BRCAK, Clinical Assistant Professor of Psychiatry and Human Behavior
RUSSELL CHURCH, Edgar J. Marston Professor of Psychology
LYDIA CIARALLO, Assistant Professor of Pediatrics (Clinical), Assistant Professor of Emergency Medicine (Clinical)
JOSEPH CICCOLO, Assistant Professor of Community Health (Research)
DEUS CIELO, Assistant Professor of Neurosurgery (Clinical)
SYBIL CINEAS, Assistant Professor of Medicine (Clinical), Assistant Professor of Pediatrics (Clinical)
WILLIAM CIOFFI, J. Murray Beardsley Professor in Surgery
DEBORAH CIOMBOR, Associate Professor of Orthopaedics (Research), Associate Professor of Molecular Pharmacology, Physiology and Biotechnology (Research)
MARK CLADIS, Professor of Religious Studies
WAYNE CLAIRBORNE, Clinical Associate Professor of Obstetrics and Gynecology
MELISSA CLARK, Associate Professor of Community Health, Associate Professor of Obstetrics and Gynecology
JENNIFER CLARKE, Associate Professor of Medicine, Associate Professor of Obstetrics and Gynecology
COLLEEN CLEARY, Clinical Assistant Professor of Family Medicine
STEVEN CLEMENS, Associate Professor of Geological Sciences (Research)
JEFFREY CLEMENT, Clinical Assistant Professor of Medicine
RICHARD CLEMENTS, Assistant Professor of Surgery (Research)
JAMES CLIFTON, Assistant Professor of Medical Science (Research)
RODNEY CLIFTON, Rush C. Hawkins University Professor of Engineering
DAVID CLOUTIER, Clinical Assistant Professor of Surgery
BRIAN CLYNE, Assistant Professor of Emergency Medicine
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DANIEL COGHLIN, Assistant Professor of Pediatrics (Clinical)
ANDREW COHEN, Professor of Medicine
EVAN COHEN, Clinical Assistant Professor of Medicine
ROBERT COHEN, Assistant Professor of Obstetrics and Gynecology (Clinical)
RONALD COHEN, Professor of Psychiatry and Human Behavior
STEVEN IRA COHEN, Clinical Assistant Professor of Surgery
STEVEN IRVIN COHEN, Clinical Assistant Professor of Surgery (Urology)
TONY COKES, Professor of Modern Culture and Media
MAURO COLAVITA, Clinical Assistant Professor of Obstetrics and Gynecology
JOHN COLBY, Research Associate of Community Health
SUZANNE COLBY, Associate Professor of Psychiatry and Human Behavior (Research)
BRIAN COLE, Professor of Mathematics
REID COLEMAN, Clinical Associate Professor of Medicine
BRADLEY COLLINS, Clinical Assistant Professor of Medicine
HILLARY COLLYER, Teaching Associate of Surgery (Pediatric Surgery)
DOUGLAS COLSON, Clinical Instructor in Surgery (Otolaryngology)
RUTH COLWILL, Associate Professor of Cognitive, Linguistic, and Psychological Sciences
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MICHAEL CONNOLLY, Assistant Professor of Surgery (Trauma)
FRANCIS CONNOR, Clinical Associate Professor of Surgery (Oral & Maxillofacial Surgery)
BARRY CONNORS, L. Herbert Ballou University Professor of Medical Science
ELSA ERIKA CONSTANTINE, Clinical Assistant Professor of Emergency Medicine, Clinical Assistant Professor of Pediatrics
MARIA CONSTANTINOU, Clinical Assistant Professor of Medicine
JOHN CONTE, Clinical Assistant Professor of Medicine
STEPHEN CONWAY, Clinical Instructor in Pediatrics
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LINDA COOK, Professor of Political Science and Professor of Slavic Languages
TRAVIS COOK, Assistant Professor of Psychiatry and Human Behavior
VALERIE COOLEY, Lecturer in Public Policy
ANN COOPER, Senior Teaching Associate of Obstetrics and Gynecology
LEON COOPER, Thomas J. Watson, Sr., Professor of Science
REID COOPER, Professor of Geological Science
ROBERT COPE, Associate Professor of History
A. MICHAEL COPPA, Clinical Instructor in Obstetrics and Gynecology
DENISE COPPA, Clinical Assistant Professor of Pediatrics
JOYCE COPPOLA, Clinical Assistant Professor of Medicine
WILLIAM CORRAO, Clinical Professor of Medicine
GISELLE CORRE, Clinical Assistant Professor of Psychiatry and Human Behavior
FRANCISCO CORREA, Teaching Associate of Medicine
STEPHEN CORREIA, Assistant Professor of Psychiatry and Human Behavior
DOMINIC CORRIGAN, Clinical Associate Professor of Medicine
CYNTHIA CORRIVEAU, Teaching Associate of Family Medicine
LOUIS CORVESE, Clinical Assistant Professor of Orthopaedics
R. WILLIAM CORWIN, Clinical Assistant Professor of Medicine
CHRISTOPHER COSGROVE, Clinical Assistant Professor of Medicine
GARTH COSGROVE, Professor of Neurosurgery
JOSEPH COSTA, Clinical Assistant Professor of Family Medicine
GEANINA COSTEA, Clinical Assistant Professor of Psychiatry and Human Behavior
ELLEN COSTELLO, Clinical Assistant Professor of Psychiatry and Human Behavior
RICHARD COTTIERO, Clinical Associate Professor of Medicine
DONALD COUSTAN, Professor of Obstetrics and Gynecology
SHIAVAX COWASJI, Clinical Assistant Professor of Medicine
HUGH COWDIN, Clinical Assistant Professor of Surgery (Anesthesiology)
WILLIAM COX, Clinical Assistant Professor of Pathology and Laboratory Medicine
MARA COYLE, Associate Professor of Pediatrics (Clinical)
THOMAS CRAIN, Assistant Professor of Medicine (Clinical)
NANCY CRANDALL, Teaching Associate of Surgery
ROBERT CRAUSMAN, Associate Professor of Medicine
JILL CRAWFORD, Teaching Associate of Pediatrics
NORBERT CRAWBAS, Clinical Assistant Professor of Surgery
ROBBERT CRETON, Assistant Professor of Medical Science (Research)
REBECCA CRIGHTON, Clinical Instructor in Obstetrics and Gynecology
FREDERICK CRISAFULLI, Clinical Associate Professor of Medicine
JOSEPH CRISCO, Henry Frederick Lippitt Professor of Orthopaedic Research, Professor of Orthopaedics
PATRICIA CRISTOFARO, Clinical Assistant Professor of Medicine
JOHN CRONAN, Professor of Diagnostic Imaging
SCOTT CRUIKSHANK, Assistant Professor of Neuroscience (Research)
LARRY CULPEPPER, Adjunct Professor of Family Medicine
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MICHAEL CUMMINGS, Clinical Instructor in Pediatrics
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BRUCE CURRAN, Clinical Assistant Professor of Radiation Oncology
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SUSAN CU-UVIN, Professor of Obstetrics and Gynecology, Professor of Medicine
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NICOLE CYR, Research Associate of Medicine
MAXIM DAAK, Clinical Associate Professor of Psychiatry and Human Behavior
CONSTANTINE DAFERMOS, Alumni-Alumnae University Professor of Applied Mathematics
ALBERT DAHLBERG, Professor of Medical Science
LORI DAIHELLO, Assistant Professor of Neurology (Research)
KAREN DAIGLE, Clinical Associate Professor of Pediatrics
TANYA DAILLY, Assistant Professor of Obstetrics and Gynecology (Clinical)
PEDRO DAL BO, Associate Professor of Economics
JEAN DAILY, Assistant Professor of Surgery (Research)
JULIE DAILY, Teaching Associate of Obstetrics and Gynecology
SAMIR DALIA, Clinical Instructor in Medicine
KRISTY DALRYMPE, Assistant Professor of Psychiatry and Human Behavior (Research)
SUZANNE DAMBEK, Clinical Instructor in Obstetrics and Gynecology
SUSAN D'ANDREA, Assistant Professor of Orthopaedics (Research)
HENRY D'ANGELO, Clinical Assistant Professor of Family Medicine
MICHELLE DANIEL, Assistant Professor of Emergency Medicine (Clinical)
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KWAME DAPAHA-AFRYIE, Clinical Associate Professor of Medicine
SONYA DARIA, Clinical Instructor in Emergency Medicine
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JAMES DARNOWSKI, Associate Professor of Medicine (Research)
MANUEL DASILVA, Clinical Assistant Professor of Orthopaedics
GEORGIOS DASKALOPOULOS, Professor of Mathematics
SEAN DAVID, Adjunct Associate Professor of Family Medicine
KRISTOPHER DAVIGNON, Clinical Assistant Professor of Surgery (Anesthesiology)
G. THAMARA DAVIS, Clinical Assistant Professor of Psychiatry and Human Behavior
JENNIFER DAVIS, Assistant Professor of Psychiatry and Human Behavior (Clinical)
KATHRYN DAVIS, Clinical Instructor in Obstetrics and Gynecology
LAWRENCE DAVIS, Assistant Professor of Diagnostic Imaging (Clinical)
STEPHEN DAVIS, Clinical Associate Professor of Family Medicine
SUSAN DAY, Associate Professor of Pediatrics (Clinical)
T. EUGENE DAY, Adjunct Assistant Professor of Emergency Medicine
GEOFFROY DE CLIPPEL, Assistant Professor of Economics
ANNE DE GROOT, Adjunct Associate Professor of Pediatrics
SUZANNE DE LA MONTE, Professor of Pathology and Laboratory Medicine, Professor of Neurosurgery
MONIQUE DE PAEPE, Associate Professor of Pathology and Laboratory Medicine
VERA DE PALO, Associate Professor of Medicine
CAROLYN DEAN, Professor of History and Modern Culture and Media Studies
MARK DEAN, Assistant Professor of Economics
LYNNE DEBENEDETTE, Senior Lecturer in Slavic Languages
JERI DEBROHUN, Associate Professor of Classics
LINDA DEEGAN, Professor (MBL) of Ecology and Evolutionary Biology
SILVIA DEGLI ESPOSTI, Associate Professor of Medicine (Clinical)
CATHERINE DEGOOD, Clinical Assistant Professor of Family Medicine
PAUL DEL GUERCIO, Clinical Assistant Professor of Family Medicine
LINDA DEL VECCHIO, Teaching Associate of Pediatrics
SARAH DELANEY, Assistant Professor of Chemistry
RONALD DELELLIS, Professor of Pathology and Laboratory Medicine
DOROTHY DELESSIO, Senior Teaching Associate of Family Medicine
FRANCINE D’ELIA, Clinical Assistant Professor of Psychiatry and Human Behavior
THOMAS DELLA TORRE, Clinical Assistant Professor of Family Medicine
IAN DELL’ANTONIO, Associate Professor of Physics
ALISON DELONG, Associate Professor of Biology
STACIE DEMARAIS, Teaching Associate of Family Medicine
JOSEPH DEMARTINO, Clinical Assistant Professor of Obstetrics and Gynecology
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PENELOPE DENNEHY, Professor of Pediatrics
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DAVID DENOFRIO, Adjunct Associate Professor of Medicine
THOMAS DENUCCI, Clinical Assistant Professor of Medicine
SEAN DEONI, Assistant Professor of Engineering
JUDITH DEPUE, Clinical Professor of Psychiatry and Human Behavior
LEO DEPUYDT, Associate Professor of Egyptology
JAMES DER DERIAN, Professor of International Studies (Research)
ZOLTAN DERDAK, Assistant Professor of Medicine (Research)
DIANE DERMARDEROSIAN, Assistant Professor of Pediatrics (Clinical)
MARY DEROSA, Clinical Assistant Professor of Obstetrics and Gynecology
CLARISSE DEXTER, Teaching Associate of Medicine
PAULA DEYOUNG, Clinical Instructor in Obstetrics and Gynecology
GIULIO DIAMANTE, Clinical Assistant Professor of Surgery (Ophthalmology)
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CHRISTY DIBBLE, Clinical Assistant Professor of Medicine
JOSEPH DIBENEDETTO, Clinical Assistant Professor of Medicine
MARGARET DICARLO, Clinical Assistant Professor of Psychiatry and Human Behavior
DANIEL DICKSTEIN, Assistant Professor of Psychiatry and Human Behavior, Assistant Professor of Pediatrics
SUSAN DICKSTEIN, Associate Professor of Psychiatry and Human Behavior
ELIZABETH DIDIE, Assistant Professor of Psychiatry and Human Behavior (Research)
GERALD DIEBOLD, Professor of Chemistry
DINUSHA DIETRICH, Clinical Instructor in Pediatrics
CHRISTOPHER DIGIOVANNI, Professor of Orthopaedics
ANN DILL, Associate Professor of Sociology and Associate Professor of Women’s Studies
SARA DILL, Assistant Professor of Dermatology
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THOMAS DIPETRILLO, Associate Professor of Radiation Oncology
PAUL DISILVESTRO, Associate Professor of Obstetrics and Gynecology
STEPHEN DIZIO, Clinical Assistant Professor of Psychiatry and Human Behavior
BEATA DIZOGLIO, Clinical Instructor in Obstetrics and Gynecology
DON DIZON, Associate Professor of Obstetrics and Gynecology, Associate Professor of Medicine
MARY ANN DOANE, Professor of Modern Culture and Media Studies
CURTIS DOBERSTEIN, Associate Professor of Neurosurgery (Clinical)
NIKOLA DOBRIVOJIC, Assistant Professor of Surgery (Cardiothoracic Surgery)
ROBERT DOBRZYNSKI, Clinical Assistant Professor of Medicine
ERIN DOBSON, Teaching Associate of Obstetrics and Gynecology
KIMBERLY DODD, Assistant Professor of Medicine, Assistant Professor of Family Medicine
THOMAS DOEPPNER, Associate Professor of Computer Science (Research)
JIMMIE DOLL, Jesse H. and Louisa D. Sharpe Metcalf Professor of Chemistry
LISA DOMAGALSKI, Clinical Assistant Professor of Obstetrics and Gynecology
FULVIO DOMINI, Associate Professor of Cognitive, Linguistic, and Psychological Sciences
JOHN E. DONAHUE, Assistant Professor of Pathology and Laboratory Medicine, Assistant Professor of Neurology
JOHN P. DONAHUE, Clinical Assistant Professor of Surgery (Ophthalmology)
DEIDRE DONALDSON, Adjunct Assistant Professor of Psychiatry and Human Behavior
WALTER DONAT, Clinical Associate Professor of Medicine
JO-ANN DONATELLE, Investigator in Community Health
LINDA DONEGAN, Assistant Professor of Diagnostic Imaging (Clinical)
HONGJIE DONG, Assistant Professor of Applied Mathematics
KATHLEEN DONISE, Clinical Assistant Professor of Psychiatry and Human Behavior
JOHN DONOHERUE, Henry Merritt Wriston Professor of Neuroscience
DAVID DORE, Adjunct Assistant Professor of Community Health
STEPHEN DORIS, Visiting Scientist of Molecular Biology, Cell Biology, and Biochemistry
DAVID DOSA, Assistant Professor of Medicine, Assistant Professor of Community Health
EDMUND DOSREMEDIOS, Clinical Assistant Professor of Orthopaedics
JEANNETTE DOWNING-PARK, Teaching Associate of Family Medicine
RICHARD DOYLE, Research Associate of Family Medicine
JAMES DREIER, Professor of Philosophy
THOMAS DREW, Clinical Associate Professor of Medicine
JEFFREY DROGIN, Clinical Instructor in Medicine
LAURA DRURY, Senior Teaching Associate of Psychiatry and Human Behavior
VIREN D'SA, Assistant Professor of Pediatrics
FENGHAI DUAN, Assistant Professor of Community Health (Research)
KRISTINA DUARTE, Clinical Assistant Professor of Family Medicine
CATHERINE DUBE, Adjunct Associate Professor of Community Health
GREGORY DUBEL, Assistant Professor of Diagnostic Imaging
JOSEPH DUCHARM, Clinical Assistant Professor of Surgery (Ophthalmology)
HUGH DUCKLOW, Professor (MBL) in Ecology and Evolutionary Biology
BRIAN DUFF, Clinical Associate Professor of Surgery (Otolaryngology)
CHRISTINE DUFFY, Assistant Professor of Medicine
SUSAN DUFFY, Associate Professor of Emergency Medicine, Associate Professor of Pediatrics
RAYMOND DUFRESNE, Professor of Dermatology
LUBA DUMENCO, Lecturer in Pathology and Laboratory Medicine
NANCY DUNBAR, Senior Lecturer in Theatre, Speech, and Dance
ANNMARIE DUNCAN, Assistant Professor of Surgery (Clinical)
KATHERINE DUNLOP, Assistant Professor of Philosophy
CASEY DUNN, Manning Assistant Professor of Ecology and Evolutionary Biology
GEORGE DUPONT, Clinical Assistant Professor of Surgery (Oral/Maxillofacial)
DONNA DUPUIS, Teaching Associate of Family Medicine
PAUL DUPUIS, Professor of Applied Mathematics
DAMIAN DUPUY, Professor of Diagnostic Imaging
KEVIN DUSHAY, Assistant Professor of Medicine
RICHARD DVORIN, Clinical Assistant Professor of Pediatrics
LANCE DWORKIN, Professor of Medicine
CANDACE DYER, Clinical Assistant Professor of Surgery
JENNIFER DYL, Clinical Assistant Professor of Psychiatry and Human Behavior
ANANI DZIDZIENYO, Associate Professor of Afro-American Studies and Portuguese and Brazilian Studies
MARY FRANCES DZURINKO, Clinical Assistant Professor of Surgery (Oral/Maxillofacial)
NEIL EAD, Senior Teaching Associate of Surgery
REGAN EARLY, Adjunct Assistant Professor of Ecology and Evolutionary Biology
CHARLES EATON, Professor of Family Medicine, Professor of Community Health
CRAIG EBERSON, Assistant Professor of Orthopaedics
ROBERT EDEN, Clinical Assistant Professor of Pediatrics
DAVID EDMONSON, Assistant Professor of Obstetrics and Gynecology (Clinical)
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JANE EISEN, Associate Professor of Psychiatry and Human Behavior
YUL EJNES, Clinical Associate Professor of Medicine
FADYA EL RAYESS, Clinical Assistant Professor of Family Medicine
CHARLES ELBAUM, Professor of Physics (Research)
KFIR ELIAZ, Professor of Economics
HEINRICH ELINZANO, Assistant Professor of Neurology
JONATHAN ELION, Associate Professor of Medicine
PETER ELLER, Clinical Assistant Professor of Medicine
MARK ELLIOTT, Clinical Assistant Professor of Psychiatry and Human Behavior
GREGORY ELLIOTT, Professor of Sociology
KRISTIN ELLISON, Associate Professor of Medicine
PAMELA ELLSWORTH, Associate Professor of Surgery (Urology)
KHALED ELSAID, Research Associate of Emergency Medicine
MOHAMAD EL-SHARKAWI, Lecturer in Language
MATTHEW ESPOSITO, Clinical Assistant Professor of Surgery (Oral maxillofacial)
MICHELLE EMBREE-KU, Adjunct Instructor in Pathology and Laboratory Medicine
RINCHEN-TZO EMGUSHOV, Clinical Instructor in Medicine
CHRISTINE EMMICK, Clinical Assistant Professor of Surgery
TIMOTHY EMPKIE, Clinical Associate Professor of Family Medicine
RAYMOND ENDRENY, Clinical Associate Professor of Medicine
JOSEPH ENGLAND, Clinical Assistant Professor of Family Medicine
PATRICIA ENGLER-FIELD, Assistant Professor of Medicine (Research)
ESTHER ENTING, Clinical Associate Professor of Family Medicine
YOASH ENZER, Clinical Associate Professor of Surgery
GARY EPSTEIN-LUBOW, Assistant Professor of Psychiatry and Human Behavior
DEBRA ERICKSON-OWENS, Teaching Associate of Family Medicine
ALFREDO ESPARZA, Associate Professor of Pathology and Laboratory Medicine (Clinical)
MATTHEW ESPOSITO, Clinical Assistant Professor of Obstetrics and Gynecology
CHRISTIANNE ESPOSITO-SMYTHERS, Adjunct Assistant Professor of Community Health (Research)
DAVID ESTLUND, Professor of Philosophy
ELKIN ESTRADA, Clinical Assistant Professor of Medicine
DAVID ETTENSOHN, Clinical Associate Professor of Medicine
PETER EVANGELISTA, Assistant Professor of Diagnostic Imaging
ALLISON EVANS, Clinical Assistant Professor of Psychiatry and Human Behavior

D MATTHEW EVANS, Clinical Assistant Professor of Psychiatry and Human Behavior

SVETLANA EVDOKIMOVA, Professor of Slavic Languages and Comparative Literature

BRIAN EVENSON, Professor of Literary Arts

PAUL FADALE, Professor of Orthopaedics

MARK FAGAN, Professor of Medicine

ELAINE FAIN, Clinical Assistant Professor of Medicine

ITAY FAIMMESSER, Assistant Professor of Economics

WILLIAM FAIRBROTHER, Assistant Professor of Biology

M. KHURRAM FAIZAN, Assistant Professor of Pediatrics (Clinical)

STEPHEN FALKENBERRY, Clinical Associate Professor of Obstetrics and Gynecology

JUSTIN FALLO, Professor of Medical Science

FRANK FALTUS, Clinical Assistant Professor of Psychiatry and Human Behavior

EDWARD FAMIGLIETTI, Adjunct Associate Professor of Surgery (Ophthalmology)

THOMAS FANTES, Clinical Assistant Professor of Family Medicine

ASHRAF FARID, Clinical Instructor in Surgery

RONALD FARIS, Adjunct Associate Professor of Pediatrics (Research), Adjunct Associate Professor of Pathology and Laboratory Medicine (Research)

ULANA FARMER, Clinical Assistant Professor of Family Medicine

ELISABETH FARNUM, Clinical Assistant Professor of Family Medicine

DAVID FARELL, Clinical Associate Professor of Dermatology

LOREN FAST, Associate Professor of Medicine (Research)

PAJA FAUDREE, Assistant Professor of Anthropology

CAROL FAULKNER, Assistant Professor of Psychiatry and Human Behavior (Clinical)

DAVID FAUST, Adjunct Associate Professor of Psychiatry and Human Behavior

NELSON FAUSTO, Adjunct Professor of Pathology and Laboratory Medicine

ANNE FAUSTO-STERNING, Nancy Duke Lewis Professor of Biology and Gender Studies, Professor of Biology

PETER FAY, Clinical Assistant Professor of Surgery (Ophthalmology)

DEIRDRE FEARON, Assistant Professor of Emergency Medicine (Clinical), Assistant Professor of Pediatrics (Clinical)

JEFFREY FEDEN, Assistant Professor of Emergency Medicine

SETH FEDER, Clinical Assistant Professor of Dermatology

JEAN FEERICK, Assistant Professor of English

LESLEY FEIL, Clinical Assistant Professor of Psychiatry and Human Behavior

LLOYD FEIT, Associate Professor of Pediatrics

MICHAEL FELDER, Clinical Assistant Professor of Medicine, Clinical Assistant Professor of Pediatrics

DMITRI FELDMAN, Associate Professor of Physics

MICHAEL FELDMAN, Clinical Assistant Professor of Orthopaedics

EDWARD FELLER, Adjunct Professor of Community Health, Clinical Professor of Medicine

JUN FENG, Assistant Professor of Surgery (Research)

WILLIAM FENG, Clinical Associate Professor of Surgery (Cardiothoracic Surgery)

ZHANLIAN FENG, Assistant Professor of Community Health (Research)

MARY FENNELL, Professor of Community Health

MARY ANNE FENTON, Clinical Assistant Professor of Medicine

STEVEN FERA, Clinical Assistant Professor of Medicine
GARY FERGUSON, Clinical Assistant Professor of Orthopaedics
MARCOLINO FERRETTI, Clinical Assistant Professor of Pediatrics
FRED FERRI, Clinical Professor of Community Health
SARAH FESSLER, Clinical Assistant Professor of Family Medicine
ELENA FESTA MARTINO, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences (Research)
THALIA FIELD, Associate Professor in Literary Arts
EDWARD FILARDO, Associate Professor of Medicine (Research), Associate Professor of Surgery (Research)
JAMES FINGLETON, Clinical Assistant Professor of Surgery (Cardiothoracic Surgery)
JOHN FINIGAN, Clinical Instructor in Pediatrics
ELANA FINN, Teaching Associate of Family Medicine
MICHAEL FIORI, Clinical Assistant Professor of Psychiatry and Human Behavior
BRUCE FISCHER, Clinical Instructor in Medicine
KAREN FISCHER, Professor of Geological Sciences
STACI FISCHER, Associate Professor of Medicine
LINFORD FISHER, Assistant Professor of History
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KATHLEEN FITZGERALD, Clinical Associate Professor of Obstetrics and Gynecology
WALTER FITZHUGH, Clinical Assistant Professor of Psychiatry and Human Behavior
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TIMOTHY FLANIGAN, Professor of Medicine
BRADEN FLEMING, Professor of Orthopaedics, Adjunct Professor of Engineering
WENDELL FLEMING, Professor of Applied Mathematics (Research)
STEVEN FLOOD, Clinical Assistant Professor of Family Medicine
PAUL FLORIN, Adjunct Professor of Community Health
ELLEN FLYNN, Clinical Assistant Professor of Psychiatry and Human Behavior
MARY FLYNN, Assistant Professor of Medicine (Clinical)
JOHN FOOGLE, Assistant Professor of Emergency Medicine (Clinical)
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STEPHEN FOLEY, Associate Professor of English and Comparative Literature
MICHAEL FOLLicK, Clinical Professor of Community Health
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LYNNE FONTAINE, Adjunct Associate Professor of Pediatrics
ELIZABETH FORBES, Clinical Assistant Professor of Pediatrics
MICHELLE FORCIER, Assistant Professor of Pediatrics (Clinical)
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GLENN FORT, Clinical Associate Professor of Medicine
DAVID FORTUNATO, Clinical Associate Professor of Medicine
ANDREW FOSTER, Professor of Economics
RACHEL FOWLER, Assistant Professor of Emergency Medicine
GREGORY FOX, Clinical Instructor in Pediatrics
SARAH FOX, Assistant Professor of Obstetrics and Gynecology
A. RAYMOND FRACKELTON, Adjunct Associate Professor of Medicine (Research), Adjunct Associate Professor of Pathology and Laboratory Medicine (Research)
LAURA FRAKEY, Clinical Assistant Professor of Psychiatry and Human Behavior
GRETA FRANCIS, Associate Professor of Psychiatry and Human Behavior
CHRISTIAN FRANCK, Assistant Professor of Engineering
MICHAEL FRANK, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences
STEVEN FRANK, Clinical Assistant Professor of Family Medicine
RACHEL FRANKLIN, Assistant Professor of Population Studies (Research)
LUCIA FRATANTARO, Clinical Assistant Professor of Pediatrics
ARTHUR FRAZZANO, Clinical Associate Professor of Family Medicine
LISA FREDA, Clinical Assistant Professor of Psychiatry and Human Behavior
JENNIFER FREEMAN, Assistant Professor of Psychiatry and Human Behavior (Research)
NANCY FREEMAN, Clinical Associate Professor of Medicine
WALTER FREIBERGER, Professor of Applied Mathematics (Research)
RICHARD FREIMAN, Associate Professor of Medical Science
DAVID FRIED, Clinical Assistant Professor of Medicine
RACHEL FRIEDBERG, Senior Lecturer in Economics
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JOSEPH FREIDMAN, Professor of Neurology (Clinical)
MICHAEL FRIEDMAN, Clinical Assistant Professor of Psychiatry and Human Behavior
PETER FRIEDMANN, Professor of Medicine, Professor of Community Health
KAREN FRIEND, Adjunct Associate Professor of Psychiatry and Human Behavior
GEORITA FRIERSON, Adjunct Assistant Professor of Psychiatry and Human Behavior
GARY FRIEDMAN, Professor of Obstetrics and Gynecology
GREGORY FRITZ, Professor of Psychiatry and Human Behavior
JOHN FROEHILICH, Clinical Assistant Professor of Orthopaedics
LINA FRUZZETTI, Royce Family Professor in Teaching Excellence and Professor of Anthropology and Afro-American Studies
JOHN FULTON, Clinical Associate Professor of Community Health
MARTIN FURMAN, Clinical Assistant Professor of Psychiatry and Human Behavior
STACIA FURTADO, Investigator in Molecular Pharmacology, Physiology and Biotechnology (Research)
GERARD GAGNE, Clinical Assistant Professor of Psychiatry and Human Behavior
ALAN GAINES, Clinical Assistant Professor of Pediatrics
SARAH GAINES, Assistant Professor of Emergency Medicine (Clinical)
JOHN GAITANIS, Assistant Professor of Neurology (Clinical), Assistant Professor of Pediatrics (Clinical)
MELISSA GAITANIS, Assistant Professor of Medicine (Clinical)
RICHARD GAITSKELL, Professor of Physics
OMAR GALARRAGA, Assistant Professor of Community Health
HARRIS GALKIN, Clinical Assistant Professor of Obstetrics and Gynecology
EZRA GALLER, Clinical Assistant Professor of Surgery (Ophthalmology)
ANTHONY GALLO, Clinical Assistant Professor of Psychiatry and Human Behavior
ODED GALOR, Professor of Economics
GIOVANNI GAMBASSI, Adjunct Associate Professor of Community Health
KATRINA GAMBLE, Assistant Professor of Political Science
FORREST GANDER, Adele Kellenberg Seaver ’49 Professor of Creative Writing
MICHELE GANGE, Clinical Assistant Professor of Obstetrics and Gynecology
MARIE GANIM, Clinical Assistant Professor of Community Health
KIM GANS, Professor of Community Health
HUAJIAN GAO, Walter H. Annenberg Professor of Engineering
ABBE GARCIA, Assistant Professor of Psychiatry and Human Behavior (Research)
MATTHEW GARCIA, Associate Professor of American Civilization and Ethnic Studies and History
CYNTHIA GARCIA COLL, Charles Pitts Robinson and John Palmer Barstow Professor of Education and Psychology
MANUEL GARCIA-TOCA, Assistant Professor of Surgery
ADRIAN GARDNER, Assistant Professor of Medicine (Research)
REBEKAH GARDNER, Assistant Professor of Medicine
ILANA GAREEN, Assistant Professor of Community Health (Research)
ARIS GARRO, Assistant Professor of Emergency Medicine, Assistant Professor of Pediatrics
CHRISTINE GARRO, Teaching Associate of Emergency Medicine
JENNIFER GARTMAN, Assistant Professor of Pediatrics (Clinical), Assistant Professor of Medicine (Clinical)
RONNESIA GASKINS, Assistant Professor of Pediatrics (Research)
MASON GASPER, Assistant Professor of Neurology (Clinical)
JENNIFER GASS, Assistant Professor of Surgery, Assistant Professor of Obstetrics and Gynecology
STEPHEN GATESY, Professor of Biology
CONSTANTINE GATSONIS, Professor of Medical Science
BRANDON GAUDIANO, Assistant Professor of Psychiatry and Human Behavior (Research)
ELIZABETH GEBHARD, Clinical Assistant Professor of Family Medicine
GRETCHEN GEE, Investigator in Molecular Biology, Cell Biology, and Biochemistry
KEVIN GEE, Lecturer in Public Policy
GUY GEFFROY, Clinical Assistant Professor of Neurology
ARTHUR GELTZER, Clinical Associate Professor of Surgery (Ophthalmology)
STUART GEMAN, James Manning Professor of Applied Mathematics
BETHANY GENTILESCO, Assistant Professor of Medicine (Clinical)
MICHAEL GEORGE, Adjunct Assistant Professor of Medicine
OLAKUNLE GEORGE, Associate Professor of English and Associate Professor of Africana Studies
PAUL GEORGE, Assistant Professor of Family Medicine
SUSAN GERBI, George Eggleston Professor of Biochemistry
THOMAS GERMANO, Clinical Assistant Professor of Emergency Medicine
JONATHAN GERSHON, Clinical Assistant Professor of Psychiatry and Human Behavior
FRANTZ GIBBS, Assistant Professor of Emergency Medicine
ANNE GIBLIN, Professor (MBL) of Ecology and Evolutionary Biology
SHARON GIBSON, Clinical Associate Professor of Surgery (Otolaryngology)
BASILIS GIDAS, Professor of Applied Mathematics
DAVID GIFFORD, Clinical Associate Professor of Medicine, Clinical Associate Professor of Community Health
DEIDRE GIFFORD, Clinical Assistant Professor of Community Health
ALFREDO GIL, Clinical Assistant Professor of Obstetrics and Gynecology
HOLLY GIL, Assistant Professor of Diagnostic Imaging (Clinical)
JAMES GILCHRIST, Professor of Neurology
MARY LOUISE GILL, Professor of Classics and Professor of Philosophy
PETER GILL, Clinical Assistant Professor of Surgery
WILLIAM GILLAM, Tamarkin Assistant Professor of Mathematics
FIZZA GILLANI, Assistant Professor of Medicine (Research)
MALINI GILLEN, Clinical Assistant Professor of Pediatrics
RICHARD GILLERMAN, Clinical Assistant Professor of Surgery (Anesthesiology)
GREGORY GILLETTE, Clinical Assistant Professor of Psychiatry and Human Behavior
RONALD GILMAN, Clinical Assistant Professor of Medicine
IRVING GILSON, Clinical Instructor in Medicine
MICHAEL GILSON, Clinical Associate Professor of Medicine
ANNIE GJELSVIK, Assistant Professor of Community Health (Research)
ANNETTE GLADMAN, Assistant Professor of Literary Arts
IRENE GLASSER, Research Associate of Community Health
STEPHEN GLINICK, Clinical Associate Professor of Dermatology
DOUGLAS GLOD, Clinical Assistant Professor of Orthopaedics
MARY GLUCK, Professor of History
DOUGLAS GNEPP, Professor of Pathology and Laboratory Medicine
MOSES GODDARD, Associate Professor of Molecular Pharmacology, Physiology and Biotechnology (Research)
REGINALD GOHI, Associate Professor of Medicine
RICHARD GOLD, Associate Professor of Diagnostic Imaging (Clinical)
AMY GOLDBERG, Clinical Assistant Professor of Pediatrics
ARNOLD GOLDBERG, Associate Professor of Family Medicine (Clinical)
RICHARD GOLDBERG, Professor of Psychiatry and Human Behavior
ROBERT GOLDBERG, Adjunct Professor of Community Health
DANIEL GOLING, Assistant Professor of Diagnostic Imaging (Clinical)
ERIC GOLDLUST, Assistant Professor of Emergency Medicine
DEBRA GOLDMAN, Clinical Instructor in Obstetrics and Gynecology
MARC GOLDMAN, Assistant Professor of Neurosurgery
ROBERTA GOLDMAN, Clinical Professor of Family Medicine
DAVID GOLDSBY, Associate Professor of Geological Sciences (Research)
LISA GOLDSTEIN, Clinical Assistant Professor of Pathology and Laboratory Medicine
MICHAEL GOLDSTEIN, Professor of Psychiatry and Human Behavior
NATALIA GOLOVA, Assistant Professor of Pediatrics (Clinical)
VLADIMIR GOLSTEIN, Associate Professor of Slavic Languages
SPENCER GOLUB, Professor of Theatre Arts and Performance Studies
RUJUN GONG, Assistant Professor of Medicine (Research)
THOMAS GOODWILLIE, Professor of Mathematics
MATTHEW GOODWIN, Adjunct Research Associate of Psychiatry and Human Behavior
DANA GOOLEY, Associate Professor of Music
GEETHA GOPALAKRISHNAN, Associate Professor of Medicine
PAMINA GORBACH, Adjunct Associate Professor of Medicine
ALAN GORDON, Clinical Assistant Professor of Psychiatry and Human Behavior
LESLIE GORDON, Associate Professor of Pediatrics (Research)
NORMAN GORDON, Clinical Associate Professor of Neurology
PAUL GORDON, Assistant Professor of Medicine (Clinical)
ELLIOTT GORN, Professor of History and American Civilization
DAVID GOTTESMAN, Clinical Assistant Professor of Psychiatry and Human Behavior
AMY GOTTLIEB, Assistant Professor of Medicine (Clinical), Assistant Professor of Obstetrics and Gynecology (Clinical)
PHILIP GOULD, Professor of English
VINITA GOYAL, Assistant Professor of Obstetrics and Gynecology
PEDRO GOZALO, Assistant Professor of Community Health (Research)
DAVID GRABOWSKI, Adjunct Associate Professor of Community Health
JANET GRACE, Professor of Psychiatry and Human Behavior (Clinical)
MICHAEL GRADY, Clinical Assistant Professor of Education
STEVEN GRAFF, Clinical Assistant Professor of Orthopaedics
ROD GRAGG, Clinical Assistant Professor of Psychiatry and Human Behavior
CORNELIUS GRANAI, Professor of Obstetrics and Gynecology
DAVID GRAND, Assistant Professor of Diagnostic Imaging
LAURIE GRAUEL, Clinical Instructor in Pediatrics
STEFAN GRAVENSTEIN, Professor of Medicine
THERESA GRAVES, Assistant Professor of Surgery (Clinical)
ROBYN GRAY, Assistant Professor of Obstetrics and Gynecology (Clinical)
ANDREW GREEN, Associate Professor of Orthopaedics
JAMES GREEN, Professor of History
TRACI GREEN, Assistant Professor of Community Health (Research), Assistant Professor of Medicine (Research)
BENJAMIN GREENBERG, Associate Professor of Psychiatry and Human Behavior
DAVID GREENBERG, Clinical Assistant Professor of Surgery
PAUL GREENBERG, Clinical Associate Professor of Surgery (Ophthalmology)
DAVID GREENBLATT, Adjunct Professor of Medicine
SAMUEL GREENBLATT, Professor of Neurosurgery, Professor of Neuroscience
JENNIFER GREENE WELCH, Assistant Professor of Pediatrics
NEIL GREENSPAN, Clinical Associate Professor of Medicine
AMY GREENWALD, Associate Professor of Computer Science
KRISTIN GREGG, Clinical Assistant Professor of Emergency Medicine
SHEA GREGG, Assistant Professor of Surgery
STEPHEN GREGORY, Associate Professor of Medicine (Research)
ANGELA GRENNANDER, Clinical Assistant Professor of Pediatrics
MARK GREVE, Clinical Assistant Professor of Emergency Medicine
JANE GRIFFIN, Teaching Associate of Community Health
FRED GRIFFITH, Clinical Instructor in Neurology
ROBERT GRIFFITH, Clinical Associate Professor of Pediatrics
ROGERS GRIFFITH, Associate Professor of Pathology and Laboratory Medicine
IULIA GRILLO, Clinical Assistant Professor of Medicine
KATIE GRINNELL, Research Associate of Medicine
ANDREW GRISCOM, Clinical Assistant Professor of Emergency Medicine
JAN GROBLEWSKI, Clinical Assistant Professor of Surgery (Otolaryngology), Clinical Assistant Professor of Pediatrics
L. PETER GROMET, Associate Professor of Geological Sciences
STEPHEN GROSIN, Clinical Assistant Professor of Family Medicine
NICHOLAS GRUMBACH, Clinical Assistant Professor of Medicine, Clinical Assistant Professor of Pediatrics
PHILIP GRUPPUSO, Professor of Pediatrics, Professor of Molecular Biology, Cell Biology, and Biochemistry (Research)
TAO GU, Investigator in Molecular Biology, Cell Biology, and Biochemistry
ANTONIO GUALBERTO, Adjunct Associate Professor of Pathology and Laboratory Medicine
YINGJIE GUAN, Instructor in Orthopaedics (Research)
KATHLEEN GUARINO, Teaching Associate of Pediatrics
PRADEEP GUDURU, Associate Professor of Engineering
FREDERICK GUGGENHEIM, Clinical Professor of Psychiatry and Human Behavior
BARBARA GUILLETTE, Clinical Instructor in Surgery (Otolaryngology)
THOMAS GUILMETTE, Adjunct Associate Professor of Psychiatry and Human Behavior
FUSUN GUNDOGAN, Assistant Professor of Pathology and Laboratory Medicine
YAN GUO, Professor of Applied Mathematics
GAURAV GUPTA, Clinical Assistant Professor of Surgery (Ophthalmology)
THOMAS GUTTMACHER, Clinical Assistant Professor of Family Medicine
VOLKAN GUREL, Adjunct Assistant Professor of Pathology and Laboratory Medicine
DEBORAH GUTMAN, Assistant Professor of Emergency Medicine (Clinical)
NED GUTMAN, Clinical Assistant Professor of Medicine
MATTHEW GUTMANN, Professor of Anthropology
FADLALLAH HABR, Assistant Professor of Medicine (Clinical)
JASON HACK, Associate Professor of Emergency Medicine
JAMES HADDOW, Professor of Pathology and Laboratory Medicine (Research)
WENDY HADLEY, Assistant Professor of Psychiatry and Human Behavior (Research)
SUHDONG HAHN, Clinical Assistant Professor of Medicine
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GEORGE HALEBLIAN, Assistant Professor of Surgery (Urology)
SHEILA HALEY, Assistant Professor of Medical Science (Research)
HARALD HALL, Adjunct Assistant Professor of Medicine
JODY HALL, Teaching Associate of Molecular Biology, Cell Biology, and Biochemistry
JOSEPH HALLETT, Associate Professor of Pediatrics (Clinical)
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GEOFFREY HAMILTON, Clinical Assistant Professor of Medicine
JOSHUA HAMILTON, Professor (MBL) of Pathology and Laboratory Medicine
TERESITA HAMILTON, Clinical Assistant Professor of Family Medicine
FRANCOISE NICOLE HAMLIN, Assistant Professor of Africana Studies and History
ABDEL-HAI HAMMO, Assistant Professor of Pediatrics (Clinical)
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BRITTANY HAMPTON, Assistant Professor of Obstetrics and Gynecology
SAJEEV HANDEM, Clinical Instructor in Medicine
JOHANNA HANINK, Assistant Professor of Classics
ROGER HANLON, Professor (MBL) of Ecology and Evolutionary Biology
CYNTHIA HANNA, Clinical Assistant Professor of Obstetrics and Gynecology
KATRINE HANSEN, Assistant Professor of Pathology and Laboratory Medicine
GITA HARAPPANAHALLY, Assistant Professor of Neurology (Clinical), Assistant Professor of Pediatrics (Clinical)
CHRISTINE HARDY-FRAMSON, Clinical Assistant Professor of Pediatrics
ZEEV HAREL, Professor of Pediatrics
OMUR HARMANSAH, Assistant Professor of Archaeology and Egyptology and Ancient Western Asian Studies
KAREN HARNETT, Assistant Professor of Medicine (Research), Assistant Professor of Molecular Pharmacology, Physiology and Biotechnology (Research)
THOMAS HARONIAN, Clinical Assistant Professor of Emergency Medicine
JAMES HARPER, Director
MICHAEL HARPER, University Professor of Literary Arts
COLIN HARRINGTON, Associate Professor of Psychiatry and Human Behavior (Clinical), Associate Professor of Medicine (Clinical)
DAVID J. HARRINGTON, Clinical Assistant Professor of Obstetrics and Gynecology (Clinical)
DAVID T. HARRINGTON, Associate Professor of Surgery (Trauma)
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DOUGLAS HARRISON, Assistant Professor of Pediatrics
EMILY HARRISON, Clinical Assistant Professor of Family Medicine
MATTHEW HARRISON, Assistant Professor of Applied Mathematics
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CHANTELLE HART, Assistant Professor of Psychiatry and Human Behavior (Research)
SUSAN HARVEY, Professor of Religious Studies
JOSEPH HARWELL, Associate Professor of Medicine, Associate Professor of Pediatrics
GHINWA HASSAN, Clinical Assistant Professor of Family Medicine
LINDA HASSAN, Clinical Assistant Professor of Medicine
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MEREDITH HASTINGS, Assistant Professor of Geological Sciences
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ROMAN HAYDA, Associate Professor of Orthopaedics
KENNETH HAYNES, Associate Professor of Comparative Literature
JAMES HAYS, Assistant Professor of Computer Science
JIMAN HE, Assistant Professor of Medicine (Research)
MAI HE, Assistant Professor of Pathology and Laboratory Medicine
JAMES HEAD, Louis and Elizabeth Scherck Distinguished Professor of Geological Sciences
TERRANCE HEALEY, Clinical Assistant Professor of Diagnostic Imaging
RICHARD HECK, Professor of Philosophy
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DAITHI HEFFERNAN, Assistant Professor of Surgery
ROBER HEFFRON, Clinical Assistant Professor of Family Medicine
WILLIAM HEINDEL, Professor of Cognitive, Linguistic, and Psychological Sciences
ULRICH HEINTZ, Professor of Physics
STEPHEN HELFAND, Professor of Biology
PATRICK HELLER, Professor of Sociology and International Studies
THOMAS HELTON, Investigator in Neuroscience
JOHN HENDERSON, Eastman Professor of Political Economy and Professor of Economics and Urban Studies
PAGET HENRY, Professor of Sociology and Professor of African American Studies
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TIMOTHY HERBERT, Professor of Geological Science and Professor of Environmental Studies
DAVID HERECE, Clinical Assistant Professor of Medicine
THADDEUS HERLICZEK, Assistant Professor of Diagnostic Imaging
MAURICE HERLIHY, Professor of Computer Science
ARNOLD HERMAN, Clinical Associate Professor of Surgery
DEBRA HERMAN, Clinical Assistant Professor of Medicine
JOHN HERMANCE, Professor of Geological Sciences
LYNN HERNANDEZ, Assistant Professor of Community Health (Research)
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RACHEL HERZ, Visiting Assistant Professor of Psychiatry and Human Behavior
KATHLEEN HESS, Lecturer in Chemistry
JAN HESTHAVEN, Professor of Applied Mathematics
PETER HEYWOOD, Professor of Biology
JESSICA HIATT, Teaching Associate of Radiation Oncology
PAMELA HIGH, Professor of Pediatrics (Clinical)
ELLEN HIGHT, Clinical Assistant Professor of Family Medicine
CHRISTOPHER HILL, Professor of Philosophy
NICHOLAS HILL, Adjunct Professor of Medicine
CONSTANCE HILLER, Clinical Instructor in Pediatrics
MARY HILLSTROM, Assistant Professor of Diagnostic Imaging (Clinical)
HOWARD HIRSCH, Clinical Assistant Professor of Orthopaedics
LAURENCE HIRSHBERG, Clinical Assistant Professor of Psychiatry and Human Behavior
GREG HIRTH, Professor of Geological Sciences
KATHLEEN HITTNER, Clinical Professor of Surgery (Anesthesiology)
MARY HIXON, Manning Assistant Professor in Pathology and Laboratory Medicine
DOUGLAS HIXSON, Professor of Medicine (Research), Professor of Pathology and Laboratory Medicine (Research)
JOHN HOBBIE, Professor (MBL) in Ecology and Evolutionary Biology
LEIGH HOCHBERG, Associate Professor of Engineering
MELINDA HODEN, Teaching Associate of Surgery
DIANE HOFFMAN-KIM, Associate Professor of Medical Science and Engineering
JEFFREY HOFFSTEIN, Professor of Mathematics
ROBERT HOFFMANN, Clinical Assistant Professor of Surgery (Ophthalmology)
DAWN HOGAN, Clinical Assistant Professor of Family Medicine
DENNIS HOGAN, Robert E. Turner Distinguished Professor of Population Studies
JOSEPH HOGAN, Professor of Medical Science
MARY Hohenhaus, Instructor in Medicine (Clinical)
LEIGH HOHLSTEIN, Clinical Assistant Professor of Psychiatry and Human Behavior
HORACIO HOJMAN, Clinical Assistant Professor of Psychiatry and Human Behavior
KAREN HOLLER, Clinical Assistant Professor of Psychiatry and Human Behavior
WILLIAM HOLLINSHEAD, III, Clinical Assistant Professor of Community Health
PETER HOLLMANN, Clinical Assistant Professor of Family Medicine
MARIDA HOLLOS, Professor of Anthropology
JUSTIN HOLMER, Assistant Professor of Mathematics
KATHERINE HOLMES, Clinical Assistant Professor of Family Medicine
CATHLEEN HOOD, Clinical Assistant Professor of Family Medicine
CHARLES HOPKINSON, Professor (MBL) of Ecology and Evolutionary Biology
JOHN HORAN, Clinical Assistant Professor of Family Medicine
ANDREW HORDES, Clinical Associate Professor of Medicine
JEFFREY HOROWITZ, Clinical Instructor in Medicine
KARYN HOROWITZ, Clinical Assistant Professor of Psychiatry and Human Behavior
SETH HOROWITZ, Assistant Professor of Neuroscience (Research)
JOHN HORAN, Clinical Assistant Professor of Family Medicine
ADRIANA HOSU, Clinical Instructor in Medicine
CHRISTOPHER HOUCK, Assistant Professor of Psychiatry and Human Behavior
CLAIRE HOUSEMAN, Assistant Professor of Anthropology and Professor of Archaeology
STEPHEN HOUSTON, Assistant Professor of Psychiatry and Human Behavior
ERIK HUDEPOHL, Assistant Professor of Emergency Medicine
MICHAEL HULSTYN, Associate Professor of Orthopaedics
ANNE HUME, Adjunct Professor of Family Medicine
JEFFREY HUNT, Associate Professor of Psychiatry and Human Behavior
LINDA HUNTER, Clinical Assistant Professor of Obstetrics and Gynecology
MARIANNE HURLEY, Teaching Associate of Medicine
ROBERT HURT, Professor of Engineering
JOHN HUSTAD, Adjunct Assistant Professor of Community Health
MICHAEL HYDER, Clinical Assistant Professor of Medicine
HARRY IANNOTTI, Clinical Assistant Professor of Surgery (Urology)
SADIA IFTIKHAR, Clinical Assistant Professor of Medicine
SYED IFTIKHAR HUSSAIN, Clinical Instructor in Medicine
LYNN ILER, Clinical Assistant Professor of Dermatology
CATHERINE IMBRIGLIO, Senior Lecturer in English
ORNA INTRATOR, Associate Professor of Community Health (Research)
JULIANNE IP, Clinical Associate Professor of Family Medicine
AHMAD ISMAIL, Instructor in Medicine (Clinical)
SORIN ISTRAIL, Julie Nguyen Brown Professor in Computational and Mathematical Sciences
JOSE ITZIGSOHN, Professor of Sociology
BARBARA JABLOW, Clinical Assistant Professor of Family Medicine
MOUNE JABRE-RAUGHLEY, Instructor in Obstetrics and Gynecology (Clinical)
BRIAN JACK, Adjunct Associate Professor of Family Medicine
ALLISON JACKSON, Teaching Associate of Emergency Medicine
CYNTIA JACKSON, Associate Professor of Pathology and Laboratory Medicine
FRED JACKSON, Teaching Associate of Ecology and Evolutionary Biology
KRISTINA JACKSON, Associate Professor of Community Health (Research)
MARGOT JACKSON, Assistant Professor of Sociology
YUKO JACKSON, Senior Lecturer in East Asian Studies
NINNI JACOB, Teaching Associate of Diagnostic Imaging
ELIZABETH JACOBS, Assistant Professor of Emergency Medicine (Clinical)
MARK JACOBS, Clinical Assistant Professor of Medicine
NANCY JACOBS, Associate Professor of History and Africana Studies
SUZANNE JACOBS, Teaching Associate of Community Health
DAVID JACOBSON, Professor of Judaic Studies
PAULINE JACOBSON, Professor of Cognitive, Linguistic, and Psychological Sciences
KARL JACOBY, Professor of History
ABDEL JAFFAN, Clinical Instructor in Diagnostic Imaging
MARC JAFFE, Clinical Assistant Professor of Obstetrics and Gynecology
LIUDVIKAS JAGMINAS, Adjunct Associate Professor of Emergency Medicine
NEETA JAIN, Clinical Assistant Professor of Psychiatry and Human Behavior
ROBERT JANIGIAN, Clinical Assistant Professor of Surgery (Ophthalmology)
CHRISTINE JANIS, Professor of Biology
MATTHEW JANKOWICH, Assistant Professor of Medicine
JOHN JANNOTTI, Assistant Professor of Computer Science
JOHN JARRELL, Teaching Associate of Orthopaedics
NOEL JAVIER, Clinical Assistant Professor of Medicine
BRYAN JAY, Clinical Assistant Professor of Diagnostic Imaging
GREGORY JAY, Professor of Emergency Medicine, Professor of Medicine, Professor of Engineering (Research)
MAHESH JAYARAMAN, Assistant Professor of Diagnostic Imaging, Assistant Professor of Neurosurgery
THOMAS JEAN, Clinical Instructor in Medicine
JULIE JEFFERSON, Clinical Assistant Professor of Community Health
ELISSA JELALLAN, Associate Professor of Psychiatry and Human Behavior, Associate Professor of Pediatrics
NATHANIEL JELLINEK, Clinical Assistant Professor of Dermatology
BETHANY JENKINS, Adjunct Assistant Professor of Ecology and Evolutionary Biology
MELISSA JENKINS, Clinical Assistant Professor of Psychiatry and Human Behavior
ODEST JENKINS, Associate Professor of Computer Science
ERNESTINE JENNINGS, Assistant Professor of Psychiatry and Human Behavior (Research)
CAROLE JENNY, Professor of Pediatrics
ILSE JENOURI, Clinical Assistant Professor of Emergency Medicine
CAROL JENSEN, Clinical Assistant Professor of Psychiatry and Human Behavior
JENNIFER JEREMIAH, Clinical Associate Professor of Medicine
BETH JERSKEY, Assistant Professor of Psychiatry and Human Behavior (Research)
ANTAL JEVKICI, Professor of Physics
SURIYA JEYPALAN, Assistant Professor of Neurology
SHARON JEZARD, Clinical Assistant Professor of Family Medicine
YONGWEN JIANG, Assistant Professor of Community Health (Clinical)
HITESH JINDAL, Assistant Professor of Medicine (Research)
LOUIS JODRY, Senior Lecturer in Music
GERWALD JOGL, Assistant Professor of Biology
BELINDA JOHNSON, Clinical Assistant Professor of Psychiatry and Human Behavior
BENJAMIN JOHNSON, Clinical Assistant Professor of Psychiatry and Human Behavior
CHRISTINE JOHNSON, Clinical Assistant Professor of Family Medicine
EILEEN JOHNSON, Clinical Assistant Professor of Psychiatry and Human Behavior
GARY JOHNSON, Associate Professor of Neurology (Clinical)
JENNIFER JOHNSON, Assistant Professor of Psychiatry and Human Behavior (Research)
JULIE JOHNSON, Assistant Professor of Obstetrics and Gynecology
MARK JOHNSON, Associate Professor of Biology
MICHAEL JOHNSON, Clinical Assistant Professor of Medicine
ROBERT JOHNSTON, Clinical Assistant Professor of Psychiatry and Human Behavior
TATIANA JOHNSTON, Instructor in Pathology and Laboratory Medicine (Research)
THOM JONES, Clinical Associate Professor of Theatre Arts and Performance Studies
PLAKYIL JOSEPH, Clinical Assistant Professor of Medicine
DAVID JOSEPHSON, Professor of Music
DJURO JOSIC, Professor of Medicine (Research)
DONALD JOYCE, Clinical Assistant Professor of Radiation Oncology
LYNNE JOYRICH, Associate Professor of Modern Culture and Media
ANNMARIE JURCZAK, Clinical Assistant Professor of Obstetrics and Gynecology
ALICIA JUSTUS, Assistant Professor of Community Health (Research)
DAVID KADMON, Clinical Assistant Professor of Family Medicine
PENNY KADMON, Clinical Instructor in Pediatrics
SAMUEL KAGAN, Clinical Assistant Professor of Family Medicine
CHRISTOPHER KAHLER, Professor of Community Health (Research)
CHARLES KAHN, Clinical Professor of Medicine
COPPELIA KAHN, Professor of English
S. PAUL KAJENCKI, Clinical Assistant Professor of Family Medicine
BRETT KALMOWITZ, Clinical Assistant Professor of Medicine
ACHYUT KAMAT, Clinical Associate Professor of Emergency Medicine
MICHAEL KAMINER, Adjunct Assistant Professor of Dermatology
AGNES KANE, Professor of Medical Science
RAMI KANTOR, Assistant Professor of Medicine
BARBARA KAO, Clinical Assistant Professor of Pediatrics
HUNG-TEH KAO, Associate Professor of Psychiatry and Human Behavior (Research)
DAVID KAPLAN, Clinical Assistant Professor of Emergency Medicine
NICOLAOS KAPOULEAS, Professor of Mathematics
DENNIS KARAMBELAS, Teaching Associate of Surgery
PETER KARCZMAR, Clinical Assistant Professor of Medicine
GEORGE KARNIADAKIS, Professor of Applied Mathematics
CAROLINE KARP, Senior Lecturer in Environmental Studies
MOHIT KASIBHATLA, Clinical Assistant Professor of Radiation Oncology
JULIA KATARINCIC, Assistant Professor of Orthopaedics
DAVID KATZ, Clinical Assistant Professor of Medicine
EMILY KATZ, Assistant Professor of Psychiatry and Human Behavior (Clinical)
TAMAR KATZ, Associate Professor of English
GARY KATZMAN, Clinical Assistant Professor of Medicine
JULIE KAUFER, Professor of Medical Science
JOEL KAUFMAN, Clinical Associate Professor of Neurology
CRAYK KAUFMANN, Clinical Assistant Professor of Psychiatry and Human Behavior
JOHN KAWAOKA, Clinical Assistant Professor of Dermatology
DAVID KAWATU, Clinical Assistant Professor of Pediatrics
ALI KAZIM, Clinical Associate Professor of Psychiatry and Human Behavior, Clinical
Associate Professor of Emergency Medicine
WILLIAM KEACH, Professor of English
EDWARD KEATING, Clinical Assistant Professor of Medicine
W. SCOTT KEIGWIN, Clinical Assistant Professor of Family Medicine
GABOR KEITNER, Professor of Psychiatry and Human Behavior
MARTIN KELLER, Mary E. Zucker Professor of Psychiatry and Human Behavior,
Professor of Psychiatry and Human Behavior
COLLEEN KELLY, Clinical Assistant Professor of Medicine
JOHN KELLY, Adjunct Associate Professor of Community Health
Megan KELLY, Adjunct Assistant Professor of Psychiatry and Human Behavior
(Research)
SUSAN KELLY, Clinical Assistant Professor of Psychiatry and Human Behavior
KARL KELSEY, Professor of Community Health, Professor of Pathology and Laboratory
Medicine
PATRICK KELTY, Clinical Assistant Professor of Surgery (Urology)
STEVEN KEMPNER, Clinical Assistant Professor of Medicine
GEORGE KENNA, Assistant Professor of Psychiatry and Human Behavior (Research)
CHRISTINE KENNEDY, Clinical Assistant Professor of Family Medicine
MICHAEL KENNEDY, Professor of Sociology
RICHARD KENYON, Professor of Mathematics
KAREN KERMAN, Clinical Assistant Professor of Neurology, Clinical Assistant
Professor of Pediatrics
LAURA KERTZ, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences
DAVID KERTZER, Paul R. Dupee, Jr., University Professor of Social Science
YOUENN KERVENNIC, Senior Lecturer in French Studies
DAVID KERZER, Clinical Assistant Professor of Family Medicine
MARTIN KERZER, Clinical Assistant Professor of Family Medicine
NOUBAR KESSIMIAN, Associate Professor of Pathology and Laboratory Medicine
(Clinical)
LISA KESWICK, Clinical Instructor in Pediatrics
NANCY KHALEK, Assistant Professor of Religious Studies
HANAN KHALIL, Assistant Professor of Diagnostic Imaging (Clinical)
JACQUES KHALIP, Robert Gale Noyes Assistant Professor of Humanities
AMIR KHAN, Clinical Assistant Professor of Psychiatry and Human Behavior
PERVEZ KHATIB, Clinical Assistant Professor of Family Medicine
RAZI KHAN, Clinical Assistant Professor of Medicine
ELIAS KHAWAM, Clinical Instructor in Medicine
NABIL KHOURY, Clinical Associate Professor of Obstetrics and Gynecology
HUMERA KHURSHID, Assistant Professor of Medicine
DOUGLAS KIEL, Adjunct Professor of Community Health
SUSAN KIENE, Assistant Professor of Medicine (Research), Assistant Professor of Community Health (Research)
JANE KIFF, Assistant Professor of Pediatrics (Clinical)
DANIEL KIM, Associate Professor of English
EUNHEE KIM, Assistant Professor of Community Health
EUNSU KIM, Assistant Professor of Chemistry
HYUN KIM, Clinical Assistant Professor of Community Health
JAEGWON KIM, William Herbert Perry Faunce Professor of Philosophy
KYUNG-SUK KIM, Professor of Engineering
MIN KIM, Visiting Professor of Molecular Pharmacology, Physiology and Biotechnology
MIRAN KIM, Assistant Professor of Medicine (Research)
BRIAN KIMBLE, Clinical Assistant Professor of Medicine
BENJAMIN KIMIA, Professor of Engineering
ANGUS KINGON, Barrett Hazeltine University Professor of Entrepreneurship and Organizational Studies
TIMOTHY KINSELLA, Professor of Radiation Oncology
MALCOLM KIRK, Clinical Assistant Professor of Medicine
WILLIAM KIRKPATRICK, Senior Teaching Associate of Medicine
KATHRYN KIRSHENBAUM, Teaching Associate of Psychiatry and Human Behavior
JENNIFER KITTLER, Clinical Assistant Professor of Psychiatry and Human Behavior
DAVID KITZES, Clinical Associate Professor of Medicine
FRANK KLEIBERGEN, Professor of Economics
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ERIKA KLEIN, Clinical Assistant Professor of Obstetrics and Gynecology
MICHAEL A. KLEIN, Clinical Assistant Professor of Pathology and Laboratory Medicine
MICHAEL D. KLEIN, Clinical Assistant Professor of Family Medicine
PHILIP KLEIN, Professor of Computer Science
ROBERT KLEIN, Sylvia Kay Hassenfeld Professor of Pediatrics, Professor of Pediatrics
JACK KLEIE, Clinical Assistant Professor of Medicine
PETRA KLINGE, Associate Professor of Neurosurgery
JAMES KLINGER, Associate Professor of Medicine
CINDY KLIPFEL, Clinical Instructor in Pediatrics
MARGARET KLOTZKE, Clinical Assistant Professor of Psychiatry and Human Behavior
JANKLYSIAK, Associate Professor of Molecular Biology, Cell Biology and Biochemistry (Research)
THOMAS KNIESCHE, Associate Professor of German Studies
BRIAN KNIGHT, Associate Professor of Economics
GEORGE KNIGHT, Adjunct Assistant Professor of Pathology and Laboratory Medicine
VALERIE KOPIK, Associate Professor of Psychiatry and Human Behavior (Research), Associate Professor of Community Health (Research)
LEO KOBAYASHI, Assistant Professor of Emergency Medicine
MARGARET KOEHM, Clinical Assistant Professor of Family Medicine
SUSAN KOELLLKER, Assistant Professor of Diagnostic Imaging (Clinical)
ROBERT Kohn, Associate Professor of Psychiatry and Human Behavior
DAPHNE KOINIS-MITCHELL, Assistant Professor of Psychiatry and Human Behavior (Research)
ERNA KOJIC, Assistant Professor of Medicine
CHRISTOPHER KOLLER, Teaching Associate of Community Health
R JAMES KONESS, Clinical Assistant Professor of Surgery
SHERYL KOPEL, Research Associate of Psychiatry and Human Behavior
MATTHEW KOPP, Clinical Assistant Professor of Emergency Medicine
GIDEON KOREN, Professor of Medicine
NORMAN KORNWITZ, Teaching Associate of Orthopaedics
KENNETH KORR, Associate Professor of Medicine
MICHAEL KOSTER, Assistant Professor of Pediatrics (Clinical)
MICHAEL KOSTERLITZ, Harrison E. Farnsworth Professor of Physics
RENU KOTHARI, Clinical Assistant Professor of Psychiatry and Human Behavior
CHRISTOPHER KOTTKE, Tamarkin Assistant Professor of Mathematics
ASHOK KOUL, Senior Lecturer in Language Studies
SAVVAS KOUŞIAPPAS, Assistant Professor of Physics
NICOLA KOUTTAB, Adjunct Associate Professor of Pathology and Laboratory Medicine (Research)
ALEXANDER KOWAL, Clinical Instructor in Diagnostic Imaging
LILIYA KOYFMAN, Clinical Assistant Professor of Psychiatry and Human Behavior
ROSS KRAEMER, Professor of Religious Studies
THOMAS KRAHN, Clinical Assistant Professor of Medicine
NAOMI KRAMER, Clinical Assistant Professor of Medicine
SHERON KRAUSE, Professor of Political Science
VIRGINIA KRAUSE, Associate Professor of French
DENNIS KRAUSS, Clinical Assistant Professor of Medicine
JILL KREILING, Assistant Professor of Biology (Research)
JOCELYN KREISS, Clinical Assistant Professor of Family Medicine
ANDREA KRETZSCHMAR, Clinical Assistant Professor of Psychiatry and Human Behavior
SHIRIRAM KRISHNAMURTHI, Associate Professor of Computer Science
BERGLUND KRISTINA, Clinical Instructor in Medicine
K. DIAN KRIZ, Professor of History of Art and Architecture
ULRICH KROTZ, Assistant Professor of Political Science
GEORGE KROUMPOUZOS, Clinical Assistant Professor of Dermatology
JOACHIM KRUEGER, Professor of Cognitive, Linguistic, and Psychological Sciences
BRANDON KRUPP, Clinical Associate Professor of Psychiatry and Human Behavior
MAGDELENA KRZYSTOLIK, Clinical Assistant Professor of Surgery (Ophthalmology)
DONNA KUCHARSKI, Clinical Assistant Professor of Surgery (Anesthesiology)
K. SHARVAN KUMAR, Professor of Engineering
VARUN KUMAR, Clinical Assistant Professor of Pediatrics
N. KUMARASAMY, Senior Research Associate of Medicine
JACQUELYN KUNG, Teaching Associate of Community Health
SYLVIA KUO, Assistant Professor of Community Health (Research)
MARINA KUPERMAN-BEADE, Clinical Assistant Professor of Dermatology
ARLET KURCHUBASCHE, Associate Professor of Surgery (Pediatric Surgery), Associate Professor of Pediatrics
JAYNE KURKJIAN, Clinical Assistant Professor of Psychiatry and Human Behavior
KATHLEEN KUROWSK, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences (Research)
JONATHAN KURTIS, Associate Professor of Pathology and Laboratory Medicine
HAROLD KUSHNER, Professor of Applied Mathematics (Research)
DOUGLAS KUTACH, Assistant Professor of Philosophy
HELENA KWAKWA, Research Associate of Medicine
AWEWURA KWARA, Assistant Professor of Medicine
JOHN LADETTO, Clinical Assistant Professor of Medicine
JOHN LAFLUEUR, Clinical Assistant Professor of Emergency Medicine
DONNA LAFONTAINE, Clinical Associate Professor of Obstetrics and Gynecology (Research), Assistant Professor of Neurology (Research)
W. CURT LAFRANCE, Assistant Professor of Psychiatry and Human Behavior (Research), Assistant Professor of Neurology (Research)
JORGE LAGARES-GARCIA, Clinical Assistant Professor of Surgery (Colo-Rectal Surgery)
LINDA LAGASSE, Associate Professor of Pediatrics (Research)
ZHONGBIN LALI, Research Associate of Pediatrics
DAVID LAIDLAW, Professor of Computer Science
CHANDAN LAKHIANI, Assistant Professor of Pediatrics (Clinical)
LINDA LALIBERTE-COTE, Clinical Assistant Professor of Community Health
EDWARD LALLY, Professor of Medicine
MICHELLE LALLY, Associate Professor of Medicine
ROBERT LAMBE, Clinical Assistant Professor of Family Medicine
JENNIFER LAMBERT, Clinical Assistant Professor of Psychiatry and Human Behavior
GERALYN LAMBERT-MESSERLIEN, Associate Professor of Pathology and Laboratory Medicine
ROBERT LAMBIASE, Associate Professor of Diagnostic Imaging
JON LAMBRICHT, Clinical Assistant Professor of Medicine
CHAD LAMENDOLA, Clinical Assistant Professor of Family Medicine
CAROL LANDAU, Clinical Professor of Psychiatry and Human Behavior, Clinical Professor of Medicine
ALAN LANDMAN, Associate Professor of Mathematics
GEORGE LANDOW, Professor of English
GREG LANDSBERG, Professor of Physics
ARTHUR LANDY, University Professor of Medical Science
JEFFREY LANEY, Assistant Professor of Medical Science
THOMAS LANG, Clinical Assistant Professor of Surgery (Ophthalmology)
ELIZABETH LANGE, Clinical Assistant Professor of Pediatrics
THILO LANGE, Adjunct Assistant Professor of Molecular Biology, Cell Biology, and Biochemistry (Research)
ROBERT LANOU, Professor of Physics (Research)
CANDACE LAPHO, Assistant Professor of Dermatology, Assistant Professor of Pediatrics
ELIZABETH LAPOSA, Clinical Associate Professor of Pathology and Laboratory Medicine
ABBOT LAPTOK, Professor of Pediatrics
JEROME LARKIN, Assistant Professor of Medicine (Clinical)
CHARLES LARMORE, Professor of Philosophy
STEVEN LAROSA, Assistant Professor of Medicine
JESSICA LAROSE, Assistant Professor of Psychiatry and Human Behavior (Research)
ERICA LARSCHE, Assistant Professor of Biology
LUCIA LARSON, Associate Professor of Obstetrics and Gynecology, Associate Professor of Medicine
SYED LATIF, Professor of Pathology and Laboratory Medicine (Clinical)
MARC LAUFGRABEN, Clinical Associate Professor of Medicine
JOSEPH LAURO, Assistant Professor of Emergency Medicine (Clinical)
LAURA LAVALLEE, Teaching Associate of Family Medicine
NABIL LAWANDY, Professor of Engineering (Research)
CHARLES LAWRENCE, Professor of Applied Mathematics
W. DWAYNE LAWRENCE, Professor of Pathology and Laboratory Medicine
MICHAEL LAWS, Assistant Professor of Community Health (Research)
BRUCE LAZARUS, Clinical Assistant Professor of Family Medicine
ELIZABETH LAZARUS, Assistant Professor of Diagnostic Imaging
TRICIA LEAHEY, Assistant Professor of Psychiatry and Human Behavior (Research)
MONIQUE LEBOURGEOIS, Adjunct Assistant Professor of Psychiatry and Human Behavior (Research)
BEATRICE LECHNER, Assistant Professor of Pediatrics
PATRICIA LEDDY, Teaching Associate of Community Health
CHRISTINA LEE, Assistant Professor of Community Health (Research)
GEORGE LEE, Clinical Assistant Professor of Medicine
HAN-KYU LEE, Senior Research Associate of Neurology
JINKEE LEE, Assistant Professor of Engineering (Research)
LAWRENCE LEE, Clinical Assistant Professor of Family Medicine
ROBERT LEE, Associate Professor of American Civilization
SUNG-WOO LEE, Assistant Professor of Radiation Oncology
YUN LEE, Clinical Assistant Professor of Pediatrics
MICHELLE LEFEBVRE, Clinical Instructor in Pediatrics
JANET LEFKOWITZ, Clinical Instructor in Obstetrics and Gynecology
ROBERT LEGARE, Associate Professor of Obstetrics and Gynecology (Clinical), Associate Professor of Medicine (Clinical)
LORENZO LEGGIO, Assistant Professor of Community Health (Research)
MARK LEGOLVAN, Assistant Professor of Pathology and Laboratory Medicine
JESSACA LEINAWEAVER, Vartan Gregorian Assistant Professor of Anthropology
PHILIP LEIS, Professor of Anthropology
KIMBERLY LEITE-MORRIS, Adjunct Assistant Professor of Community Health
NEAL LELEIKO, Professor of Pediatrics
MICHAEL LEPORE, Investigator in Community Health
VICTOR LERISH, Clinical Assistant Professor of Pediatrics
CELIA LESCANO, Assistant Professor of Psychiatry and Human Behavior (Research)
HEATHER LESLIE, Sharpe Assistant Professor of Environmental Studies And Biology
BARRY LESTER, Professor of Psychiatry and Human Behavior, Professor of Pediatrics
GARY L'EUROPA, Teaching Associate of Neurology
WILLIAM LEVIN, Clinical Associate Professor of Medicine
ADAM LEVINE, Assistant Professor of Emergency Medicine
DANIEL LEVINE, Clinical Associate Professor of Medicine
LAURA LEVINE, Clinical Assistant Professor of Psychiatry and Human Behavior
ROSS LEVINE, James and Meryl Tisch Professor of Economics
SCOTT LEVINE, Assistant Professor of Diagnostic Imaging (Clinical)
TODD LEVINE, Instructor in Psychiatry and Human Behavior (Research)
PAUL LEVINSON, Associate Professor of Medicine
ALEXANDER LEVITSKY, Professor of Slavic Languages
CAROL LEVITT, Clinical Assistant Professor of Family Medicine
DORE LEVY, Professor of Comparative Literature and East Asian Studies
MITCHELL LEV, Professor of Medicine
WILLIAM LEWANDER, Professor of Emergency Medicine, Professor of Pediatrics
BETH LEWIS, Adjunct Assistant Professor of Psychiatry and Human Behavior
CAROL LEWIS, Associate Professor of Pediatrics (Clinical)
THOMAS LEWIS, Associate Professor of Religious Studies
GUANGLAI LI, Assistant Professor of Physics (Research)
JI SU LI, Associate Professor of Medicine (Research)
JIN LI, Associate Professor of Education and Human Development
LEI-SHI LI, Adjunct Professor of Medicine
YAN LIANG, Associate Professor of Geological Science
N. PETER LIBBEY, Clinical Associate Professor of Pathology and Laboratory Medicine
JONAH LICHT, Clinical Assistant Professor of Medicine
RASHMI LICHT, Clinical Assistant Professor of Surgery (Urology)
WARREN LICHT, Clinical Assistant Professor of Medicine
STEVE LICHTENBAUM, Roland George Dwight Richardson University Professor of Mathematics
KRISTIN LICHTENBERG, Clinical Assistant Professor of Family Medicine
DAVID LICHTENSTEIN, Clinical Assistant Professor of Psychiatry and Human Behavior
DIANA LIDOFSKY, Clinical Assistant Professor of Psychiatry and Human Behavior
SHELDON LIDOFSKY, Clinical Assistant Professor of Medicine
PAUL LIEBERMAN, Associate Professor of Psychiatry and Human Behavior (Clinical)
PHILIP LIEBERMAN, Fred M. Seed Professor of Cognitive and Linguistic Sciences
OTTO LIEBMANN, Assistant Professor of Emergency Medicine
STACEY LIEVENSE, Clinical Assistant Professor of Obstetrics and Gynecology
ENG-BENG LIM, Assistant Professor of Theatre Arts and Performance Studies
YOW-PIN LIM, Adjunct Assistant Professor of Pathology and Laboratory Medicine
PATRICK LIMBACH, Visiting Scientist of Molecular Biology, Cell Biology, and Biochemistry
RICHARD LIMBIRD, Clinical Assistant Professor of Orthopaedics
HAI LIN, Assistant Professor of Pediatrics (Research)
JAMES LINAKIS, Associate Professor of Emergency Medicine, Associate Professor of Pediatrics
EVELYN LINCOLN, Associate Professor of History of Art and Architecture and Associate Professor of Italian Studies
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XINSHENG LING, Professor of Physics
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JAMES LIPPINCOTT, Clinical Assistant Professor of Family Medicine
DIANE LIPSCOMBE, Professor of Neuroscience
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JOSEPH LIU, Professor of Engineering
NA LIU, Research Associate of Medicine
TAO LIU, Assistant Professor of Community Health (Research)
YUHONG LIU, Research Associate of Surgery (Cardiothoracic Surgery)
ZHI-HONG LIU, Adjunct Professor of Medicine
DAVID LIVINGSTON, Adjunct Associate Professor of Molecular Pharmacology, Physiology and Biotechnology
SOFIA LIZARRAGA, Investigator in Molecular Biology, Cell Biology, and Biochemistry
ELIZABETH LLOYD-RICHARDSON, Adjunct Assistant Professor of Psychiatry and Human Behavior (Research)
ALBERT LO, Assistant Professor of Neurology, Assistant Professor of Community Health
DEBRA LOBATO, Professor of Psychiatry and Human Behavior (Clinical)
GREGORY LOCKHART, Associate Professor of Emergency Medicine (Clinical), Associate Professor of Pediatrics (Clinical)
JOHN LOGAN, Professor of Sociology and Professor of Environmental Studies
JOANNE LOMAS-NEIRA, Instructor in Surgery (Research)
MICHELE LOMME, Assistant Professor of Pathology and Laboratory Medicine
CYNTHIA LONCAR, Assistant Professor of Pediatrics (Research)
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JOHN LONKS, Associate Professor of Medicine
SALVATORE LOPORCHIO, Clinical Assistant Professor of Surgery (Ophthalmology)
PEEM LORVIDHAYA, Clinical Assistant Professor of Medicine
PHYLIS LOSIKOFF, Assistant Professor of Pediatrics (Clinical)
ERIC LOUCKS, Assistant Professor of Medical Science
MARIAM LOUIS, Assistant Professor of Medicine
ANA LOURENCO, Assistant Professor of Diagnostic Imaging
GLENN LOURY, Merton P. Stoltz Professor of the Social Sciences
JOHN LUO, Adjunct Clinical Assistant Professor of Family Medicine
QING LU, Assistant Professor of Medicine (Research)
STEVEN LUBAR, Professor of American Civilization and Professor of History
PHILLIP LUCAS, Clinical Associate Professor of Orthopaedics
ARNOLD LUDWIG, Adjunct Professor of Psychiatry and Human Behavior
IVANA LUKACOVA-ZIB, Clinical Assistant Professor of Medicine
KATARINA LUKATELA, Clinical Assistant Professor of Psychiatry and Human Behavior
NANCY LUKE, Assistant Professor of Sociology
FRANCOIS LUKS, Professor of Surgery, Professor of Pediatrics, Professor of Obstetrics and Gynecology
PAULINE LUONG, Associate Professor of Political Science
MARK LURIE, Assistant Professor of Medical Science
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ANNA LYSYANSKAYA, Associate Professor of Computer Science
STEPHANIE MACAUSLAND, Assistant Professor of Radiation Oncology
JASON MACHAN, Assistant Professor of Orthopaedics (Research), Assistant Professor of Surgery (Research)
JOHN MACHATA, Clinical Assistant Professor of Family Medicine
ANNA MACKAY-BRANDT, Research Associate of Psychiatry and Human Behavior
JAMES MACKILLOP, Adjunct Assistant Professor of Community Health
SCOTT MACKINNON, Clinical Assistant Professor of Surgery (Anesthesiology)
DAVID MACLEAN, Adjunct Associate Professor of Medicine
SUSANNA MAGEE, Assistant Professor of Family Medicine
HENRY MAGENDANTZ, Clinical Associate Professor of Obstetrics and Gynecology
SAMUEL MAGHUYOP, Clinical Assistant Professor of Medicine
MOLLY MAGILL, Assistant Professor of Community Health (Research)
MICHAEL MAHER, Assistant Professor of Medicine (Clinical)
ROSEMARY MAHER, Teaching Associate of Medicine
JAMES MAHER, Clinical Assistant Professor of Orthopaedics
MARTHA MAINIERO, Associate Professor of Diagnostic Imaging
ABBY MAIZEL, Adjunct Professor of Pathology and Laboratory Medicine
SAMIR MAKARIOUS, Clinical Assistant Professor of Medicine
NOEMI MALANDRINO, Visiting Research Associate of Medicine
TARIQ MALIK, Clinical Associate Professor of Medicine
BERTRAM MALLE, Professor of Cognitive, Linguistic, and Psychological Sciences
JOHN MALLET-PARET, George Ide Chase Professor of the Physical Sciences
PAUL MALLOY, Professor of Psychiatry and Human Behavior
STEVEN MALLOZZI, Clinical Assistant Professor of Medicine
SHAFIQ MAMDANI, Clinical Assistant Professor of Medicine
MARIA MANCEBO, Assistant Professor of Psychiatry and Human Behavior (Research)
MAUD MANDEL, Associate Professor of History and Judaic Studies
DAVID MANDELBAUM, Professor of Neurology, Professor of Pediatrics
SHREYAS MANDRE, Assistant Professor of Engineering
JOHANNA MANGAHAS KUTLUHAN, Tamarkin Assistant Professor of Mathematics
SHAMLAL MANGRAY, Assistant Professor of Pathology and Laboratory Medicine
ABIGAIL MANSFIELD MARCACCIO, Assistant Professor of Psychiatry and Human Behavior (Research)
FADI MANSOURATI, Clinical Assistant Professor of Medicine
GINGER MANZO, Clinical Assistant Professor of Psychiatry and Human Behavior
PIERRE MANZO, Clinical Assistant Professor of Family Medicine
QUANFU MAO, Research Associate of Pathology and Laboratory Medicine
BETH MARCACCIO, Clinical Assistant Professor of Obstetrics and Gynecology
EDWARD MARCACCIO, Assistant Professor of Surgery (Clinical)
VINCENT MARCACCIO, Clinical Instructor in Medicine
DAVID MARCOUX, Clinical Assistant Professor of Medicine
BESS MARCUS, Professor of Medical Science
PETER MARGOLIS, Clinical Assistant Professor of Medicine
LOUIS MARINO, Clinical Associate Professor of Psychiatry and Human Behavior
HUMPHREY MARIS, Hazard Professor of Physics
DAVID MARK WELCH, Assistant Professor (MBL) of Molecular Biology, Cell Biology, and Biochemistry, Assistant Professor (MBL) of Ecology and Evolutionary Biology
JOHN MARSHALL, Professor of Medical Science
LOWRY MARSHALL, Professor of Theatre Arts and Performance Studies
ROBERT MARSHALL, Clinical Associate Professor of Community Health
CARMEN MARSIT, Assistant Professor of Community Health, Assistant Professor of Pathology and Laboratory Medicine
JOHN MARSTON, Professor of Physics
DOUGLAS MARTIN, Assistant Professor of Medicine (Clinical)
EDWARD MARTIN, Clinical Associate Professor of Medicine
ROSEMARIE MARTIN, Assistant Professor of Community Health (Research)
SARAH MARTIN, Clinical Assistant Professor of Psychiatry and Human Behavior
MARIO MARTINEZ, Teaching Associate of Pediatrics
RONALD MARTINEZ, Professor of Italian Studies
LAUREN MARVELL, Teaching Associate of Surgery
DANIEL MARWIL, Clinical Instructor in Pediatrics
GABRIELA MASKO, Clinical Assistant Professor of Radiation Oncology
ANDREW MASLOW, Clinical Associate Professor of Surgery (Anesthesiology)
CAROLE MASO, Professor of English
NADINE MASTROLEO, Assistant Professor of Community Health (Research)
DONNAH MATHEWS, Clinical Assistant Professor of Medicine
CLAIRE MATHIEU, Professor of Computer Science
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CHRISTOPHER MATKOVIC, Clinical Assistant Professor of Psychiatry and Human Behavior
KRISTEN MATTESON, Assistant Professor of Obstetrics and Gynecology
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MARTIN MAXEY, Professor of Applied Mathematics
KENNETH MAYER, Professor of Medicine, Professor of Community Health
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PETER MAZZAGLIA, Assistant Professor of Surgery
ALDO MAZZUCHELLI, Assistant Professor in Hispanic Studies
JEANNE MCCAFFERY, Associate Professor of Psychiatry and Human Behavior (Research)
KATHLEEN MCCARTEN, Associate Professor of Diagnostic Imaging (Clinical), Associate Professor of Pediatrics (Clinical)
THOMAS MCCAULEY, Clinical Assistant Professor of Surgery (Ophthalmology)
JAMES MCCLAIN, Professor of History and Professor of East Asian Studies
STEVEN MCCLOY, Clinical Assistant Professor of Medicine
EDIE MCCONNAUGHY, Senior Teaching Associate of Obstetrics and Gynecology
DAVID MCCONVILLE, Clinical Assistant Professor of Psychiatry and Human Behavior
F. DENNIS MCCOOL, Professor of Medicine
CAROLYN MCCOURT, Assistant Professor of Obstetrics and Gynecology
CHARLES MCCOY, Clinical Associate Professor of Medicine
ROSE MCDERMOTT, Professor of Political Science
CHARLES MCDONALD, Professor of Dermatology
REBECCA MCEACHERN, Assistant Professor of Pediatrics (Clinical)
BRIAN MCELENEY, Clinical Professor of Theatre Arts and Performance Studies
MATTHEW MCGARRELL, Senior Lecturer in Music
KELLY MCGARRY, Associate Professor of Medicine
STEPHEN MCGARVEY, Professor of Community Health
JOHN MCGEARY, Assistant Professor of Psychiatry and Human Behavior
BRIAN MCGILLEN, Assistant Professor of Medicine (Clinical)
KAREN MCGOLDRICK, Clinical Assistant Professor of Obstetrics and Gynecology
JOHN MCGONIGLE, Clinical Instructor in Family Medicine
BETHANY MCGONNIGAL, Research Associate of Pediatrics
EDWARD MCGOOKIN, Clinical Assistant Professor of Pediatrics, Clinical Assistant Professor of Family Medicine
ANDREW MCGRATH, Clinical Instructor in Pediatrics
MARGARET MCGRATH, Adjunct Professor of Pediatrics
ALKYON MCGREGOR, Assistant Professor of Emergency Medicine
KEVIN MCKAY, Clinical Assistant Professor of Psychiatry and Human Behavior
GEORGE MCKENDALL, Associate Professor of Medicine
SHARON MCKENZIE, Research Associate of Medicine
MICHAEL MCKEOWN, Professor of Medical Science
LORI MCKINSEY, Clinical Assistant Professor of Psychiatry and Human Behavior
KEVIN MCLAUGHLIN, Nicholas Brown Professor of Oratory and Belles Lettres and Professor of English
NICOLE MCLAUGHLIN, Assistant Professor of Psychiatry and Human Behavior (Research)
SUZANNE MCLAUGHLIN, Assistant Professor of Pediatrics, Assistant Professor of Medicine (Clinical)
NAOMI MCMACKIN, Adjunct Assistant Professor of Family Medicine
PAUL MCMILLAN, Associate Professor of Pathology and Laboratory Medicine (Clinical)
JEROME MCMURRAY, Teaching Associate of Family Medicine
JOSEPH MCNAMARA, Assistant Professor of Pediatrics (Clinical)
MEGAN MCNAMARA, Clinical Instructor in Emergency Medicine
LYNN MCNICOLL, Assistant Professor of Medicine
LAURA MCPEAKE, Assistant Professor of Emergency Medicine (Clinical)
WILLIAM MCQUADE, Adjunct Assistant Professor of Family Medicine
ELIZABETH MCQUAID, Associate Professor of Psychiatry and Human Behavior (Research)
ROBERT MCRAN, Clinical Assistant Professor of Surgery (Otolaryngology)
RICHARD MECKEL, Associate Professor of American Civilization and Associate Professor of History
CARROLL MEDEIROS, Clinical Assistant Professor of Obstetrics and Gynecology
ILDIKO MEDVE, Clinical Instructor in Medicine
SANDRA MEECH, Clinical Assistant Professor of Pediatrics
ANTHONY MEGA, Associate Professor of Medicine (Clinical)
ROBYN MEHLENBECK, Clinical Associate Professor of Psychiatry and Human Behavior
NIHARIKA MEHTA, Assistant Professor of Medicine (Clinical)
CHRISTOPHER MELHIS, Adjunct Assistant Professor of Radiation Oncology
JERRY MELILLO, Professor (MBL) of Ecology and Evolutionary Biology
MICHELLE MELHIS, Assistant Professor of Neurology
MICHAEL MELLO, Associate Professor of Emergency Medicine, Associate Professor of Community Health
BLAISE MELLY, Assistant Professor of Economics
LISA MENARD-MANLOVE, Clinical Assistant Professor of Family Medicine
ULRIKE MENDE, Associate Professor of Medicine
DEBBIE MENDELOHN, Teaching Associate of Psychiatry and Human Behavior
MANUELA MENDES, Clinical Assistant Professor of Family Medicine
GOVIND MENON, Associate Professor of Applied Mathematics
JUDITH MERCER, Adjunct Professor of Pediatrics
ROLAND MERCHANT, Associate Professor of Emergency Medicine, Associate Professor of Community Health
ARTHUR MERCURIO, Teaching Associate of Psychiatry and Human Behavior
THOMAS MEREDITH, Assistant Professor of Emergency Medicine (Clinical)
ROBERT MERINGOLO, Clinical Associate Professor of Medicine
LEONARD MERMEL, Professor of Medicine
STEPHEN MERNOFF, Associate Professor of Neurology (Clinical)
STEPHANIE MERRIM, Professor of Comparative Literature and Hispanic Studies
JOHN MERTUS, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences (Research)
JANE METRIK, Assistant Professor of Community Health (Research)
KEITH METZGER, Adjunct Assistant Professor of Ecology and Evolutionary Biology
SHAHJAHAN MIAH, Investigator in Molecular Microbiology and Immunology
DOMINIQUE MICHAUD, Associate Professor of Community Health
JACQUELINE MICHAUD, Clinical Instructor in Medicine
PAOLO MIGANI, Visiting Scientist of Molecular Pharmacology, Physiology and Biotechnology
MICHAEL MIGLIORI, Clinical Associate Professor of Surgery (Ophthalmology)
STEPHEN MIGLIORI, Assistant Professor of Surgery (Clinical) (Laparoscopy)
JOHN MIGNANO, Adjunct Instructor in Radiation Oncology
LISA MIGNONE, Assistant Professor of Classics
IVAYLO MIHAYLOV, Assistant Professor of Radiation Oncology
DENNIS MIKOLICH, Clinical Associate Professor of Medicine
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ALISON MILLER, Adjunct Assistant Professor of Psychiatry and Human Behavior (Research)
E. BRADLEY MILLER, Clinical Assistant Professor of Surgery (Urology)
EDWARD MILLER, Adjunct Associate Professor of Community Health
HOWARD MILLER, Clinical Assistant Professor of Surgery (Urology)
IVAN MILLER, Professor of Psychiatry and Human Behavior
JANICE MILLER, Clinical Assistant Professor of Family Medicine
KENNETH MILLER, Professor of Biology
KIRI MILLER, Manning Assistant Professor of Music
MARGARET MILLER, Assistant Professor of Medicine, Assistant Professor of Obstetrics and Gynecology
SUSAN MILLER, Associate Professor of Community Health (Research)
RICHARD MILLMAN, Professor of Medicine
DAVID MILLS, Assistant Professor of Medicine (Research)
TARO MINAMI, Assistant Professor of Medicine (Clinical)
DIANE MINASIAN, Clinical Assistant Professor of Family Medicine
MARTIN MINER, Clinical Associate Professor of Family Medicine, Clinical Associate Professor of Surgery (Urology)
THOMAS MINER, Assistant Professor of Surgery
JANE MINIUTTI, Clinical Assistant Professor of Family Medicine
PATRICIA MINUGH, Clinical Assistant Professor of Community Health
ROBERT MIRANDA, Associate Professor of Psychiatry and Human Behavior (Research)
JOHN MISKOVSKY, Clinical Assistant Professor of Medicine
Cristina Mitchell, Clinical Assistant Professor of Family Medicine
VESNA MITROVIC, Associate Professor of Physics
JOSEF MITTELHANN, Clinical Professor of Engineering
JEFFREY MOFFIT, Adjunct Assistant Professor of Pathology and Laboratory Medicine
SUSAN MOFFIT, Assistant Professor of Political Science and Public Policy
LESLIE MOHLMAN, Clinical Instructor in Pediatrics
REBECCA MOLHOLT, Assistant Professor of History of Art and Architecture
JOYCE MONAC, Clinical Assistant Professor of Pediatrics
JACK MONCHIK, Clinical Professor of Surgery (Endocrine Surgery)
BRIAN MONTAGUE, Assistant Professor of Medicine
TERRI MONTAGUE, Assistant Professor of Medicine
ALAIN MONTEGUT, Adjunct Assistant Professor of Family Medicine
JAMES E. MONTI, Clinical Assistant Professor of Emergency Medicine
PETER MONTI, Donald G Millar Distinguished Professor of Alcohol and Addiction Studies, Professor of Medical Science
CARMEN MONZON, Clinical Assistant Professor of Psychiatry and Human Behavior
DOUGLAS MOORE, Senior Research Associate of Orthopaedics
JASON MOORE, Adjunct Associate Professor of Psychiatry and Human Behavior
RICHARD MOORE, Associate Professor of Obstetrics and Gynecology
VINCENT MOR, Florence Pirce Grant University Professor of Community Health, Professor of Medical Science
JOHN MORAN, Clinical Associate Professor of Pediatrics
LOUIS MORAN, Clinical Instructor in Medicine
SARAH MORCHEN, Clinical Instructor in Family Medicine
KATHLEEN MOREN, Teaching Associate of Family Medicine
JAMES MORGAN, Professor of Cognitive, Linguistic, and Psychological Sciences
JEFFREY MORGAN, Associate Professor of Medical Science, Associate Professor of Engineering
THOMAS MORGAN, Clinical Assistant Professor of Neurology
RICHARD MORGERA, Clinical Assistant Professor of Family Medicine
SABINE MORITZ, Research Associate of Ecology and Evolutionary Biology
WILLIAM MOROCCO, Clinical Instructor in Pediatrics
JAMES MORONE, Professor of Political Science and Professor of Urban Studies
ANDREW MORRIS, Clinical Assistant Professor of Psychiatry and Human Behavior
DAVID MORRIS, Professor of Pathology and Laboratory Medicine
PAUL MORRISSEY, Associate Professor of Surgery
ERIC MORROW, Assistant Professor of Biology, Assistant Professor of Psychiatry and Human Behavior (Research)
KATHLEEN MORROW, Associate Professor of Psychiatry and Human Behavior (Research)
JOHN MORTON, Clinical Assistant Professor of Family Medicine
PAULA MOSKOWITZ, Clinical Assistant Professor of Dermatology
STEVEN MOSS, Professor of Medicine
ALBERT MOST, Professor of Medicine
BERNARD MOULE, Clinical Assistant Professor of Surgery (Urology)
ANNE MOULTON, Associate Professor of Medicine
ANTHONY MOULTON, Clinical Professor of Surgery (Cardiothoracic Surgery)
LINDA MOULTON, Senior Teaching Associate of Obstetrics and Gynecology
JONATHAN MOVSON, Assistant Professor of Diagnostic Imaging (Clinical)
KIMBERLY MOWRY, Robin Chemers Neustein Professor of Biomedicine, Professor of Biology
JENNIE MUGLIA, Associate Professor of Dermatology (Clinical)
JON MUKAND, Clinical Assistant Professor of Orthopaedics
VINCENT MUKKADA, Assistant Professor of Pediatrics (Clinical)
TRACY MULLARE, Clinical Assistant Professor of Psychiatry and Human Behavior
JEFFREY MULLER, Professor of History of Art and Architecture
MARY MUMFORD HALEY, Teaching Associate of Family Medicine
JEFFREY MUMM, Visiting Scientist of Molecular Biology, Cell Biology, and Biochemistry
JOSEPH MUNDY, Professor of Engineering (Research)
URSULA MUNOZ-NAJAR, Investigator in Molecular Biology, Cell Biology, and Biochemistry
KAIVAN MUNSHI, Professor of Economics
CHRISTOPHER MURATORE, Assistant Professor of Surgery, Assistant Professor of Pediatrics
BRIAN MURPHY, Clinical Associate Professor of Diagnostic Imaging
DONALD MURPHY, Clinical Assistant Professor of Community Health
JAMES MURPHY, Adjunct Assistant Professor of Psychiatry and Human Behavior
JOHN B. MURPHY, Professor of Medicine, Professor of Family Medicine
JOHN F. MURPHY, Clinical Assistant Professor of Medicine
LISA MURPHY, Teaching Associate of Emergency Medicine
TIMOTHY MURPHY, Professor of Diagnostic Imaging
ANNE MURRAY, Clinical Instructor in Obstetrics and Gynecology
ROLLAND MURRAY, Associate Professor of English
JAYASIMHA MURTHY, Assistant Professor of Pathology and Laboratory Medicine (Clinical)
JOHN MUSTARD, Professor of Geological Sciences
TRACEY MYATT, Clinical Instructor in Pediatrics
DEBORAH MYERS, Professor of Obstetrics and Gynecology
JAMES MYERS, Clinical Associate Professor of Medicine
WADE MYERS, Professor of Psychiatry and Human Behavior
PAUL MYODA, Assistant Professor of Visual Art
DRAYTON NABERS, Associate Professor of English
AHMED NADEEM, Clinical Assistant Professor of Medicine
SRINIKETH NAGAVARAPU, Assistant Professor of Economics and Environmental Studies
KIRAN NAKKALA, Clinical Instructor in Medicine
AMAN NANDA, Associate Professor of Medicine
ANTHONY NAPOLI, Assistant Professor of Emergency Medicine
MEENAKSHI NARAIN, Professor of Physics
JUSTIN NASH, Associate Professor of Psychiatry and Human Behavior
MARGORIE NASIN, Assistant Professor of Pediatrics (Clinical)
JACK NASSAU, Clinical Assistant Professor of Psychiatry and Human Behavior
ANDREW NATHANSON, Clinical Associate Professor of Emergency Medicine
CHRISTOPHER NEILL, Associate Professor (MBL) of Ecology and Evolutionary Biology
MARGUERITE NEILL, Associate Professor of Medicine
EZEQUIEL NEIMARK, Clinical Assistant Professor of Pediatrics
LINA NEMCHENOK, Clinical Instructor in Medicine
SAED NEMR, Clinical Instructor in Medicine
NICOLA NERETTI, Assistant Professor of Brain and Neural Science (Research)
SONIA NESBITT, Research Associate of Pediatrics
ELIZABETH NESTOR, Clinical Associate Professor of Emergency Medicine
DAVID NEUMANN, Assistant Professor of Diagnostic Imaging (Clinical)
DIETRICH NEUMANN, Professor of Art and Architecture
LAURA NEVEL, Clinical Assistant Professor of Obstetrics and Gynecology
CHAD NEVOLA, Clinical Instructor in Pediatrics
KAREN NEWMAN, Owen Walker Professor of Humanities and Professor of Comparative Literature w/tenure
MICHAEL NEWSTEIN, Assistant Professor of Medicine (Research)
CHRISTOPHER NEWTON, Clinical Assistant Professor of Surgery (Ophthalmology)
KAREN NG, Clinical Assistant Professor of Family Medicine
THOMAS NG, Associate Professor of Surgery (Cardiothoracic Surgery)
TOAN NGUYEN, Prager Assistant Professor of Applied Mathematics
RAYMOND NIAURA, Professor of Psychiatry and Human Behavior
GUY NICASTRI, Clinical Assistant Professor of Surgery
LINDA NICI, Clinical Professor of Medicine
DOUGLAS NICKEL, Professor of History of Art and Architecture
THOMAS NOONAN, Clinical Assistant Professor of Medicine
GEORG NOREN, Professor of Neurosurgery
DAVID NORTH, Teaching Associate of Diagnostic Imaging
MELISSA NOTHNAGLE, Assistant Professor of Family Medicine
RICHARD NOTO, Associate Professor of Diagnostic Imaging (Clinical)
JUDITH NUDELMAN, Clinical Assistant Professor of Family Medicine
NICOLE NUGENT, Assistant Professor of Psychiatry and Human Behavior (Research)
TARA NUMMEDAL, Associate Professor of History
AMY NUNN, Assistant Professor of Medicine (Research)
ARTO NURMIKKO, L. Herbert Ballou University Professor of Engineering
ELENA OANCEA, Assistant Professor of Medical Science
JOHN O'BELL, Assistant Professor of Medicine
BARBARA O'BRIEN, Assistant Professor of Obstetrics and Gynecology
JAMES O'BRIEN, Clinical Assistant Professor of Obstetrics and Gynecology
J MICHAEL O'CONNELL, Clinical Instructor in Medicine
PATRICIA O'CONNELL, Senior Teaching Associate of Obstetrics and Gynecology
BONNIE O'CONNOR, Associate Professor of Pediatrics (Clinical)
BRIGID O'CONNOR, Assistant Professor of Radiation Oncology
LAURA OFSTEAD, Clinical Assistant Professor of Medicine
HEE OH, Professor of Mathematics
KATHLEEN O'HEELAN, Clinical Assistant Professor of Family Medicine
RICHARD OHNMACHT, Clinical Associate Professor of Pediatrics
MICHAEL OKLOT, Assistant Professor of Slavic Languages
RUDOLF OLDBENBURG, Professor (MBL) in Physics
NICKLAS OLDBENBURG, Clinical Assistant Professor of Radiation Oncology
G RICHARD OLDS, Adjunct Professor of Medicine
JEANNE OLIVA, Clinical Assistant Professor of Medicine
ALVARO OLIVARES, Clinical Assistant Professor of Psychiatry and Human Behavior
KAREN OLIVER, Clinical Assistant Professor of Psychiatry and Human Behavior
SUSAN OLIVERIO, Assistant Professor of Medicine (Clinical)
ADAM OLSZEWSKI, Assistant Professor of Medicine
SAUL OLYAN, Samuel Ungerleider, Jr. Professor of Judaic Studies
HERNANDO OMBAO, Associate Professor of Community Health
WARREN ONG, Clinical Assistant Professor of Psychiatry and Human Behavior
STEVEN OPAL, Professor of Medicine
DON OPERARIO, Associate Professor of Medical Science
MARION ORR, Frederick Lippitt Professor of Public Policy
JULIO ORTEGA, Professor of Hispanic Studies
FRANCISCO ORTIZ, Adjunct Professor of Medicine
ROBERTO ORTIZ, Clinical Assistant Professor of Medicine
ED OSBORN, Assistant Professor of Visual Art
MAHASIN OSMAN, Adjunct Assistant Professor of Molecular Pharmacology, Physiology and Biotechnology
WENDY OSSMAN, Clinical Assistant Professor of Psychiatry and Human Behavior
MARIA OTOOLE, Clinical Assistant Professor of Obstetrics and Gynecology
THOMAS OTOOLE, Associate Professor of Medicine
BRIAN OTT, Professor of Neurology
QING OUYANG, Investigator in Molecular Biology, Cell Biology, and Biochemistry
FRANK OVERLY, Assistant Professor of Emergency Medicine, Assistant Professor of Pediatrics
SHIZU OYAMADA, Research Associate of Surgery (Cardiothoracic Surgery)
ADETOKUNBO OYELESE, Assistant Professor of Neurosurgery
CALVIN OYER, Clinical Associate Professor of Pathology and Laboratory Medicine
ILKER OZDEN, Assistant Professor of Engineering (Research)
MARGARET PACCIONE-DYSZLEWSKI, Clinical Assistant Professor of Psychiatry and Human Behavior
CRISTINA PACHECO, Clinical Assistant Professor of Family Medicine
DOMENICO PACIFICI, Assistant Professor of Engineering
JAMES PADBURY, William and Mary Oh - William and Elsa Zopfi Professor of Pediatrics for Perinatal Research, Professor of Pediatrics
RAFAEL PADILLA, Clinical Assistant Professor of Surgery (Anesthesiology)
MARIA PAGANO, Adjunct Assistant Professor of Psychiatry and Human Behavior (Research)
REBECCA PAGE, Assistant Professor of Biology
KELLY PAGIDAS, Assistant Professor of Obstetrics and Gynecology
MICHAEL PAGLIA, Clinical Assistant Professor of Obstetrics and Gynecology
DAVID PAINE, Professor of Engineering
SUSAN PAKULA, Clinical Assistant Professor of Pediatrics
ANJALI PALAV, Clinical Assistant Professor of Psychiatry and Human Behavior
FRANK PALETTA, Clinical Assistant Professor of Surgery (Oral Maxillofacial)
ADAM PALLANT, Associate Professor of Pediatrics (Clinical)
DAVID PALLER, Senior Research Associate of Orthopaedics
KATHLEEN PALM, Adjunct Assistant Professor of Psychiatry and Human Behavior (Research)
LYNNE PALMISCIANO, Assistant Professor of Emergency Medicine (Clinical), Assistant Professor of Pediatrics (Clinical)
TAYHAS PALMORE, Professor of Engineering
GLENN PALOMAKI, Senior Research Associate of Pathology and Laboratory Medicine
MARK PALUMBO, Associate Professor of Orthopaedics
STEPHEN PANARO, Clinical Assistant Professor of Surgery (Anesthesiology)
MAOYIN PANG, Research Associate of Medicine
EUSTRATIOS PAPAIOANNOU, Assistant Professor of Classics
GEORGE PAPANDONATOS, Associate Professor of Community Health (Research)
REBECCA PAPAS, Assistant Professor of Psychiatry and Human Behavior (Research)
MARTIN PAPAZIAN, Clinical Assistant Professor of Surgery (Otolaryngology)
MICHAEL PARADISO, Sidney A. Fox and Dorothea Doctors Fox Professor of Ophthalmology and Visual Sciences
GRETCHEN PARANYA, Clinical Instructor in Obstetrics and Gynecology
GYAN PAREEK, Assistant Professor of Surgery (Urology)
WILLIAM PARK, Assistant Professor of Diagnostic Imaging (Research)
JOEL PARK, II, Clinical Instructor in Medicine
DONNA PARKER, Assistant Professor of Family Medicine (Research), Assistant Professor of Community Health (Research)
STEVEN PARMAN, Assistant Professor of Geological Sciences
EDGAR PARMENTIER, Professor of Geological Sciences
JOHN PARSONS, Clinical Assistant Professor of Psychiatry and Human Behavior
ROBERT PARTRIDGE, Adjunct Associate Professor of Emergency Medicine
JOHN PARZIALE, Clinical Associate Professor of Orthopaedics
JAMES PASCALIDES, Clinical Assistant Professor of Orthopaedics
GEORGE PASQUARELLO, Teaching Associate of Family Medicine
MARY ANN PASSERO, Clinical Associate Professor of Pediatrics
MICHAEL PASSERO, Adjunct Associate Professor of Medicine
NEHA PATHAK, Assistant Professor of Medicine (Clinical)
ROBERT PATRICK, Associate Professor of Medical Science
ELENI PATROZOU, Research Associate of Medicine, Clinical Instructor in Medicine
ROBERT PATTerson, Clinical Assistant Professor of Surgery
TARA PATTerson, Research Associate of Neurology
ROBERT PAUL, Adjunct Assistant Professor of Psychiatry and Human Behavior (Research)
K ERIC PAULSON, Adjunct Assistant Professor of Radiation Oncology
BENOIT PAUSADER, Tamarkin Assistant Professor of Mathematics
ROBERT PAZULINE, Clinical Assistant Professor of Psychiatry and Human Behavior
GILLIAN PEARIS, Clinical Assistant Professor of Psychiatry and Human Behavior
DEBORAH PEARLMAN, Assistant Professor of Community Health (Research)
TERI PEARLSTEIN, Associate Professor of Psychiatry and Human Behavior, Associate Professor of Medicine
DOROTHY PEKMEZI, Adjunct Assistant Professor of Psychiatry and Human Behavior
ROBERT PELCOVITS, Professor of Physics
JOSEPH PENN, Clinical Associate Professor of Psychiatry and Human Behavior
KELLY PENNELL, Assistant Professor of Engineering (Research)
FRANK PENSA, Clinical Associate Professor of Obstetrics and Gynecology
MICHAEL PEPI, Clinical Assistant Professor of Obstetrics and Gynecology
VINCENT PERA, Clinical Assistant Professor of Medicine
KIMBERLY PEREZ, Assistant Professor of Medicine
ELLIOIT PERLMAN, Clinical Associate Professor of Surgery (Ophthalmology)
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Kathleen Rotondo, Associate Professor of Pediatrics (Clinical)
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Sharon Rounds</td>
<td>Professor of Medicine, Professor of Pathology and Laboratory Medicine</td>
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<tr>
<td>Stephen Rous</td>
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<td>Boris Rozovsky</td>
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<td>Amity Rubeor</td>
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<td>Yona Rubinstein</td>
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<td>Research Associate of Medicine</td>
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<td>Matthew Rutz</td>
<td>Assistant Professor of Egyptology and Ancient Western Asian Studies</td>
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<td>Christine Ryan</td>
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<tr>
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<td>Carl Saab</td>
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<tr>
<td>Alberto Saal</td>
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<tr>
<td>George Sachs</td>
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<td>Ara Sadanianz</td>
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<td>Imam Sadio</td>
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<tr>
<td>Gregory Sadownikoff</td>
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<td>Grazyna Sadowska</td>
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<td>Thais Salazar-Mather</td>
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Gail Skowron, Adjunct Professor of Medicine
Boris Skurkovich, Clinical Professor of Pediatrics
Jeffrey Slaiby, Assistant Professor of Surgery (Clinical)
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JEANETTE SMITH, Assistant Professor of Medicine  
JESSICA SMITH, Assistant Professor of Emergency Medicine (Clinical)  
KATHERINE SMITH, Assistant Professor of Biology (Research)  
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KRISTEN SMITH, Teaching Associate of Community Health  
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RICHARD SNYDER, Professor of Political Science  
GREGORY SOARES, Assistant Professor of Diagnostic Imaging  
DAVID SOBEL, Professor of Cognitive, Linguistic, and Psychological Sciences  
ANDREA SOBIERAJ, Senior Teaching Associate of Molecular Pharmacology, Physiology and Biotechnology  
PATRICIA SOBRAL, Senior Lecturer in Portuguese and Brazilian Studies  
SILVIA SOBRAL, Lecturer in Spanish Studies  
MITCHELL SOGIN, Professor (MLB) of Molecular Biology, Cell Biology, and Biochemistry  
JANE SOKOLOSKY, Senior Lecturer in German Studies  
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SUNITI SOLOMON, Research Associate of Medicine  
SUKANYA SOMASUNDAR, Clinical Assistant Professor of Family Medicine  
JOO-HYUN SONG, Assistant Professor of Cognitive, Linguistic, and Psychological Sciences  
JULIE SONG, Associate Professor of Diagnostic Imaging (Clinical)  
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JENNIFER SOUZA, Clinical Assistant Professor of Family Medicine  
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KENNETH SPERBER, Clinical Assistant Professor of Family Medicine
KONSTANTINOS SPILIPOULOS, Prager Assistant Professor of Applied Mathematics
NICHEA SPILLANE, Assistant Professor of Community Health (Research)
ANTHONY SPIRITO, Professor of Psychiatry and Human Behavior
KATHRYN SPOEHR, Professor of Cognitive, Linguistic, and Psychological Sciences
LUTHER SPOEHR, Senior Lecturer in Education
SERENA SPOSATO, Clinical Assistant Professor of Obstetrics and Gynecology
MARCUS SPRADLIN, Manning Assistant Professor of Physics
EMILY SPURRELL, Clinical Assistant Professor of Psychiatry and Human Behavior
TIMOTHY SPURRELL, Clinical Assistant Professor of Obstetrics and Gynecology
DANIEL SQUIRES, Assistant Professor of Community Health (Research)
JOAN STABILA, Research Associate of Pediatrics
DARIUSZ STACHURSKI, Assistant Professor of Pathology and Laboratory Medicine
BARBARA STALLINGS, Professor of International Studies (Research)
MICHAEL STANCHINA, Clinical Assistant Professor of Medicine
LAWRENCE STANLEY, Senior Lecturer in English
CASSANDRA STANTON, Assistant Professor of Psychiatry and Human Behavior (Research)
JANUSZ STARAKIEWICZ, Assistant Professor of Pathology and Laboratory Medicine (Clinical)
KATHLEEN STAUDINGER, Clinical Instructor in Diagnostic Imaging
PAMELA STEADMAN-WOOD, Clinical Assistant Professor of Psychiatry and Human Behavior
BRETT STECKER, Clinical Assistant Professor of Family Medicine
DALE STEELE, Associate Professor of Pediatrics, Associate Professor of Emergency Medicine
JOHN STEELE, Associate Professor of Egyptology and Ancient Western Asian Studies
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ACHINA STEIN, Clinical Assistant Professor of Psychiatry and Human Behavior
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JOHN STEIN, Senior Lecturer in Neuroscience
JOHN STEIN, Senior Lecturer in Neuroscience
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LINDA STEINHARDT, Senior Teaching Associate of Obstetrics and Gynecology
MARGARET STEINHOFF, Professor of Pathology and Laboratory Medicine
GREGORY STEINMETZ, Clinical Assistant Professor of Family Medicine
BONNIE STEPHENS, Assistant Professor of Pediatrics
EDWARD STERNICK, Professor of Radiation Oncology
ANGELA STEWART, Clinical Assistant Professor of Psychiatry and Human Behavior
SUZANNE STEWART-STEINBERG, Associate Professor of Comparative Literature and Italian Studies
GREGORY STIENER, Clinical Assistant Professor of Psychiatry and Human Behavior
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PHILIP STOCKWELL, Assistant Professor of Medicine (Clinical)
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DAVID STRONG, Associate Professor of Psychiatry and Human Behavior (Research)
LAURA STROUD, Associate Professor of Psychiatry and Human Behavior (Research)
GREGORY STUART, Associate Professor of Psychiatry and Human Behavior
ASHLEY STUCKEY, Assistant Professor of Obstetrics and Gynecology
ANNE STULIK, Senior Teaching Associate of Obstetrics and Gynecology
EDWARD STULIK, Clinical Assistant Professor of Medicine
CHAU-HSING SU, Professor of Applied Mathematics
SHARON SU, Assistant Professor of Pediatrics (Clinical)
MARK SUCHMAN, Professor of Sociology
ANDREW SUCOV, Associate Professor of Emergency Medicine
EKIR SUDDERTH, Assistant Professor of Computer Science
VIJAYENDRA SUDHEENDRA, Clinical Assistant Professor of Surgery (Anesthesiology)
JOHN SUGGS, Associate Professor of Chemistry
FRANCIS SULLIVAN, Clinical Associate Professor of Emergency Medicine
JAMES C SULLIVAN, Clinical Assistant Professor of Medicine
JAMES K SULLIVAN, Clinical Assistant Professor of Psychiatry and Human Behavior
MARY SULLIVAN, Adjunct Professor of Pediatrics
PATRICK SULLIVAN, Associate Professor of Surgery (Plastic Surgery)
STEPHEN SULLIVAN, Assistant Professor of Surgery (Plastic Surgery), Assistant Professor of Pediatrics
ELEANOR SUMMERHILL, Associate Professor of Medicine
MARGARET SUN, Clinical Assistant Professor of Family Medicine
SHOUHENG SUN, Professor of Chemistry
XIAOJUAN SUN, Research Associate of Orthopaedics
SELIM SUNER, Associate Professor of Emergency Medicine, Associate Professor of Engineering, Associate Professor of Surgery
C JAMES SUNG, Professor of Pathology and Laboratory Medicine
VIVIAN SUNG, Assistant Professor of Obstetrics and Gynecology
GHULAM SURTI, Clinical Assistant Professor of Psychiatry and Human Behavior
ELIZABETH SUTTON, Clinical Assistant Professor of Emergency Medicine
TREVOR SUTTON, Clinical Assistant Professor of Surgery (Anesthesiology)
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LYNN SWEENEY, Assistant Professor of Emergency Medicine (Clinical)
PATRICK SWEENEY, Professor of Obstetrics and Gynecology
LAWRENCE SWEET, Associate Professor of Psychiatry and Human Behavior (Research)
Dwight Sweigart, Professor of Chemistry
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REBECCA SWENSON, Assistant Professor of Psychiatry and Human Behavior (Research)
ROBERT SWIFT, Professor of Psychiatry and Human Behavior
MARILYN SYKULSKI, Teaching Associate of Psychiatry and Human Behavior
JEFFREY SYME, Clinical Assistant Professor of Family Medicine
ERICA SZABADOS, Assistant Professor of Neurology (Clinical)
JOANNA SZYMUDNYGER-CHODOBSKA, Assistant Professor of Emergency Medicine (Research)
RAMIN TABADDOR, Clinical Assistant Professor of Family Medicine
HIROSHI TAJIMA, Lecturer in East Asian Studies
KATHY TAKAYAMA, Adjunct Associate Professor of Molecular Biology, Cell Biology, and Biochemistry
ROBERTO TAMASSIA, Professor of Computer Science
DOMINICK TAMMARO, Associate Professor of Medicine
CHUNG-I TAN, Professor of Physics
JAY TANG, Associate Professor of Physics
JIANWU TANG, Assistant Professor (MBL) of Ecology and Evolutionary Biology
XIAOLI TANG, Assistant Professor of Medicine (Research)
BARBARA TANNENBAUM, Senior Lecturer in Theatre Arts and Performance Studies
NINA TANNENWALD, Associate Professor of International Studies (Research)
UMADEVI TANTRAVAHI, Associate Professor of Pathology and Laboratory Medicine
JOHN TARR, Assistant Professor of Visual Arts
LEIGH TARENTINO, Assistant Professor of Visual Arts
GERALD TARNOFF, Clinical Assistant Professor of Psychiatry and Human Behavior
KEIKO TARQUINIO, Assistant Professor of Pediatrics
JOHN TARRO, Clinical Assistant Professor of Surgery (Otolaryngology)
LINDA TARTELL, Clinical Associate Professor of Pediatrics
KAREN TASHIMA, Associate Professor of Medicine
MARC TATAR, Professor of Ecology and Evolutionary Biology
CHARLENE TATE, Assistant Professor of Neurology (Clinical)
GABRIEL TAUBIN, Associate Professor of Engineering and Computer Science
JOAO TAVARES, Clinical Assistant Professor of Medicine
TRACEY TAVEIRA, Adjunct Associate Professor of Medicine
ELISABETH TAYLOR, Clinical Assistant Professor of Psychiatry and Human Behavior
ELIZABETH TAYLOR, Senior Lecturer in English
HELENA TAYLOR, Assistant Professor of Surgery (Plastic Surgery), Assistant Professor of Pediatrics
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LYNN TAYLOR, Assistant Professor of Medicine
TREVOR TEJADA-BERGES, Assistant Professor of Obstetrics and Gynecology
GLADYS TELANG, Associate Professor of Dermatology
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DMITRY TERENTYEV, Assistant Professor of Medicine (Research)
JOSEPH TERLATO, Clinical Assistant Professor of Medicine
ELMO TERRY-MORGAN, Associate Professor of Theater, Speech, and Dance and Afro-American Studies
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JACQUELINE TETREULT, Clinical Assistant Professor of Obstetrics and Gynecology
TRACY TEVYAW, Clinical Assistant Professor of Psychiatry and Human Behavior
CHRISTOPHER THANOS, Adjunct Assistant Professor of Pathology and Laboratory Medicine
RICHARD THEBARGE, Clinical Assistant Professor of Psychiatry and Human Behavior
DEEPAK THIAGARAJAN, Clinical Assistant Professor of Medicine
ANTHONY THOMAS, Clinical Assistant Professor of Medicine
EDWARD THOMAS, Clinical Assistant Professor of Medicine
JOHN THOMAS, Assistant Professor of Psychiatry and Human Behavior (Research)
TENNY THOMAS, Clinical Assistant Professor of Emergency Medicine
VALERIE THOMAS, Clinical Assistant Professor of Medicine
BRADFORD THOMPSON, Assistant Professor of Neurology, Assistant Professor of Neurosurgery
MARGRIT THOMPSON, Adjunct Associate Professor of Biology
WILLIAM THOMPSON, Assistant Professor of Applied Mathematics (Research)
ANTHONY THORNTON, Clinical Assistant Professor of Psychiatry and Human Behavior
LESLIE THORNTON, Professor of Modern Culture and Media Studies
MATTHEW THRAN, Clinical Assistant Professor of Surgery (Anesthesiology)
STEVEN THRELKELD, Research Associate of Pediatrics
MICHAEL THURBSBY, Clinical Assistant Professor of Medicine
IAN TICE, Prager Assistant Professor of Applied Mathematics
JENNIFER TIDEY, Associate Professor of Psychiatry and Human Behavior (Research)
DAVID ROBBINS TIENTH, Clinical Associate Professor of Surgery (Ophthalmology)
PETER TILKEMEIER, Associate Professor of Medicine
ALVARO TINAJERO, Clinical Assistant Professor of Community Health
JEFF TITON, Professor of Music
KING TO, Clinical Professor of Surgery (Ophthalmology)
NEIL TOBACK, Clinical Assistant Professor of Dermatology
ELIZABETH TOLL, Clinical Assistant Professor of Pediatrics, Clinical Assistant Professor of Medicine
MARINA TOLOU-SHAMS, Assistant Professor of Psychiatry and Human Behavior (Research)
JOHN TOMASI, Associate Professor of Political Science
DAVID TOMLINSON, Clinical Instructor in Family Medicine
MARY TOMS, Clinical Assistant Professor of Family Medicine
IRIS TONG, Assistant Professor of Medicine
SHUPING TONG, Associate Professor of Medicine (Research)
BETH TOOLAN, Clinical Instructor in Pediatrics
GREGORY TOWNE, Assistant Professor of Surgery (Clinical) (Anesthesiology)
NICHOLAS TOWNSEND, Associate Professor of Anthropology
ROBERT TRACHTENBERG, Teaching Associate of Family Medicine
MOLLY TRACY, Assistant Professor of Neurology (Clinical)
THOMAS TRACY, Professor of Surgery, Professor of Pediatrics
PETER TRAFTON, Professor of Orthopaedics
CHRISTINE TRASK, Clinical Assistant Professor of Psychiatry and Human Behavior
PETER TRASK, Adjunct Assistant Professor of Psychiatry and Human Behavior
DIANA TREABA, Assistant Professor of Pathology and Laboratory Medicine
SERGUEI TREIL, Professor of Mathematics
GEOFFREY TREMONT, Assistant Professor of Psychiatry and Human Behavior
MARK TRIBE, Assistant Professor of Modern Culture and Media Studies
ELIZABETH TRICHE, Assistant Professor of Medical Science
ANDREW TRIEBWASSER, Assistant Professor of Surgery (Clinical) (Anesthesiology)
SCOTT TRIEDMAN, Clinical Assistant Professor of Radiation Oncology
ANUBHAV TRIPATHI, Associate Professor of Engineering
AMAL TRIVEDI, Assistant Professor of Community Health, Assistant Professor of Medicine
CAROLINE TROISE, Clinical Assistant Professor of Medicine
WILSON TRUCCOLO-FILHO, Assistant Professor of Neuroscience (Research)
MARGARET TRYFOROS, Clinical Assistant Professor of Family Medicine
SHU-WEI TSAI, Research Associate of Medicine
HSIN-I TSENG, Lecturer in East Asian Studies
YI-TANG TSENG, Associate Professor of Pediatrics (Research)
EKATERINI TSIAPALI, Clinical Instructor in Surgery
WILLIAM TSIARAS, Clinical Professor of Surgery (Ophthalmology)
ROBERT TUBBS, Assistant Professor of Emergency Medicine
JOSEPH TUCCI, Adjunct Professor of Medicine
GREGORY TUCKER, Associate Professor of Physics
JAN TULLIS, Professor of Geological Sciences
TERRY TULLIS, Professor of Geological Sciences (Research)
GLENN TUNG, Professor of Diagnostic Imaging
ANA TUYA FULTON, Assistant Professor of Medicine
JEAN TWOMEY, Assistant Professor of Psychiatry and Human Behavior (Research), Assistant Professor of Pediatrics (Research)
BARBARA TYLENDIKA, Clinical Associate Professor of Psychiatry and Human Behavior
DENISE TYLER, Investigator in Community Health
JOHN TYLER, Associate Professor of Education
AUDREY TYRKA, Assistant Professor of Psychiatry and Human Behavior
HOLLY TYTELL, Clinical Assistant Professor of Psychiatry and Human Behavior
LISA UEBELACKER, Assistant Professor of Psychiatry and Human Behavior (Research)
MASAKO UEDA FIDLER, Professor of Slavic Languages
JODY UNDERWOOD, Clinical Assistant Professor of Psychiatry and Human Behavior
WILLIAM UNGER, Clinical Assistant Professor of Psychiatry and Human Behavior
RANDALL UPDEGROVE, Clinical Assistant Professor of Orthopaedics
ELIEZER UPFAL, Professor of Computer Science
JONATHAN URL, Clinical Assistant Professor of Surgery (Anesthesiology)
AYSE UZGOREN-BARAN, Research Associate of Molecular Pharmacology, Physiology and Biotechnology
ARMEN VAGHARSHAKYAN, Tamarkin Assistant Professor of Mathematics
JAMSHEED VAKHARIA, Clinical Assistant Professor of Surgery
JONATHAN VALENTE, Assistant Professor of Emergency Medicine, Assistant Professor of Pediatrics
LUIZ VALENTE, Associate Professor of Portuguese and Brazilian Studies
JAMES VALLES, Professor of Physics
JOSEPH VALLINO, Assistant Professor (MBL) of Ecology and Evolutionary Biology
ANDRIES VAN DAM, Thomas J. Watson Jr. University Professor of Technology and Education
PASCAL VAN HENTENRYCK, Professor of Computer Science
ELIZA VAN REEN, Instructor in Psychiatry and Human Behavior (Research)
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CHARLES VASLET, Assistant Professor of Pathology and Laboratory Medicine (Research)
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ROSALIND VAZ, Professor of Pediatrics (Clinical)
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ALICE VESTNER, Assistant Professor of Psychiatry and Human Behavior (Clinical)
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LAURA VIEHMAN, Clinical Instructor in Pediatrics
NELSON VIEIRA, University Professor of Portuguese and Brazilian Studies
MARGUERITE VIGLIANI, Clinical Associate Professor of Obstetrics and Gynecology
EUGENIA VILLA-CUESTA, Investigator in Ecology and Evolutionary Biology
RENDUELES VILLALBA, Clinical Associate Professor of Psychiatry and Human Behavior
BIANCA VIRAY, Tamarkin Assistant Professor of Mathematics
MEERA VISWANATHAN, Associate Professor of Comparative Literature
SIVAMAINTHAN VITHIANANTHAN, Assistant Professor of Surgery (Clinical)
GWENN VITTIMBERGA, Clinical Assistant Professor of Dermatology
PATRICK VIVIER, Associate Professor of Community Health, Associate Professor of Pediatrics
PETIA VLACHOVA, Assistant Professor of Engineering
BENJAMIN VOGEL, Clinical Assistant Professor of Obstetrics and Gynecology
BETTY VOHR, Professor of Pediatrics
RAJIV VOHRA, Ford Foundation Professor of Economics
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ROXANNE VREES, Instructor in Obstetrics and Gynecology (Clinical)
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COREY WALKER, Associate Professor of Africana Studies
W SCOTT WALKER, Clinical Assistant Professor of Obstetrics and Gynecology
BARRY WALL, Clinical Associate Professor of Psychiatry and Human Behavior
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MICHAEL WALLACH, Associate Professor of Diagnostic Imaging (Clinical)
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ANNE WALTERS, Clinical Associate Professor of Psychiatry and Human Behavior
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HYE-SOOK WANG, Associate Professor of East Asian Studies
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LINGZHEN WANG, Associate Professor of East Asian Studies
LI-QIONG WANG, Lecturer in Chemistry
NINA WANG, Research Associate of Family Medicine
SHUO WANG, Clinical Instructor in Orthopaedics
YANG WANG, Lecturer in East Asian Studies
CHRISTINE WANCHE, Adjunct Professor of Medicine
THOMAS WARCUP, Clinical Assistant Professor of Family Medicine
NICHOLAS WARD, Associate Professor of Medicine
DAVID WARREN, Assistant Professor of Molecular Biology, Cell Biology, and Biochemistry (Research)
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OTIS warren, Assistant Professor of Emergency Medicine (Clinical)
WILLIAM WARREN, Chancellor’s Professor of Cognitive, Linguistic, and Psychological Sciences
SARITA WARRIOR, Assistant Professor of Medicine (Clinical)
SHOGGY WARYN, Senior Lecturer in French
MARVIN WASSER, Clinical Instructor in Pediatrics
DELMA JEAN WATTS, Clinical Instructor in Pediatrics
DAVID WAZER, Professor of Radiation Oncology
PETER WEBER, Professor of Chemistry
THOMAS WEBSTER, Associate Professor of Engineering and Associate Professor of Orthopaedics
LEI WEI, Assistant Professor of Orthopaedics (Research)
Marilyn Weigner, Clinical Associate Professor of Medicine
BARBARA WEIL, Clinical Assistant Professor of Medicine
DAVID WEIL, Professor of Economics
DANIEL WEINREICH, Assistant Professor of Biology, Assistant Professor of Center for Computational Molecular Biology
ARNOLD WEINSTEIN, Edna and Richard Salomon Distinguished Professor of Comparative Literature
LAUREN WEINSTOCK, Assistant Professor of Psychiatry and Human Behavior (Research)
MARTIN WEINSTOCK, Professor of Dermatology, Professor of Community Health
JAMES WEINTRUB, Clinical Assistant Professor of Surgery
RISA WEISBERG, Assistant Professor of Psychiatry and Human Behavior (Research)
MARRJORE WEISHAAR, Clinical Professor of Psychiatry and Human Behavior
BARRIE WEISMAN, Clinical Assistant Professor of Family Medicine
ARNOLD-PETER WEISS, Professor of Orthopaedics
ALAN WEITBERG, Adjunct Professor of Medicine
SHERRY WEITZEN, Assistant Professor of Community Health (Research)
REBECCA WEITZ-SHAPIRO, Assistant Professor of Political Science and Public Policy
DAVID WELCH, Assistant Professor (MBL) of Ecology and Evolutionary Biology
ELIZABETH WELCH, Clinical Assistant Professor of Dermatology
IVO WELCH, Professor of Economics
LESLEY WELCH, Associate Professor of Cognitive, Linguistic, and Psychological Sciences
RAYMOND WELCH, Clinical Assistant Professor of Dermatology
MARY BETH WELSEKO, Teaching Associate of Medicine
GREGORY WELLENISUS, Assistant Professor of Community Health
RYAN WELTER, Clinical Assistant Professor of Family Medicine
JANE WEN, Clinical Instructor in Medicine
LINDA WENDELL, Assistant Professor of Neurology, Assistant Professor of Neurosurgery
KATHARINE WENSTROM, Professor of Obstetrics and Gynecology
JENNIFER WERNENGREEN, Associate Professor (MBL) of Ecology and Evolutionary Biology
LEE WESNER, Clinical Assistant Professor of Surgery (Anesthesiology)
GARY WESSEL, Professor of Biology
ELIZABETH WESSEN, Teaching Associate of Family Medicine
HOLLY WESTERVELT, Assistant Professor of Psychiatry and Human Behavior (Clinical)
JUDITH WESTRICK, Clinical Instructor in Pediatrics
TERRIE WETLE, Professor of Medical Science
PATRICK WEYER, Clinical Assistant Professor of Medicine
RICHARD WHALEN, Clinical Assistant Professor of Psychiatry and Human Behavior
GARY WHARTON, Clinical Assistant Professor of Obstetrics and Gynecology
KRISTI WHARTON, Associate Professor of Medical Science
CAROL  WHEELER,  Clinical  Associate  Professor  of  Obstetrics  and  Gynecology
EDWARD  WHEELER,  Clinical  Assistant  Professor  of  Medicine
ELIZABETH  WHEELER,  Assistant  Professor  of  Psychiatry  and  Human  Behavior
   (Clinical)
WILLIAM  WHELIHAN,  Clinical  Associate  Professor  of  Psychiatry  and  Human  Behavior
EMILY  WHITE,  Instructor  in  Obstetrics  and  Gynecology  (Clinical)
MICHAEL  WHITE,  Professor  of  Sociology
RUSSELL  WHITE,  Clinical  Associate  Professor  of  Surgery
TARA  WHITE,  Assistant  Professor  of  Community  Health  (Research)
JESSICA  WHITELEY,  Adjunct  Assistant  Professor  of  Psychiatry  and  Human  Behavior
JESSICA  WHITESIDE,  Assistant  Professor  of  Geological  Sciences
ESTHER  WHITFIELD,  Associate  Professor  of  Comparative  Literature
HILARY  WHITLATCH,  Assistant  Professor  of  Medicine
ANNIE  WIART,  Senior  Lecturer  in  French  Studies
JOHN  WIDEMAN,  Asa  Messer  Professor  of  Africana  Studies  and  English
DOREEN  WIGGINS,  Assistant  Professor  of  Obstetrics  and  Gynecology  (Clinical)
BRIAN  WILEY,  Clinical  Assistant  Professor  of  Emergency  Medicine
CAROLINE  WILKEL,  Clinical  Assistant  Professor  of  Dermatology
JOANNE  WILKINSON,  Adjunct  Assistant  Professor  of  Family  Medicine
DAVID  WILLIAMS,  Assistant  Professor  of  Community  Health
DAVID  WILLIAMS,  Assistant  Professor  of  Community  Health,  Assistant  Professor  of  Psychiatry  and  Human  Behavior
KENNETH  WILLIAMS,  Associate  Professor  of  Emergency  Medicine  (Clinical)
ROBERT  WILLIAMS,  Clinical  Associate  Professor  of  Obstetrics  and  Gynecology
PAUL  WILLIARD,  Professor  of  Chemistry
IRA  WILSON,  Professor  of  Community  Health
JEFFREY  WILSON,  Clinical  Instructor  in  Family  Medicine
JULIE  WILSON,  Clinical  Assistant  Professor  of  Psychiatry  and  Human  Behavior
VALERIE  WILSON,  Clinical  Professor  of  Community  Health
DAVID  WILTERDINK,  Clinical  Assistant  Professor  of  Family  Medicine
JANET  WILTERDINK,  Clinical  Associate  Professor  of  Neurology
JEFFREY  WINCZE,  Clinical  Assistant  Professor  of  Psychiatry  and  Human  Behavior
JOHN  WINCZE,  Clinical  Professor  of  Psychiatry  and  Human  Behavior
ERIC  Winer,  Assistant  Professor  of  Medicine
EDWARD  WING,  Frank  L  Day  Professor  of  Biology,  Professor  of  Medical  Science
RENA  WING,  Professor  of  Psychiatry  and  Human  Behavior
MARION  WINKLER,  Associate  Professor  of  Surgery
TODD  WINKLER,  Associate  Professor  of  Music
RONALD  WINTROB,  Clinical  Professor  of  Psychiatry  and  Human  Behavior
SABRINA  WITHERBY,  Assistant  Professor  of  Medicine  (Clinical)
JON  WITMAN,  Professor  of  Biology
JEANNINE  WITMYER,  Clinical  Assistant  Professor  of  Obstetrics  and  Gynecology
EDWARD  WITTLELS,  Associate  Professor  of  Medicine
KYLE  WOHRLAB,  Assistant  Professor  of  Obstetrics  and  Gynecology  (Clinical)
ANNE  WOLD,  Clinical  Instructor  in  Obstetrics  and  Gynecology
CHARLES  WOLFF,  Clinical  Assistant  Professor  of  Family  Medicine
JENNIFER  WOLFF,  Assistant  Professor  of  Psychiatry  and  Human  Behavior  (Research)
IVAN  WOLFSON,  Clinical  Assistant  Professor  of  Family  Medicine
ARTHUR WONG, Clinical Instructor in Surgery (Urology)
KENNETH WONG, Walter and Leonore Annenberg Professor of Education Policy
MARK WOOD, Adjunct Professor of Community Health
HAROLD WOODCOME, Clinical Associate Professor of Surgery (Ophthalmology)
MARGARET WOOL, Clinical Associate Professor of Family Medicine, Clinical Associate Professor of Psychiatry and Human Behavior, Adjunct Associate Professor of Community Health
KAREN WOOLFALL-QUINN, Clinical Assistant Professor of Medicine
HUGH WOOLVERTON, Clinical Assistant Professor of Family Medicine
MICHAEL WORDEN, Assistant Professor of Neuroscience (Research)
CAROLYN WRIGHT, Israel J. Kapstein Professor of English
JACQUES WRIGHT, Associate Professor of Cognitive, Linguistic, and Psychological Sciences
HAIWEI WU, Assistant Professor of Pediatrics (Research)
TONY WU, Clinical Associate Professor of Medicine
WEN-CHIH WU, Associate Professor of Medicine
ZHIJIN WU, Assistant Professor of Community Health
DONNA WULFF, Associate Professor of Religious Studies
SARAH XAVIER, Clinical Assistant Professor of Psychiatry and Human Behavior
GANG XIAO, Professor of Physics
HAIYAN XU, Assistant Professor of Medicine (Research)
JINGMING XU, Charles C. Tillinghast, Jr. University Professor of Engineering
EVGENY YAKIREVICH, Assistant Professor of Pathology and Laboratory Medicine
ALI YALCINDAG, Assistant Professor of Pediatrics (Clinical)
KIKUKO YAMASHITA, Associate Professor of East Asian Studies
JOSEPH YAMMINE, Assistant Professor of Medicine (Clinical)
WENTIAN YANG, Assistant Professor of Orthopaedics (Research), Assistant Professor of Medicine (Research)
NAOHIRO YANO, Research Associate of Pediatrics
YVETTE YATCHMINK, Associate Professor of Pediatrics (Clinical)
PATRICIA YBARRA, Associate Professor of Theatre Arts and Performance Studies
SHIRLEY YEN, Assistant Professor of Psychiatry and Human Behavior (Research)
SEE-CHEN YING, Professor of Physics
AGUSTIN YIP, Clinical Assistant Professor of Psychiatry and Human Behavior
DAVID YOBURN, Clinical Associate Professor of Medicine
DON YOO, Assistant Professor of Diagnostic Imaging (Clinical)
GI YOON-HUANG, Clinical Instructor in Surgery (Ophthalmology)
CAROLYN YOUNG, Clinical Assistant Professor of Pathology and Laboratory Medicine
MARK YOUNG, Clinical Assistant Professor of Family Medicine
GENGSHENG YU, Assistant Professor of Pathology and Laboratory Medicine
ZHENG LONG YUAN, Assistant Professor of Surgery (Research)
JEFFREY ZACK, Clinical Instructor in Emergency Medicine
ABDUL ZAFAR, Research Associate of Diagnostic Imaging
NAJAM ZAIDI, Assistant Professor of Medicine (Clinical)
ANNA ZALETAYEVA, Clinical Assistant Professor of Family Medicine
NICKOLAS ZALLER, Assistant Professor of Medicine (Research)
VAZIRA ZAMINDAR, Associate Professor of History
DOMINICK ZANGARI, Clinical Assistant Professor of Surgery (Ophthalmology)
RAYMOND ZARLENGO, Clinical Instructor in Pediatrics
ALEXANDER ZASLAVSKY, Professor of Engineering
VLADISLAV ZAYAS, Clinical Assistant Professor of Neurology
STANLEY ZDONIK, Professor of Computer Science
KIMBERLY ZELLER, Clinical Assistant Professor of Family Medicine
CATHERINE ZERNER, Professor of Art
MARK ZERVAS, Manning Assistant Professor of Molecular Biology, Cell Biology and Biochemistry
CUNXIAN ZHANG, Associate Professor of Pathology and Laboratory Medicine
MEIQING ZHANG, Senior Lecturer in East Asian Studies
PENG ZHANG, Assistant Professor of Medicine (Research)
YINGJIE ZHANG, Assistant Professor of Medicine (Research)
ZHENG ZHANG, Assistant Professor of Community Health (Research)
ANATOLY ZHITKOVICH, Professor of Medical Science
SHOUGANG ZHUANG, Associate Professor of Medicine (Research)
RASHID ZIA, Manning Assistant Professor of Engineering
JAMES ZIEGLER, Associate Professor of Pediatrics (Clinical)
BETH ANNE ZIELINSKI, Lecturer in Molecular Pharmacology, Physiology and Biotechnology
ROBERT ZIELINSKI, Clinical Assistant Professor of Psychiatry and Human Behavior
BETH ZIELINSKI HABERSHAW, Lecturer in Molecular Pharmacology, Physiology, and Biotechnology
RICHARD ZIENOWICZ, Associate Professor of Surgery
ANITA ZIMMERMAN, Professor of Medical Science
MARK ZIMMERMAN, Associate Professor of Psychiatry and Human Behavior
BERNARD ZIMMERMANN, Adjunct Associate Professor of Medicine
MATTHEW ZIMMT, Professor of Chemistry
BRIAN ZINK, Professor of Emergency Medicine
STEPHEN ZINNER, Adjunct Professor of Medicine
SAMUEL ZIPP, Assistant Professor of American Civilization and Urban Studies
CARON ZLOTNICK, Professor of Psychiatry and Human Behavior; Professor of Medicine
JOHN Zwetchkenbaum, Clinical Instructor in Medicine
WILLIAM ZYWIAK, Adjunct Assistant Professor of Psychiatry and Human Behavior (Research)

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**Named Professorships**

CHINUA ACHEBE, David and Marianna Fisher University Professor
EDWARD AHEARN, University Professor of Comparative Literature
ENGIN AKARLI, Joukowsky Family Distinguished Professor of Modern Middle Eastern History
SUSAN ALCOCK, Joukowsky Family Professor of Archaeology
JAMES ALLEN, Charles Edwin Wilbour Professor of Egyptology
OMER BARTOV, John P. Birkelund Distinguished Professor of European History
NATHANIEL BAUM-SNOW, Stephen Robert Assistant Professor of Economics
REDA BENSMAIA, University Professor of French Studies
NATHANIEL BERMAN, Rahel Varnhagen Professor of International Affairs, Law, and Modern Culture
DAVID BERSON, Sidney A. Fox and Dorothea Doctors Fox Professor of Ophthalmology and Visual Sciences
MARK BERTNESS, Robert P. Brown Professor of Biology
RICHARD BESDINE, David S. Greer M.D. Professor of Geriatric Medicine
CHRISTINE BIRON, Esther Elizabeth Brinzenhoff Professor of Medical Science
SHEILA BLUMSTEIN, Albert D. Mead Professor of Cognitive and Linguistic Science
JOHN BODEL, W. Duncan MacMillan II Professor of Classics
BARRYMORE BOGUES, Harmon Family Professor of Africana Studies
GEORGE BORTS, George S. and Nancy B. Parker Professor of Economics
WAYNE BOWEN, Upjohn Professor of Pharmacology
LUNDY BRAUN, Royce Family Professor in Teaching Excellence and Professor of Medical Science and Africana Studies
CLYDE BRIANT, Otis Everett Randall University Professor of Engineering
MARCY BRINK-DANAN, Dorot Assistant Professor of Judaic Studies
STEPHEN BUKA, Mittleman Family Director of the Center for Study of Human Development
ALFRED BUXTON, Ruth and Paul Levinger Professor of Cardiology
DAVID CANE, Vernon K. Krieble Professor of Chemistry
EUGENE CHARNIAK, University Professor of Computer Science
QIAN CHEN, Michael G. Ehrlich, MD Professor of Orthopedic Research
JOHN CHERRY, Joukowsky Family Professor of Archaeology
HOWARD CHUDACOFF, George L. Littlefield Professor of American History
RUSSELL CHURCH, Edgar L. Marston Professor of Psychology
WILLIAM CIOFFI, J. Murray Beardsley Professor of Surgery
RODNEY CLIFTON, Rush C. Hawkins University Professor of Engineering
BARRY CONNORS, L. Herbert Ballou University Professor of Neuroscience
HAROLD COOK, John F. Nickoll ’57 Professor of History
LEON COOPER, Thomas J. Watson, Sr. Professor of Science
JOSEPH CRISCO, Henry F. Lippitt Professor of Orthopedics
WILLIAM CURTIN, Elisha Benjamin Andrews Professor of Engineering
CONSTANTINE DA FER MO S, Alumni-Alumnae University Professor of Applied Mathematics
CAROLYN DEAN, John Hay Professor of International Studies
MARY ANN DOANE, George Hazard Crooker University Professor of Modern Culture and Media
JIMMIE DOLL, Jesse H. and Louisa D. Sharpe Metcalf Professor of Chemistry
JOHN DONOGHUE, Henry Merritt Wriston Professor of Neuroscience
CASEY DUNN, Manning Assistant Professor of Ecology and Evolutionary Biology
MICHAEL EHR LICH, Vincent Zecchino, MD Professor of Orthopaedic Surgery
DAVID ESTLUND, Lombardo Family Professor of the Humanities
ANNE FAUSTO-S T E RING, Nancy Duke Lewis Professor of Biology and Gender Studies
JAMES FITZGERALD, St. Purander Das Distinguished Professor of Classics
TIMOTHY FLANIGAN, The Dean's Professor of Medical Science (Charles C.J. Carpenter, MD Professor of Infectious Diseases)
BRADEN FLEMING, Lucy Lippitt Professor of Orthopedics
DONALD FORSYTH, James Manning Professor of Geological Sciences
LINA FRUZZETTI, Royce Family Professor in Teaching Excellence and Professor of Anthropology
ODED GALOR, Herbert H. Goldberger Professor of Economics
FORREST GANDER, Adele Kellenberg Seaver Professor of Creative Writing
HUAIJIAN GAO, Walter H. Annenberg Professor of Engineering
CYNTHIA GARCIA COLL, Charles Pitts Robinson and John Palmer Barstow Professor of Education
CONSTANTINE GATSONIS, Henry Ledyard Goddard University Professor of Medical Science and Applied Math
STUART GEMAN, James Manning Professor of Applied Mathematics
SUSAN GERBI, George D. Eggleston Professor of Biochemistry
PRADEEP GUDURU, James R. Rice Associate Professor of Engineering
GERALD GURALNICK, Chancellor's Professor of Physics
SHERINE HAMDY, Kutayba Alghanim Assistant Professor of Social Science
FRANCOISE HAMLIN, Hans Rothfels Assistant Professor of History and Africana Studies
MICHAEL HARPER, University Professor of Literary Arts
TIMOTHY HARRIS, Munro, Goodwin, Wilkinson Professor of European History
SUSAN HARVEY, Willard Prescott and Annie McClelland Smith Professor of History and Religion
EDWARD HAWROT, Alva O. Way University Professor of Molecular Pharmacology, Physiology & Biotechnology
JAMES HEAD, Louis and Elizabeth Scherck Distinguished Professor of the Geological Sciences
RICHARD HECK, Romeo Elton Professor of Natural Theology
J. VERNON HENDERSON, Eastman Professor of Political Economy
MARY HIXON, Manning Assistant Professor of Molecular Microbiology & Immunology
DENNIS HOGAN, Robert E. Turner Distinguished Professor of Population Studies
STEPHEN HOUSTON, Dupee Family Professor of Social Science
PETER HOWITT, Lyn Crost Professor of Social Sciences
SORIN ISTRAIL, Julie Nguyen Brown Professor of Computational and Mathematical Science
RICHARD KENYON, William R. Kenan, Jr. University Professor of Mathematics
DAVID KERTZER, Paul R. Dupee, Jr. University Professor of Social Science
JACQUES KHALIP, Robert Noyes Assistant Professor of Humanities
JAEGWON KIM, William Herbert Perry Faunce Professor of Philosophy
ANGUS KINGON, Barrett Hazeltine University Professor of Entrepreneurship and Organizational Studies
ROBERT KLEIN, Sylvia Kay Hassenfeld Professor of Pediatrics
MICHAEL KOSTERLITZ, Harrison E. Farnsworth Professor of Physics
ARTHUR LANDY, University Professor of Molecular Biology, Cell Biology, and Biochemistry
CHARLES LARMORE, W. Duncan MacMillan Family Professor of the Humanities
JESSICA LEINAWEVER, Vartan Gregorian Assistant Professor of Anthropology
HEATHER LESLIE, Peggy and Henry D. Sharpe Assistant Professor of Environmental Studies
ROSS LEVINE, James and Meryl Tisch Professor of Economics
STEPHEN LICHTENBAUM, Roland George Dwight Richardson University Professor of Mathematics
PHILIP LIEBERMAN, Fred M. Seed Professor of Cognitive and Linguistic Sciences
GLENN LOURY, Merton P. Stoltz Professor of Social Sciences
CATHERINE LUTZ, Thomas J. Watson, Jr. Family Professor of Anthropology and International Studies
JOHN MALLET-PARET, George Ide Chase Professor of Physical Science
HUMPHREY MARIS, Hazard Professor of Physics
KEVIN MCLAUGHLIN, Nicholas Brown Professor of Oratory and Belles Lettres
KIRI MILLER, Manning Assistant Professor of Music
SUSAN MOFFITT, Mary Teft and John Hazen White, Sr. Assistant Professor of Political Science and Public Policy
PETER MONTI, Donald G. Millar Distinguished Professor of Alcohol and Addiction Studies
VINCENT MOR, Florence Pierce Grant University Professor of Community Health
KIMBERLY MOWRY, Robin Chomers Neustein Professor of Biomedicine
CHRISTOPHER NEIL, Phyllis and Charles M. Rosenthal Director of the Brown-Marine Biological Laboratory Partnership
DEITRICH NEUMANN, Royce Family Professor in Teaching Excellence and Professor of History of Art and Architecture
KAREN NEWMAN, Owen F. Walker ’33 Professor of the Humanities
DOUGLAS NICKEL, Andrea V. Rosenthal Professor of History of Art and Architecture
ARTO NURMIKKO, L. Herbert Ballou University Professor of Engineering
SAUL OLYAN, Samuel Ungerleider, Jr. Professor of Judaic Studies
MARION ORR, Lippitt Professor of Public Policy
JAMES PADBURY, William and Mary Oh - William and Elsa Zopfi Professor of Pediatrics for Perinatal Research
EFSTRATIOS PAPAIOANNOU, William A. Dyer, Jr. Assistant Professor of Humanities
MICHAEL PARADISO, Sidney A. Fox and Dorothea Doctors Fox Professor of Ophthalmology and Visual Science
ROBERT PELCOVITS, Royce Family Professor in Teaching Excellence and Professor of Physics
WILLIAM PELL, Henry L. Doherty Professor of Oceanography
FRANCO PREPARATA, An Wang Professor of Computer Science
PETER J. QUESENBERRY, Paul Calabresi, M.D. Professor of Oncology
THANGAM RAVINDRANATHAN, Robert and Nancy Carney Assistant Professor of French Studies
BORIS ROZOVSKY, Ford Foundation Professor of Applied Mathematics
JAMES RUSSELL, Joukowsky Family Assistant Professor of Geological Sciences
PIERRE SAINT-AMAND, Francis Wayland Professor of French Studies
FRED SCHIFFMAN, Sigal Family Professor of Humanistic Medicine
JOHANNA SCHMITT, Stephen T. Olney Professor of Natural History
CINDY SCHWARTZ, Alan G. Hassenfeld Professor of Pediatrics
RICHARD SCHWARTZ, Chancellor’s Professor of Mathematics
JOHN SEDIVY, Hermon C. Bumpus Professor of Biology
FRANK SELLKE, Karl E. Karlson, MD and Gloria A. Karlson Professor of Cardiothoracic Surgery
ROBERTO SERRANO, Harrison S. Kravis University Professor of Economics
CHI-WANG SHU, Stowell University Professor of Applied Mathematics
MARK SIGMAN, Krishnamurthi Family Professor of Urology
MARCUS SPRADLIN, Manning Assistant Professor of Physics
MICHAEL STEINBERG, Barnaby Conrad and Mary Critchfield Keeney Professor of History
RICHARD STRATT, Newport Rogers Professor of Chemistry
WALTER STRAUSS, L. Herbert Ballou University Professor of Mathematics
ROBERTO TAMASSIA, Plastech Professor of Computer Science
JAN TULLIS, Royce Family Professor in Teaching Excellence and Professor of Geological Sciences
ANDRIES VAN DAM, Thomas J. Watson Jr. University Professor of Technology and Education
NELSON VIEIRA, University Professor of Portuguese and Brazilian Studies
RAJIV VOHRA, Ford Foundation Professor of Economics
ANASTASIA VOLOVICH, Richard and Edna Salomon Assistant Professor of Physics
KEITH WALDROP, Brooke Russell Astor Professor of Humanities
JACK WANDS, Jeffrey and Kimberly Greenberg - Artemis and Martha Joukowsky Professor of Gastroenterology
KAY WARREN, Charles C. Tillinghast, Jr. ’32 Professor of International Studies
WILLIAM WARREN, Chancellor’s Professor of Cognitive, Linguistic and Psychological Sciences
ARNOLD WEINSTEIN, Edna and Richard Salomon Distinguished Professor of Comparative Literature
REBECCA WEITZ-SHAPIRO, Stanley J. Bernstein Assistant Professor of Political Science and Public Policy
IVO WELCH, C. V. Starr Professor of Economics
JOHN E. WIDEMAN, Asa Messer Professor of Africana Studies
EDWARD WING, Frank L. Day Professor of Biology
KENNETH WONG, Walter and Lenore Annenberg Professor of Education Policy
CAROLYN WRIGHT, Israel J. Kapstein Professor of English
JINGMING XU, Charles C. Tillinghast, Jr. University Professor of Engineering
MARK ZERVAS, Manning Assistant Professor of Molecular Biology, Cell Biology, and Biochemistry
RASHID ZIA, Manning Assistant Professor of Engineering
General Regulations

Course Registration and Enrollment

General Information
Instructions about enrollment will be sent prior to the opening of each semester to all students. To complete enrollment, all requirements of the pertinent administrative offices of the University must be met, including registration for courses, payment of accounts, and arrangements for housing as appropriate. Fees will be charged for failure to meet established deadlines. All students must complete enrollment in order to be eligible to remain at the University.

Students are urged to note carefully the instructions provided at registration in order to assure eligibility for enrollment, proper registration in courses, and to avoid unnecessary payment of Late Registration and Change of Course fees. All registration materials (e.g. course change permits, concentration forms, etc.) are official university documents. Any falsification of signatures or other tampering with such forms constitutes a violation of the Academic Code.

Enrollment Without Academic Credit

Auditing. An auditor is a student who is registered in a course without credit under the following conditions: (1) the student must be properly registered for it; (2) the student must pay the usual course fee except as indicated in the next paragraph; (3) the student is entitled to all instruction in the course, including conferences, the criticism of papers, tests, and examinations.

Any student registered on a full-time basis may be permitted to audit additional courses in any semester without charge. The total number of course registrations, including audits, may not exceed five credits.

With the concurrence of the instructor, the fact that a course has been audited shall be entered on the permanent record of any student electing this privilege. The status of a course in which a student has registered may not be changed from audit to credit after the fourth week of classes or from credit to audit after midsemester.

Vagabonding. A “vagabond” is a student who, with the permission of the instructor involved, visits a given course occasionally or regularly without payment of fee. It is understood that such a student shall be entitled to participate in classes and activities, including discussions, conferences, and papers, only at the pleasure of the instructor.

Attendance, Grading, Examinations

Attendance
It is in the interest of every student to attend all sessions of the classes in which registered, and each student has an obligation to contribute to the academic performance of all by full participation in the work of each class; however, within such limits as are necessary for the
general welfare, a student benefits also from exercising discretion and assuming responsibility for his or her educational progress.

Accordingly, unless the instructor imposes attendance requirements, students are not limited with respect to the number of absences from a course. When, in the instructor's opinion, a student is abusing the privilege of voluntary attendance, the appropriate dean's office should be notified so that appropriate action may be taken.

A student is always fully responsible for any course work missed because of absences and will be assigned failing grades in final examinations missed without excuse from the dean's office.

No student organization shall make any appointment for undergraduates which conflicts with college exercises unless permission has been obtained from the dean.

Grading System
At the end of each semester final grades are given in semester courses. A tentative grade is given at the end of the first semester in year courses (indicated by a dash between course numbers); at the end of the second semester examinations in such courses cover the work of the two semesters, and a final grade for both is assigned at that time. (Note: the grade for the second semester of a year course will become the grade for the first semester, regardless of the grade option elected for the first semester.)

In all courses, except those designated by the instructor as Mandatory Satisfactory/No Credit, a student may, in consultation with the advisor, elect to be graded on a basis of either Satisfactory/No Credit or A, B, C/No Credit. A student must for every course taken indicate by the end of the fourth week of the semester which basis for grading is elected.

Any student regularly enrolled in a course, no matter whether for A, B, C/No Credit or for Satisfactory/No Credit, may request from the instructor a more detailed written evaluation of his or her work. (See Course Performance Report below.) Such supplemental evaluations are intended primarily for the information of the student and do not replace departmental evaluations.

No Credit. This grade is given when courses are not satisfactorily completed. The notation No Credit, and the description of the course in which it is given, are not entered on the transcript.

1. Courses may be designated to be graded on a Mandatory Satisfactory/No Credit basis for all students enrolled on the initiative of the instructor. The designation of a course by an instructor to be graded S/NC only must be announced no later than the first day of classes and entails the responsibility for providing Course Performance Report forms to all students who request them. An asterisk shall accompany the listing on the transcript of any course that has been designated by the instructor to be graded on the basis of S/NC only, with an appropriate explanation of the symbol provided.

2. In exceptional circumstances, a course may be left incomplete (except for a regularly scheduled final examination—see paragraph 3 below), with the instructor's consent. In such cases, a grade of Inc will be assigned provided that the student has filed a request for extension of time to complete the work of the course and the instructor has consented to such a request. Unless an earlier date is specified by the instructor, grades of Inc must be made up as follows: for Semester I, by midsemester of Semester II; for Semester II, by the first day of Fall semester. Extensions beyond these dates for any period of time up to but no more than one year from the end of the semester in which the course left incomplete was taken may be granted by the instructor who will indicate this in writing to the registrar.
A course not completed by the designated time will be assigned a grade of NC unless the instructor indicates that sufficient work has been completed to justify course credit by submitting, as appropriate, a grade change from Inc to A, B, C, or S. A grade of NC assigned in accordance with these procedures may be changed subsequently, but no later than one calendar year after the end of the semester in which the course was taken.

3. If a student is absent from a regularly scheduled final examination for a course, the instructor will assign a grade of ABS. If the absence from the examination is excused by the dean, the student will be permitted to take a Special Examination. The Special Examination will be administered by the registrar in accordance with the provisions in the Faculty Rules for such examinations, unless other arrangements are agreed to by the instructor and the student, and communicated to the registrar. If the absence from the final examination is not excused by the dean, the student will receive no credit for the course.

4. A grade of Inc, ABS will be assigned if appropriate and will be resolved in accordance with the provisions of No. 3 and No. 4 above.

Grade Requirements for Advanced Degrees. A minimum grade of either Satisfactory or C in a 1000 or 2000 level course carries credit toward all advanced degrees. Individual departments may, subject to the approval of the Graduate Council, set higher grade requirements.

Advanced degree candidates may be required to register in courses primarily for undergraduates (numbered 1–999); these courses do not carry advanced degree credit. On occasion, however, and with approval of the student’s department and the dean, a student may register for such a course with extra work for advanced degree credit. This course then has the same standing as a 1000-level course and an EX is noted on the transcript. This provision for extra work does not apply to courses of the level of 1–999 taken for graduate credit by students in the master of medical science or Medical School programs.

Course Performance Reports. Students, regardless of grade option selected, may request the instructor to complete a Course Performance Report. This request has to be made prior to midsemester. The instructor may decline to complete such a form if it is believed he or she has inadequate information to do so. Particular consideration should be given to requests from students for whom the course is part of their concentration program. Copies of Course Performance Reports will be made available to: (1) the student, (2) the dean’s office, and (3) the student’s concentration advisor. While not part of the official record, Course Performance Reports may be sent out of the University at the student’s request as information on his or her work at Brown University. In such cases, the student must provide copies of all material to be enclosed at the time the transcript is requested.

Concentration Evaluations. Undergraduate students may request a written evaluation of performance in concentration, which will consist of the student’s own statement and an evaluation prepared by an appropriate faculty member. The following points may be included in such an evaluation: any special characteristics of the concentration program; information not on the student’s official transcript, such as the interest and motivation of the student, the probable capacity for more advanced work, the ability to conduct research, and so forth; and a comment describing the bases on which the evaluation was prepared. If the student elects to have a concentration evaluation prepared, the student’s statement and request for departmental evaluation should be submitted to the concentration advisor by the end of the first week of the student’s final semester. There is no specific form for concentration evaluations; faculty may use whatever format they choose.
Transcripts: Requests for transcripts must be made either in writing by completing a Transcript Order Form, or electronically. For further information please visit the Registrar’s website: http://brown.edu/Administration/Registrar/guidelines/records/index.html. Transcripts will be issued only if all financial obligations to the University have been met.

An official transcript consists of a copy of the permanent record listing courses passed and grades received. A statement is added to all transcripts explaining the grading system and indicating that the student may elect to include other material with the official transcript. The student should choose this material in consultation with his or her advisor. The University will mail this material in one envelope along with the official transcript.

Examinations

Final Examinations. A final, written examination (at the end of each semester) shall be given in each course numbered under 2000 unless the instructor of a particular course decides to use some other mode of final evaluation. If the written examination is not to be used, the mode of final examination which is to be used shall be made known to the students in the course no later than midterm and, in addition, the department and the registrar shall be informed.

Special or Make-up Examinations. These examinations are given only with the approval of the dean to students absent from final examinations.

Special examinations on the work of each semester are given during a stated examination period, in the second week of the subsequent semester.

Placement and Achievement Tests in Foreign Languages. Placement tests in the foreign languages are given during Orientation Program in the fall and during the first week of classes in each semester.

All students, before taking college courses in a foreign language in which they have presented entrance credit, must take either a placement test at Brown University or, preferably, a College Board Language Achievement Test in secondary school. Students with outstanding performance on these tests, or on the Advanced Placement Tests of the College Entrance Examination Board, may be admitted to advanced courses without the usual course prerequisites.

Student Code of Conduct

Academic Code Violations

All cases of academic dishonesty among undergraduates, graduate, or medical students, as defined in the Academic Code at Brown University, shall be referred to the dean of the College, Graduate School, or Medical School, or his or her designated representative. A student accused of such an offense shall be notified in writing as soon as possible of the specific charge or charges against him or her before his or her case is considered. The student shall be given the opportunity of a hearing before the designated representative of the dean of the College, Graduate School, or Medical School, and two members of the faculty, at which all relevant facts may be presented. A student shall have the right to appeal any decision to the dean of the College, Graduate School, or Medical School within five business days after receipt of the official letter outlining the case and the decision reached. For definitions of offenses against the Academic Code, procedures, policies, and a list of
penalties, see the pamphlet issued by the Office of the Dean of the College, *Principles of the Brown University Community: The Academic Code and Non-Academic Disciplinary System*.

**Nonacademic Discipline**

Brown strives to sustain a learning environment that supports individual exploration, creativity, and accomplishment and that promotes and protects the free exchange of ideas. Central to this effort are the four primary Principles of the Brown University Community: individual integrity, respect for others, respect for University resources, and respect for the values of teaching, learning and scholarship. Our community believes that adherence to these principles supports the overall academic mission of the University. Violations of these principles will be handled through the procedures governing the Academic Code and the Non-Academic Disciplinary Procedures. These procedures are designed to address behaviors that impede the educational activity of the University or that infringe upon the rights of others.

Non-academic disciplinary cases are administered by the Office of Student Life, the Peer Community Standards Board, and the University Disciplinary Council. Specific hearing procedures can be found online at www.brown.edu/randr. Printed copies of the Non-Academic Disciplinary Procedures are available from the Office of Student Life.

**Academic Freedom**

Consonant with Brown’s tradition concerning academic freedom, the faculty and Corporation, in 1966, adopted the following statement of principles:

Academic freedom is essential to the function of education and to the pursuit of scholarship in universities.

Therefore, Brown University, mindful of its historic commitment to scholarship and to the free exchange of ideas, affirms that faculty and students alike shall enjoy full freedom in their teaching, learning, and research.

Brown University also affirms that faculty and students shall have freedom of religious belief, of speech, of press, of association and assembly, of political activity inside and outside the University, the right to petition the authorities, public and university, to invite speakers of their choice to the campus, and that students and faculty as such should not be required to take any oath not required of other citizens. The time, place, and manner of exercising these rights on campus shall be subject to reasonable regulation only to prevent interference with the normal functions of the University.

**The Family Educational Rights and Privacy Act of 1974**

The Family Educational Rights and Privacy Act of 1974 (P.L. 93–380) extends to a student the right of access to his or her education records maintained at the University. Education records are those records maintained by or for Brown University that directly relate to an individual who is or has been in attendance (enrolled) at Brown University and for whom
Brown maintains educational records. Information and notification as to the type of record; the accessibility of and policies for maintaining, reviewing and expunging the record; and the procedure for inspecting, reviewing, obtaining copies of, or challenging the record are established and promulgated by the appropriate executive officers. A copy of the University’s current FERPA policy may be obtained from the Office of the Registrar.

**Nondiscrimination Policy**

Brown University does not discriminate on the basis of sex, race, color, religion, age, disability, status as a veteran, national or ethnic origin, sexual orientation, gender identity or gender expression, in administration of its educational policies, admissions policies, scholarship and loan programs, or other school-administered programs.
The College

Admission

In order to receive information about admission to the undergraduate college, please visit our website to register online: www.brown.edu/Administration/Admission. Requests for applications for admission to undergraduate study should be addressed to:

College Admission Office
Brown University
Box 1876
Providence, Rhode Island 02912
(401) 863-2378

The application deadline for the regular admission process is January 1 of the year of desired entrance to Brown. An early plan is available for students who wish to receive December notification. Early Decision candidates must apply as early in the fall of the senior year of high school as possible but in any case by November 1.

Subject Requirements

Brown’s commitment to fostering a liberal education assumes that a candidate for admission will profit most from pursuing a comprehensive college preparatory program. A strong background in English (both literature and writing), foreign languages, mathematics, science, and history will enable students to benefit from the intellectual opportunities offered by Brown University. Brown considers the programs listed below to be a desirable secondary school preparation.

**English**—four years with significant emphasis on writing, continued through the senior year;

**Mathematics**—at least three years of college preparatory mathematics, preferably continued through the senior year;

**Foreign Language**—at least three years, preferably continued through the senior year;

**Laboratory Science**—at least two years of laboratory science above the freshman-year level. Prospective science or engineering students should take both physics and chemistry, and as advanced a level of mathematics as possible;

**History**—at least two years, including American History;

**The Arts**—at least one year of study in music or art;

**Elective Subjects**—at least one year of elective academic subjects;

**Information Technology**—facility with computers is recommended for all applicants.

Exceptions may be made. The Board of Admission encourages the growth of innovative programs and welcomes applications from students of varying educational backgrounds who have shown outstanding intellectual promise. Exceptionally able students who are well-prepared to enter college before completion of secondary school may also be admitted, although such cases are unusual.
College Entrance Examination Board Tests

Each applicant must take the Scholastic Assessment Test (SAT Reasoning Test) and any two SAT Subject Tests of the College Entrance Examination Board no later than January of the senior year. Scores for the examinations administered through the American College Testing Program (the ACT) may be submitted in lieu of those of the College Board; the ACT with the Writing Test will serve as a substitute for the SAT requirements. It is the responsibility of each candidate to take the appropriate tests and to see that they are officially reported to the Board of Admission at The College by January 1 (or the January administration of the tests). A final decision on the application cannot be made until official scores have been received.

Advanced Placement Examinations

Brown participates in the Advanced Placement Program of the College Entrance Examination Board. The program’s aims are “to give able students challenging educational experiences in school, and to increase for these able students the opportunity to take advanced work in college.” Students enrolled in secondary schools participating in this program may take the appropriate examinations given in May and have the scores sent to the Office of the Dean of the College. Course credit and/or placement is determined by the appropriate academic department of Brown University, which may review the examination booklets and other materials. Policies on credit and/or placement vary from department to department. Students will be notified of such credit upon matriculation at Brown. Subjects in which course credit may be granted include American history, art history, biology, economics, European history, French, German, Latin, mathematics, physics, and Spanish.

*Advanced Placement credits may not be applied to the minimum 30 courses needed to earn a Brown degree.*

Advanced Standing for Work Done Prior to Entrance

Freshmen who have taken college courses at an accredited institution prior to matriculation at Brown may be considered for some advanced standing. Further, freshmen who have received certification under various international educational systems may also be considered for some advanced standing. Questions concerning course credit and advanced standing should be addressed to the Office of the Dean of the College.

Course Credit and Advanced Standing

By the end of their fifth semester, students must declare to the Office of the Dean of the College whether or not they wish to use their A.P. and/or international examination credit to accelerate their graduation. To use credit for acceleration, students may request one semester of Advanced Standing (and enrollment credit) for 3–6 course credits or two semesters of Advanced Standing (and enrollment credit) for 7–10 course credits. Students not requesting Advanced Standing (and enrollment credit) from the registrar by this deadline may not do so subsequently, except by petitioning the Committee on Academic Standing.
Transfer Admission from Other Colleges

Only a limited number of transfer students can be accepted each year. A maximum of two years of study elsewhere is transferable; online, extension, and correspondence courses are not transferable, nor are courses outside the realm of defined academic disciplines (nursing, radio electronics and/or broadcasting, or business administration, to name a few). Students who wish to be considered as transfer candidates should write or call The College Admission Office for additional information, application forms, and procedures.

Special and Visiting Students

Each year, a number of students enrolled at other colleges spend a semester or a year as “visitors” at Brown to pursue course work (toward credit at their own college) not offered at their own institution. Other students are accepted on a nonmatriculated basis for a limited number of courses and are classified as special students.

Resumed Education Program

The Resumed Undergraduate Education program at Brown University enables a person who has interrupted his or her formal education for five or more years, or who is twenty-five years or older, to enroll as a fully matriculated student and to study at a full or part-time rate. Some applicants have begun college work already; others have interrupted their education after completing high school. The Board of Admission for Resumed Education goes beyond the traditional bases of secondary school grades and college board scores in making its admission decisions and considers a number of criteria including experience, maturity, commitment, and future potential.

Interested people should write to The Resumed Undergraduate Education Program, The College Admission Office, Box 1876, Brown University, Providence, Rhode Island 02912 or call (401) 863-2378.

Requirements for Baccalaureate Degrees

Baccalaureate Degree Programs

At Brown, two baccalaureate degrees are awarded—the Bachelor of Arts (A.B.) and the Bachelor of Science (Sc.B.). The degree awarded is determined by a student’s chosen concentration program. All Brown undergraduates must complete the requirements for either an A.B. or a Sc.B. in order to earn the baccalaureate degree at Brown.

The Sc.B. degree recognizes a science concentration that demonstrates both breadth and depth in science beyond the minimum required for the A.B. degree in the same field. An Sc.B. program normally follows these guidelines:

1. The concentration program, with the exception of Engineering, shall require no more than ten courses in any one department. The total number of concentration courses required shall not exceed twenty (twenty-one for Engineering).
2. At least one semester course of independent study, research, or design in the concentration discipline must be included.
3. Additional electives must be chosen to meet the quantity requirement for all baccalaureate degrees.

In cases, where the student may successfully complete the Sc.B. degree on the basis of one concentration as well as an additional concentration associated with an A.B. degree,
only one degree (Bachelor of Science) is awarded upon graduation. *See below for requirements associated with combined degrees.*

Degrees with Distinction

Baccalaureate degrees may be awarded with distinction (*magna cum laude*) to those students whose percentage of quality grades -- grades of “A” or “S with Distinction” -- in courses taken at Brown puts them in the top 20% of the entire undergraduate graduating class. The Registrar will provide an opportunity for students to indicate that they do not wish to be considered for a degree with distinction.

Quantity and Progress Requirements

In order to graduate with a Brown baccalaureate degree, a student must successfully complete at least 30 courses (equivalent to 120 semester hours), 15 of which must be taken at Brown. A maximum of 4 summer courses may be applied toward this requirement. Approved study at another institution may also count toward the 30-course degree requirement.

The standard semester course load at Brown is four courses. Full-time students are permitted to enroll in a maximum of five courses in a given semester; students may take three courses in a semester as long as doing so will not bring them below the level of good academic standing. A student may not enroll in fewer than three courses in any semester without written permission from a designated academic dean. Resumed Undergraduate Education students may study on either a part-time or full-time basis.

Residence Requirement

With the exception of students admitted to the Resumed Undergraduate Education (RUE) Program, every candidate for a baccalaureate degree must be in residence at Brown for at least four semesters as a full-time student. Credits from Brown Exchange programs, Brown Approved Alternative Study Abroad programs, and the Brown Summer School do not apply to the residency requirement. Students in the RUE Program must be in residence for the equivalent of four full-time semesters. RUE students may study on either a part-time or full-time basis. Every student must spend sufficient time in concentration studies to permit faculty evaluation of his or her concentration.

Writing Requirement

In order to earn a baccalaureate degree, all students must demonstrate the ability to write well. Learning to write well is a developmental process that occurs over time; Brown students are therefore expected to work on their writing across the four years, in their general studies and the concentration. Students may begin to fulfill this expectation by taking one or more WRIT designated courses, which require students to draft and revise writing assignments based on feedback about their prose. When they declare their concentration, students explain what writing they have completed at Brown and the writing they intend to do in the concentration. The University provides an online portfolio in which students may save examples of their best work each year. This evidence allows students to demonstrate their abilities not only to Brown advisors but also to future colleagues and employers.

All students are expected to communicate effectively in writing in all of their courses. If an instructor is concerned about a student’s ability to write competently, he or she may
contact the Associate Dean of the College for Writing, who will help the student identify a course in which the student may work on writing. Some students may be urged to complete a writing course when they first study at Brown; such cases are determined on the basis of materials students submit when applying for admission to Brown or during the summer prior to matriculation. Students with identified writing concerns who do not complete such a course satisfactorily and/or are judged by the dean to be incompetent in writing will be refused registration by the Committee on Academic Standing until they demonstrate that they can meet University standards for written communication.

**Concentration Requirement**

An academic concentration is the focal point for a student’s undergraduate educational experience at Brown. It is an in-depth study centering on a discipline or disciplines, a problem or a theme, or a broad question. Concentrations aid intellectual development by encouraging conceptual and methodological study on a sophisticated level. A concentration may coincide in some ways with specific prerequisite training for professional goals, but professional training is not the central aspect of the concentration process. Rather, the concentration is designed to foster students’ command of an area of knowledge and ability to use a concentration’s concepts and methods in a coherent manner.

Brown offers standard concentrations that lead to either the Sc.B. or the A.B. degree. In keeping with the philosophy of the open curriculum, students may design an independent concentration if standard concentration offerings do not match their interests. Independent concentration proposals are sponsored by at least one faculty member and must be reviewed and approved by a subcommittee of the College Curriculum Council.

A listing of departmental and interdepartmental concentration programs that are currently available may be found at: [www.brown.edu/Administration/focal-point](http://www.brown.edu/Administration/focal-point). The programs have been approved and are subject to periodic review by the College Curriculum Council. Guidelines for preparing an independent concentration proposal are on the Dean of the College website.

All students must request, in writing, admission to a concentration program no later than the middle of their fourth semester, before pre-registering for semester five (usually spring semester of sophomore year). The written proposal should outline the student’s major objectives in choosing the concentration, while also listing the specific courses to be taken. This proposal functions as a kind of contract, and is signed jointly by the student and the concentration advisor for the relevant department or program. Once the contract has been signed, the departmental concentration advisor becomes the student’s advisor for the remainder of his or her time at Brown.

Students may complete as many as three concentrations during a regular four-year program; Brown does not offer minors. A student who satisfactorily completes more than one concentration program may have that fact indicated on his or her permanent record. In order to accomplish this, the student must have filed a declaration form for each concentration by the end of the pre-registration period in the student’s seventh semester. Sponsorship and authorization of each concentration program shall follow the usual procedures.

No student will be permitted to register for his or her fifth semester unless a declaration of concentration has been filed. Students failing to complete registration on time because of the failure to file a concentration declaration will be subject to the same action taken by the University for all cases of late registration (see page 124).
Honors in the Concentration: Students whose work in the field of concentration has demonstrated superior quality and culminated in an honors thesis of distinction are awarded departmental honors at Commencement. The designation “Honors” is included on the student's transcript and diploma. No distinctions are made among quality levels of honors work. Students considering honors work should consult their departmental, interdepartmental, or independent concentration advisor.

Recommendations for honors are due in early May preceding Commencement. Brown does not grant honors retroactively. Therefore, students who consider taking a grade of Incomplete in a thesis project should understand that they will not receive honors unless the thesis is completed in time to be evaluated by faculty readers and a recommendation submitted before graduation.

Enrollment Requirement

By decision of the Corporation, prior to the awarding of a baccalaureate degree each student is required to accumulate eight semesters, or 32 units, of enrollment credit. The eight-semester enrollment requirement is separate from and in addition to any other degree requirements. A semester of enrollment credit can be earned by studying full-time at Brown for a semester, by transferring in a full semester’s worth of work from an approved program of study at another institution, from certain Advanced Placement (AP) exams, and from some international certification programs such as the British A-Levels and the International Baccalaureate. Summer school courses do not count toward the enrollment requirement unless students successfully complete four summer courses at Brown. (See section below on Tuition Regulations Relating to Brown Summer Session Courses.)

Requirements for Combined Degree Programs

Combined A.B./Sc.B. Degree

Students who wish to earn a combined A.B. and Sc.B. degree may do so in a five-year program in which work for both degrees proceeds concurrently. Students who elect this five-year plan will usually arrange their programs of study so that they may change to either degree candidacy alone prior to the fourth year.

Requirements for this degree program are as follows:

- Declaration of intent. A formal application approved by the appropriate dean must be filed with the Registrar no later than the student’s fifth semester of study.
- Satisfactory completion of the Sc.B. requirements for a standard concentration program in the life sciences, physical sciences or mathematics, or an approved independent Sc.B. program spanning one or more of these areas.
- Satisfactory completion of the A.B. requirements for a standard or independent concentration in the humanities or social sciences.
- A minimum of 38 courses passed. Transfer credits are awarded according to the University’s standard rules and regulations.
- At least three years in residence.
- Ten semesters, or 40 units, of enrollment credit. At least six of the ten semesters must be completed in residence at Brown. The ten-semester enrollment requirement is separate from and in addition to any other degree requirements. A semester of enrollment credit can be earned by studying full-time at Brown for a semester, by transferring in a full semester’s worth of work from an approved
program of study at another institution, from certain Advanced Placement (AP) exams, and from some international certification programs such as the British A-levels and the International Baccalaureate. Summer school courses do not count toward the enrollment requirement unless students successfully complete four summer courses at Brown (see section below on Tuition Regulations Relating to Brown Summer Session courses.) (Note: The Brown Corporation has enacted a provision allowing students in the five-year A.B.-Sc.B. program who complete all academic requirements in nine semesters to terminate their studies at that point, provided the Committee on Academic Standing (CAS) approves the breadth and quality of the student's program. In that case, the enrollment requirement will be reduced to nine semesters. This provision is subject to review by the Corporation's Academic Council.)

Concurrent Program Leading to a Baccalaureate Degree and a Master’s Degree

Subject to the prior approval of the department involved, the Graduate Council, and the Committee on Academic Standing, exceptionally capable students may be permitted, in their junior year, to enter a graduate program of study leading to the earning of both baccalaureate and master’s degrees at the end of eight or nine semesters. Students who are granted this permission complete a minimum of 34 courses within eight or nine semesters. Specific requirements for both degrees must be met, although some courses may be used for credit toward both degrees. Normally, no more than two courses counted toward the undergraduate concentration may be used to fulfill the requirements of the graduate degree. The program includes at least two 2000-level courses, not including any 2000-level courses counted for the independent project or thesis.

In cases where the requirements for an advanced degree are partially completed by students in meeting the requirements for a baccalaureate degree, graduate credit for such work may be allowed upon formal admission to the Graduate School. The Graduate Council shall, in consultation with the department involved, determine the remaining requirements to be satisfied for the advanced degree.

The Committee on Academic Standing follows certain guidelines in considering requests for admission to this combined degree program. Interested students should obtain a copy of these guidelines at the Office of the Registrar prior to filing an application.

Integrated Five-Year Baccalaureate–Master’s Degree Program

With the approval of the Graduate Council, academic departments may establish integrated programs leading to the successive awarding of the bachelor’s and the master’s degrees. In such programs, a student may offer up to two courses taken during undergraduate study at Brown in partial fulfillment of the requirements for the master’s degree. In all cases, the equivalent of at least six semester courses must be taken in-residence at Brown University.

A student must apply for admission to an integrated program no later than the end of the third week of his or her penultimate semester of undergraduate study. Admission to the Graduate School for the fifth year will ordinarily be a matter of course; however, such admission must be applied for at the proper time and decided on in the regular way. Students interested in this program should consult with the Associate Dean for Academic Affairs in the Graduate School.
Brown-Rhode Island School of Design
Dual Degree Program

In this five-year program, students complete a baccalaureate degree at Brown and a Bachelor of Fine Arts (B.F.A.) degree at RISD. The Brown degree earned by students in the program will ordinarily be an A.B. degree. Earning a Bachelor of Science degree is not prohibited, but doing so is difficult because Sc.B. programs are more credit heavy than A.B. programs. For this reason, permission to pursue an Sc.B. in this program is granted on a case-by-case basis. The RISD degree will in all cases be a bachelor of fine arts (B.F.A.) degree. Other degrees offered at RISD ordinarily take five years and thus are excluded from the program.

To gain admission to the program, students must apply to and be admitted by both schools. Because of the program’s strict requirements, only students applying to enter as first-year students are eligible. Approximately 15 students matriculate in the program each year. Once admitted to the program, students must complete 156 credit hours, at least 60 of which (15 courses) must be taken at Brown. This requirement does not include courses earned on Brown sponsored exchange or approved study abroad programs.

Program in Liberal Medical Education

Each year, Brown’s Program in Liberal Medical Education (PLME) matriculates approximately fifty first-year students who will pursue an undergraduate degree and professional studies in medicine in a single eight-year program. As undergraduates, PLME students may choose to work toward an A.B. or Sc.B. degree in the sciences, or toward an A.B. in the humanities, social sciences, or behavioral sciences. The undergraduate experience is designed to prepare students for the last four years of the program, which constitute the medical school years and culminate in the MD degree.

To apply to the PLME program, students submit the standard Brown application. Candidates considered admissible by the College Admission Office are reviewed by the PLME Advisory Board. Applicants not admitted to PLME are still considered candidates to the College for the Bachelor of Arts or Bachelor of Science degree.

Academic Advising Programs

A strong network of advisors and mentors helps students engage fully and successfully with Brown’s open learning environment. Brown’s advising programs are designed to facilitate these relationships and provide students with maximum opportunity to formulate and achieve their educational objectives. Students are expected to take the initiative in seeking out and working with advisors to make the best use of their time at Brown.

To ensure that students have the guidance and support they need to make informed choices, the University assigns each first-year student two advising partners: an academic advisor who is a Brown faculty member or administrator, and a Meiklejohn student peer advisor. The academic advisor provides long-term institutional perspective on educational options while generally informing, sometimes encouraging, and occasionally challenging students. The student Meiklejohn provides an experienced perspective on the ins and outs of course registration, course reputations, prerequisites, and the like.

As first-year students transition to the sophomore year, they are encouraged to stay with their first-year advisors so that they can benefit from the continuity and depth of a two-year advising relationship. Most do stay with the same advisor, although some select a different faculty member or administrator. The efforts of assigned sophomore advisors are
augmented by Randall Advisors and Sophomore Deans in the Dean of the College Office. These advising resources constitute the foundation of “sophomore advising” at Brown and help students navigate the critical second year of undergraduate study.

Students declare a concentration in their fourth semester of study. Concentration advisors help with this process by explaining the dimensions of their academic disciplines, reading and providing feedback on students’ concentration declaration essays, and advising students during their final two years at Brown. Faculty of individual departments and programs that administer concentrations often serve as informal advisors to their concentrators.

Students in all four years can interact informally with advisors over coffee or tea in Advising Central, located on the second floor of J. Walter Wilson. Academic deans and Faculty Advising Fellows hold office hours in Advising Central every weekday afternoon. Faculty Advising Fellows (FAFs) are experienced academic advisors who are interested in students’ lives both in and outside the classroom. By directing students to Brown’s many programs and resources, FAFs can help first years, sophomores, juniors, and seniors make the most of their college experience.

A broad network of academic, co-curricular, and personal counseling complements the work of assigned advisors and faculty fellows. Throughout the year, deans in the College and in the Office of Student Life provide one-on-one consultation to all students who request it. Additional support is available from the Tutoring Program, the Curricular Resource Center, the Sarah Doyle Women’s Center, the Third World Center, the Career Development Center, the professional staff in University Health Services, and the chaplains. Peer advising groups include Brown’s Meiklejohn advising program, residential peer leaders, minority peer counselors, Career Center peer counselors, pre-med peer counselors, and athlete peer advisors.

**Academic Support Services**

A number of programs support undergraduates’ academic success and help them take full advantage of the curriculum.

- The Office of Co-Curricular Advising and Tutoring organizes academic coaching, group tutoring, and individualized tutoring. Group tutoring is offered for select courses in chemistry, economics, math, and physics. Individual tutoring is available by application.
- The Curricular Resource Center provides advising, facilitation and reference materials for students wishing to design their own courses (ISPs and GISPs), to craft independent concentrations, and to explore options for time away from Brown.
- Disability Support Services coordinates and facilitates services for students, faculty, and staff with physical, psychological, and learning disabilities.
- The Math Resource Center assists students in introductory mathematics courses.
- The Science Center offers academic support, tutoring, science-related activities, and a network of faculty and peer advisors familiar with Brown’s science curricula. Through various events and workshops, the Center works to increase the Brown community’s understanding of science.
- The Writing Center provides individual and group writing support to any member of the Brown community. Writing Center staff members help students with all stages of the writing process, from finding a topic through drafting,
revising, and final editing. Writing Center associates also offer workshops for groups of students on various writing topics.

**Academic Standing**

The Brown Faculty and Corporation set the minimum standards students must meet in order to earn the baccalaureate degree. Undergraduate students are normally expected to take 4 courses each semester for a total of 32 courses in 8 semesters and will ordinarily complete 8 courses in every 2 consecutive semesters. Students *must* complete a minimum of 30 courses in 8 semesters. (Successful completion means a course completed with a grade of A, B, C, or S.)

To remain in good academic standing, Brown students must satisfactorily complete at least three courses by the end of the first semester, seven courses by the end of the second semester, eleven courses by the end of the third, fifteen by the end of the fourth, eighteen by the end of the fifth, twenty-two by the end of the sixth, twenty-six by the end of the seventh, and thirty courses to graduate after eight semesters. In addition, students making satisfactory academic progress will complete a minimum of seven courses in any two consecutive semesters. Academic standing is determined only on the basis of courses completed at Brown. Transfer credit, Advanced Placement (A.P.) credit, and summer credit earned away from Brown do not figure in the determination of academic standing.

Undergraduates who, in the judgment of the Committee on Academic Standing, have unsatisfactory scholastic records may be placed in one of three categories—Academic Warning, Serious Warning, or Academic Suspension—which include a permanent transcript notation. The Committee’s judgment will depend on the extent of a student’s academic deficiency as defined by rules approved by the Faculty on February 5, 1991:

*Academic Warning* cautions a student that his or her record is below the standard for graduation.

*Serious Warning* notifies a student that, unless the record improves, he or she will be subject to academic suspension at the end of the semester.

*Academic Suspension* may be ordered when the Committee finds that a student’s academic record falls more than two credits below the number expected for the student’s semester level.

Students on Academic Warning and Serious Warning are required to obtain special academic advising from an assigned dean.

**Guidelines for Study Elsewhere**

Students who wish to transfer credit for study completed at other four-year institutions may do so with prior approval of the appropriate departments and the Committee on Academic Standing (CAS). The rules governing transfer credit for study away from Brown are complex. One set of rules governs study abroad; another applies to study away in the U.S. Yet another set of rules applies to summer study transfer credits. This section describes the policies and procedures that are most commonly called into play when matriculated students wish to have credits from elsewhere added to their Brown transcript.

Students may receive up to eight course credits for work undertaken during one academic year. In a semester credit hour system, one Brown course is considered the
equivalent of four semester hours. In a quarter credit hour system, one Brown course is considered the equivalent of six quarter hours. For that reason, the number of course credits received for study away from Brown may not be equal to the number of courses taken. For example, a student taking three four-semester-hour courses, all properly approved for Brown transfer credit, will receive the equivalent of three Brown course credits. However, a student taking three four-quarter-hour courses, all properly approved for Brown transfer credit, will receive the equivalent of two Brown course credits. It is the student’s responsibility to clarify in advance any concerns regarding the amount of transfer credit that may be awarded.

In order to be considered for transfer credit, courses must be completed with a grade of C or better, and an official transcript must be received by Brown’s Office of the Registrar from the host institution. This transcript will be retained by the University. All transfer credit must receive faculty and Committee on Academic Standing approval. Students should also keep all records from their work away, including: course syllabi, exams, papers, notes, projects, and portfolios, in the event that post-approval is required from an academic department at Brown.

The Brown transcript will indicate the name of the host institution, the time period during which the student studied there, as well as the courses taken and/or unassigned credits at Brown. In the case of Brown sponsored exchange and approved study abroad programs during the academic year, all course work is reflected with the actual course title and a grade of ‘S.’ Students applying to graduate and professional schools are often asked to provide official transcripts from all institutions at which they have been enrolled. In such cases, the student will need to request copies of their transcripts from the study-away institution.

Study Away in the U.S.

Students planning to study elsewhere in the United States should obtain an instruction sheet and a preliminary transfer credit approval form from the Dean of the College website. Students should then work out a program and present it to their concentration advisor and/or other appropriate faculty members for approval. When the preliminary transfer credit form is returned to the study away dean, that dean will approve it on a tentative basis for the CAS or advise the student to petition the CAS, in which case instructions for that petition will be made available. Students should also keep all records from their work away, including, course syllabi, exams, papers, notes, projects, and portfolios, in the event that post-approval is required from an academic department at Brown.

Study Away during the Summer

Two avenues of study are available to undergraduate students interested in summer work. They may take courses in Brown’s Summer School, or apply for transfer credit from other summer programs—either domestic or international—that meet certain conditions. Whether studying in the U.S. or abroad, students must study at accredited, degree granting, four-year institutions. Extension division courses are generally not allowed. Students should obtain preliminary approval for summer study away from Brown by the Committee on Academic Standing and appropriate faculty.

Students may count as many as four summer courses from all sources (or their equivalent, if summer courses carrying fewer than 4 credits were transferred to Brown) toward the baccalaureate degree. No more than the equivalent of two Brown courses will be transcripted for any given summer of enrollment. Summer transfer credit may not be
used to advance a student’s date of graduation, nor will it figure in the determination of academic standing. Students interested in summer study elsewhere should consult staff in the Dean of the College office or the Office of International Programs (OIP), as appropriate.

International Study

Brown’s Office of International Programs (OIP) coordinates all study abroad undertaken by Brown students either on Brown sponsored programs or on Brown approved programs. At present, Brown sponsors programs in France, Spain, Cuba, Czech Republic, Italy, Germany, Denmark, Sweden, The United Kingdom, Tanzania, Japan, Barbados, Brazil, India. Students interested in study abroad should check with OIP as far in advance of any intended study as possible. Brown students of any nationality are not allowed to study abroad in countries where there is a travel ban by the U.S. State Department.

The College Curriculum Council (CCC) has established the following guidelines for study abroad by Brown students:

To receive credit for international study, students must spend at least one semester enrolled in an international institution of higher learning, subject to the same rules and regulations as the host institution’s regular students. There are two exceptions: where the language of study is one in which sufficient proficiency is unlikely to be achieved by the average Brown undergraduate, but the student should study the language while in the country; and where the usual assessment procedures may not be appropriate, in which case special arrangements may have to be made. Students may not study on itinerant programs (i.e., those which travel through many sites rather than being based in one primary site). Nor may they study at institutions created for overseas study for Americans, with special exceptions: for study of a specific area and/or field research unavailable at Brown or better pursued at an international site OR in sites where “the average Brown student” cannot study alongside local students because of the language, e.g., Keio, Denmark, Sweden, Czech Republic.

Exceptions include Syracuse-in-Florence, for art history students; ICCS in Rome for classics students; programs that provide a structured “field studies” curriculum appropriate for students in such fields as development studies, environmental studies, ecology, geological studies, etc.; and programs providing for studies pursued at Brown but often not found in regular university programs overseas, such as studio art or theater arts. Prerequisites for such programs will be stated and must include previous course work pertinent to the intended study abroad.

International Study and Brown Curriculum

International study should complement the student’s program of study at Brown. This should be ascertained by the Office of International Programs (OIP) in consultation with the CCC subcommittee on International Study, the Committee on Academic Standing (CAS), and regional advisory committees.

Non-Brown programs

Brown’s Office of International Programs works closely with key academic departments to develop a list of programs approved for international study. This list includes all Brown-sponsored programs and programs administered by institutions other than Brown in each region. All such programs should conform to the above guidelines for international study. Students do not need CAS approval for study on these programs. The list will be reviewed every two years, and any new Brown-sponsored programs are added immediately.

For Programs Not on the List
Students may petition for approval to study on other programs but should be sure to check the international study guidelines to see if the proposed program meets the criteria. Grounds for exceptions include: the desire to study in a country where there is no approved program; or the desire to study at an institution known for excellence in a specific field. Students must submit a written rationale, a tentative list of courses, and a supporting statement by a faculty member who is familiar with the program or who has expertise in the field of study being pursued. The proposal will be evaluated by the appropriate regional committee; CAS will make the final decision.

OIP reports annually on petition actions to the CCC subcommittee on international study.

Students planning to study abroad must be in good academic standing. They must be able to demonstrate competency in a foreign language, if one is involved in the international study opportunity. Brown program applications are reviewed by faculty committees. Prior approval of the Committee on Academic Standing is required for all students intending to study abroad on non-Brown programs not on the approved list for transfer credit. Prior approval of departments must also be secured for credit towards concentration.

Information and counselling about international study is provided by the OIP staff and student peer counsellors as well as by department advisers.

Students planning to study abroad should visit the OIP Resource Library, meet with an OIP advisor, and with their concentration advisor. Students may receive up to eight course credits for work undertaken during one academic year. Normally no more than four concentration credits will be allowed. Credit cannot be obtained until the student has successfully completed the work and obtained documentation of what has been accomplished. Approval for concentration credit must be obtained from the appropriate concentration advisor. This credit is usually granted after the student presents documentation including evidence of work completed in the course(s) to the departmental concentration advisor.

Official transcripts should be sent to the Registrar. When other forms of evaluation or other documentation are to be used, these should be brought by the student to the Office of International Programs. Students not on Brown sponsored programs may be asked to take such materials to faculty advisers for review and final approval.

For students not on Brown sponsored programs, validation of credit may be carried out on a course by course basis. If the nature and quality of a student’s work in a specific course cannot be sufficiently determined on the basis of the available documentation, the department in question may give the student an oral or written validating examination. Validation should be completed as soon as possible after the student returns to Brown, normally no later than midsemester.

Time spent on study abroad does not apply to the four semester residency requirement for the degree. All students are asked to write to the Office of International Programs about returning to Brown. Such notification should be received no later than December 1 for return in the spring semester and no later than May 1 for return for the fall semester.

Credit may be awarded for summer study abroad, particularly for language study. Students considering this option should consult with the Office of International Programs.

**The Summer Session**

Brown’s Summer Session offers courses on campus and at international sites during the summer. Summer classes meet for six weeks; exams and final work are completed during the seventh week of the program. Brown students take summer courses to enhance their
degree work or to maintain their progress toward degree completion. Summer Session courses are open to all Brown students and to students from other institutions by application.

Governed by Faculty Rules, Brown’s Summer Session maintains guidelines that are similar to those followed during the academic year. The courses are equivalent to academic year offerings, are approved by the College Curriculum Council, and, as of summer 2000, count toward official determination of academic standing.

Brown undergraduates may complete up to two courses in any given summer, and may apply a total of four summer courses toward their bachelor’s degree. Brown Summer Session courses at the 1000-level may count toward graduate degrees. A special Corporation rule allows undergraduates who have completed four Summer Session courses at Brown to request one semester of enrollment credit. Undergraduate fees for summer courses are set annually by the Corporation at a rate lower than the per-course fee during the academic year.

For more information, contact Brown’s Office of Continuing Education, Box T, Providence, RI 02912 (401) 863-7900, or visit www.brown.edu/ce.

Each year’s Summer Session calendar is posted on the Brown Registrar’s web site, www.brown.edu/Administration/Registrar/, as well as at the site above.
The Graduate School

Brown University offers more than 70 graduate programs. The Graduate School website (http://www.brown.edu/gradschool/) is the best source of information on doctoral programs (http://www.brown.edu/gradschool/academics-research/phd-programs) and master's programs (http://www.brown.edu/gradschool/academics-research/masters-programs). The site explains the application process (http://www.brown.edu/gradschool/apply) and provides the online application (http://www.brown.edu/gradschool/apply/online-application), Graduate Record Examination requirements (http://www.brown.edu/gradschool/apply/gre-information), and information for international students (http://www.brown.edu/gradschool/apply/international-applicants). The Graduate School has a webpage for each program, which details application and completion requirements specific to that program.

The Warren Alpert Medical School of Brown University

Admissions

Students interested in the study of medicine at Brown may apply through a variety of admission routes designed to create a highly qualified and diverse medical student body. Approximately one-half of the matriculants in the first-year class enroll from our eight-year continuum leading to both the bachelor’s degree and the M.D. degree. These students are joined by students entering through the standard admission route, through the M.D./Ph.D. Program, or through special programs at institutions with which the medical school has formed a linkage (early identification). These admission routes are described below. Additional information and related admission requirements may be found at [http://med.brown.edu/admissions/](http://med.brown.edu/admissions/) or by writing or calling the Office of Admissions and Financial Aid, Brown Medical School, Box G-A212, Providence, RI 02912-9706; (401) 863-2149.

Program in Liberal Medical Education (PLME)

The Program in Liberal Medical Education is an eight-year, continuum of liberal arts and medical education leading to both the bachelor’s and M.D. degrees. The PLME is open to high school graduates who have applied to and are simultaneously admitted to Brown for their undergraduate studies. The PLME seeks highly qualified and strongly motivated high school students who are committed to a career in medicine at an early age and who also wish to pursue another area of academic interest to an advanced level of scholarship within the framework of a broad liberal education.

From a large (approximately 1,300) and highly qualified applicant pool, roughly 50 students matriculate annually. For additional information regarding the PLME, see page 118, access the website at [http://med.brown.edu/admissions/plme.html](http://med.brown.edu/admissions/plme.html) or [http://med.brown.edu/plme/](http://med.brown.edu/plme/), or contact the College Admission Office, Brown University, Prospect Street, Providence, RI 02912-9706; (401) 863-2378.

Standard Admission

Qualified students of any college or university may apply to the Brown Medical School through the standard route. Individuals must first complete and submit an application through the American College Application Service (AMCAS), indicating on the application that they wish to apply to Brown Medical School; access the website at [http://med.brown.edu/admissions/standard.html](http://med.brown.edu/admissions/standard.html) for details.

The Early Identification Program (EIP)

The Early Identification Program (EIP) provides selected students at cooperating institutions with a place at Brown Medical School upon continued academic progress and college graduation. This route provides opportunities for a medical career to two groups:
• Rhode Island residents enrolled at Providence College, Rhode Island College, and the University of Rhode Island; and
• Students enrolled at Tougaloo College, a historically black, liberal arts institution in Mississippi.

Eligible students are identified by their premedical advisor in the sophomore year of college, participate in selected PLME activities, and enroll in medical school after receiving the bachelor’s degree. Generally, up to two students may be admitted annually from each school. For more information and application procedures, please contact the premedical advisor at the participating institutions. For more information access the website at http://med.brown.edu/admissions/eip.html

The M.D./Ph.D. Program

The M.D./Ph.D. Program seeks students who are motivated to pursue a career in academic medicine and biomedical research. Candidates seek simultaneous admission to the medical school and to one of the following graduate programs in the Division of Biology and Medicine: Artificial Organs, Biomaterials, and Cellular Technology; Biomedical Engineering; Ecology and Evolutionary Biology; Epidemiology and Biostatistics; Molecular Biology, Cell Biology and Biochemistry; Molecular Pharmacology and Physiology; Neuroscience; or Pathobiology.

There is a unified review process which requires submission of a single M.D./Ph.D. application. Offers of admission to the Graduate School and to the Medical School are made simultaneously and must be accepted jointly. Approximately one hundred candidates apply each year for three openings. The M.D./Ph.D. Program is open to individuals who have completed their undergraduate studies or will have completed the requirements for their undergraduate degree prior to matriculation into the M.D./Ph.D. Program. Students enrolled in M.D., D.O. or Ph.D. programs at other institutions may apply, but preference is given to those who can best integrate their clinical and research experiences at Brown. Individuals who are neither U.S. citizens nor permanent U.S. residents may apply; however, financial assistance for these individuals is limited during the M.D. years of the program. Additional information regarding the M.D./Ph.D. Program may be found at http://med.brown.edu/admissions/mdphd.html or http://med.brown.edu/mdphd/ or by calling the M.D./Ph.D. Program, Brown Medical School, Box G-044, Providence, RI 02912-9706; (401) 863-1953.

Definition of Rhode Island Residency for Medical School Admission

An individual is considered a Rhode Island resident if he or she graduated from a Rhode Island high school and if the individual’s parent(s) have lived in Rhode Island for the previous two calendar years, as documented by federal tax returns. For dependent students, the custodial parent(s) must claim the student as a dependent on his or her federal tax returns for the prior two years. Individuals who are independent (i.e., not living with parents and filing individual federal tax returns for the previous two years) must have at least one parent residing in Rhode Island for the previous two years, as documented by federal tax returns.

Selection Factors

Students admitted to Brown Medical School must attain competence in the sciences basic to medicine at a sufficient level to provide adequate preparation for medical school. Applicants are expected to demonstrate competence by successfully completing the following
premedical course requirements at a college or university in the United States or Canada: one semester of Organic Chemistry; and two semesters of Physics, Inorganic Chemistry, and Social and Behavioral Sciences. The Medical College Admission Test (MCAT) is required for standard and M.D./Ph.D. program applicants.

All applicants are selected on the basis of academic achievement, faculty evaluations, evidence of maturity, motivation, leadership, integrity, and compassion. Applicants to the M.D./Ph.D. Program are also evaluated on the basis of their research accomplishment and potential. For the PLME, Brown seeks highly qualified and strongly motivated students who wish to pursue an area of academic interest to an advanced level of scholarship within the framework of a liberal premedical education.

In order to be eligible for consideration, candidates must present a minimum cumulative grade point average of 3.00 (on a 4.00 scale) in courses taken as a matriculated student at an undergraduate college. Applicants who have attended graduate school must achieve a cumulative grade point average of 3.00 (on a 4.00 scale) in courses taken in graduate school. Applicants must have completed requirements for the baccalaureate degree before matriculating into the medical school. All applicants must be capable of meeting the competency requirements expected of all graduates. Technological compensation can be made for some disabilities in certain competency requirements. Candidates accepted for admission who will need special accommodations cannot be admitted unless those supportive services are available, as determined by the Dean of Medicine and Biological Sciences. The processes for assessing whether applicants will be able to meet the competency requirements for the M.D. degree are described in Technical Standards for Medicine, listed below.

Brown University adheres to a policy of equal opportunity in medical education and therefore considers applicants without regard to sex, race, religion, color, national or ethnic origin, age, physical disability, or sexual orientation.

A strong affirmative action program is maintained in all admission entry routes. Brown particularly invites applications from Rhode Island residents and from members of medically-underrepresented minority groups, including African-Americans, Mexican-Americans, American Indians and mainland Puerto Ricans.

### Technical Standards for Medicine

**Process for Assessing Whether Applicants Meet Technical Standards for Medicine:**

1. No inquiry will be made on the application forms concerning disability. Brown’s policies regarding technical abilities and skills necessary to meet the competency requirements are included with the letter of admission, and students are asked at that time to contact the Associate Dean for Medical Education if they have any concerns about their ability to meet these standards.
2. Applicants who are identified as having a disability through volunteered information, supporting credentials, or interviews will have an assessment of their ability to meet competency requirements only after a determination is made of their admissibility to the medical program.
3. Those applicants with disabilities deemed admissible to the Medical School will be requested to have submitted on their behalf appropriate documentation in regard to the disability from a qualified health professional. The health professional will be asked to provide an opinion on the candidate’s ability to meet the competency requirements for the M.D. degree. The applicant may also be requested to respond to that question.
4. The responses will be submitted to a committee appointed by the Dean of Medicine and Biological Sciences. This committee may ask for a review of the supporting documentation by appropriate members of the faculty in regard to the applicant’s meeting the competency requirements. The committee will ascertain what accommodations, if any, the medical program would need to make in order that the applicant might be able to meet the competency requirements, and assess the feasibility of any needed accommodations.

5. The committee will review the information received to determine if the applicant will be able to meet the competency requirements, with reasonable accommodations on the part of the medical program, if necessary.

6. The committee will recommend to the Dean of Medicine and Biological Sciences acceptance of applicants who can meet the competency requirements or will recommend nonacceptance if they cannot.

Process for Assessing Student’s Ability to Continue in the Medical School Should Disability Occur After Matriculation at Brown University:

1. A student who develops a disability after matriculation at Brown University may be identified to the Medical Student Affairs Office through a variety of sources, e.g., reporting of accident or illness by peers, family, friends, or faculty and subsequent follow-up with health professionals managing the care.

2. If the degree to which the student has become disabled raises questions related to meeting the competency requirements after a review by the Associate Dean for Medical Education, a meeting of an ad hoc committee will be set up to discuss the situation. The student will be asked to meet with the committee members, unless the disability is so severe that the student needs to be represented by another individual. In some cases, it might be more appropriate to have a health professional, not directly involved in the care, serve as a consultant to the committee on the issues surrounding the disability.

3. The ad hoc committee will develop a recommendation as to the student’s ability to successfully pursue a medical education based on his or her ability to meet the competency requirements of the medical program. These educational accommodations will be discussed with the appropriate course directors to be certain that there is agreement on how the student will be managed. If facilities accommodations are recommended, the committee will discuss these with the appropriate individuals to be certain that the needs for the disabled student can be provided. The committee’s recommendations will be discussed with the student or his or her representative in the event that the student cannot attend.

4. When the recommendation is that the disabled student can meet the medical program’s competency requirements, the committee will develop a report on any educational program accommodations that, if made, will still meet the competency requirements.

5. Should the decision of the committee be to recommend to the dean that the student be dropped from enrollment in the medical program, the normal due process appeals mechanism will be in effect, and the Student Affairs Office will work with the individual as appropriate on potential alternative career options. For students in the Program in Liberal Medical Education continuum, being dropped from the program due to inability to meet competency requirements for medical education does not necessitate the withdrawal of the student from the undergraduate college if that phase
of the student’s education has not been completed.

**Advanced Scholarship**

Medical students who wish to earn an advanced degree (M.A., Sc.M., M.P.H., Ph.D.), must meet the requirements of the Graduate School. Numerous academic departments at Brown offer graduate programs (listed in the *Brown University Graduate School Catalog*). All graduate studies are carried out under the supervision of a faculty member of a graduate program at Brown University and are subject to the specific requirements of that program in addition to the general guidelines given below. Students should discuss their interests and goals with a director of a graduate program in planning any study that might lead to an advanced graduate degree. For additional information please access the website at: [http://med.brown.edu/education/](http://med.brown.edu/education/).

**The Master of Public Health Degree**

Advanced medical students and holders of the M.D. degree may complete the M.P.H. Specific requirements are described in the annual *Course Announcement Bulletin*.

**The Master of Science Degree**

Specific requirements of different programs and departments are described in the *University and Graduate School catalogs*.

**The Master of Arts Degree**

Specific requirements of different programs and departments are described in the *University and Graduate school catalogs*. A written thesis may be required.

**Graduate Programs in Biology and Medicine**

The division of Biology and Medicine offers seven programs of graduate study in which medical students can earn advanced degrees. These graduate programs are, (1) Artificial Organs, Biomaterials, and Cellular Technology; (2) Biomedical Engineering; (3) Ecology and Evolutionary Biology; (4) Epidemiology and Biostatistics; (5) Molecular Biology, Cell Biology and Biochemistry; (6) Molecular Pharmacology and Physiology; (7) Neuroscience; or (8) Pathobiology.

See page 195 for a detailed description of these programs.

**Educational Programs**

**Program in Liberal Medical Education**

Brown’s Program in Liberal Medical Education (PLME) offers a unique opportunity to combine undergraduate and professional studies in medicine in an eight-year continuum. The PLME combines the open curriculum concept of the college and the competency-based curriculum of the Medical School. It encourages students to pursue their own interests (humanities, social sciences, natural sciences) in depth as they prepare for careers as physicians.
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The PLME provides great flexibility in curriculum planning. During the early years of the continuum, students take courses related to their chosen concentration and to obtain a broad liberal education. In addition, students take courses designed to meet the competencies required for admission to Brown Medical School. This begins with courses in the natural, social and behavioral sciences, and mathematics, which provide a foundation for later medical science and clinical courses.

Students may choose to work towards an A.B. or Sc.B. degree in the sciences, or to fulfill the requirements for an A.B. in the humanities, social sciences or behavioral sciences. Several interdisciplinary concentrations such as Public Policy, and International Relations are also available. The expected duration of the program is eight years. The last four years of the program culminate in the M.D. degree.

Brown’s entire faculty is available to PLME students. This access to faculty throughout the University fosters collaborative teaching and research among scholars and students from widely divergent disciplines. Although the program is characterized by the unique breadth of educational opportunities available to students, it has great strength in the conventional biomedical sciences as well.

The Medical Curriculum

The Alpert Medical School curriculum has been designed and implemented with the intention of creating an integrated, contemporary, compassionate, and flexible program of learning for our students. Our approach to medical education is predicated on the vision that tomorrow’s physician must be a lifelong learner who is scientifically and clinically enlightened, patient and service-centered, and who understands the economic underpinnings of the US health care system. Our goal is to train physicians who will provide informed and compassionate care while at the same time serving as leaders and change agents for the health care system. To achieve the latter goal, we aim to train physicians who will be leaders at all levels.

These educational goals are pursued through a curriculum with the following structure. During Years 1 and 2, students enroll in four sequential semesters of Integrated Medical Sciences (IMS-I through –IV) and Doctoring-I through -IV. The elective Scholarly Concentrations Program is introduced to students during Year 1. Year 3 allows students to explore core disciplines and related specialties through the completion of required clerkships in medicine, surgery, pediatrics, obstetrics & gynecology, psychiatry, and family medicine. The transition from the third year to the fourth year takes place in May, after which time students have the opportunity to develop a program of elective rotations aimed at finalizing a career choice, and obtaining and preparing for a residency in their chosen field.

Brown Medical School continues to employ a competency-based curriculum that began with the inauguration of the PLME in 1985. The rationale behind the competency-based curriculum stems from the need to define the outcomes of the educational process: what are the desirable qualities of a medical school graduate, and what constitutes the essential knowledge base that will enable a graduate to make a successful transition to his or her chosen medical field?

All students are expected to gain competency in the nine abilities (see below) and knowledge base by graduation. Each course within the core curriculum of the Medical School identifies which abilities and parts of the knowledge base it addresses. Students may also meet the competency requirements through individualized study, group independent study projects (GISPs), or alternative courses that might be arranged as part of collaborative learning opportunities.
Nine Abilities:

1. Effective communication
2. Basic clinical skills
3. Using basic science in the practice of medicine
4. Diagnosis, management, and prevention
5. Lifelong learning
6. Professional development and personal growth
7. Social and community contexts of health care
8. Moral reasoning and clinical ethics
9. Problem solving

For additional information regarding the Alpert Medical School please visit the website at:

http://med.brown.edu/
Financial Information

The College—Tuition Regulations

Undergraduate students at Brown are required to accumulate eight semester, or 32 units of enrollment credit in order to earn a baccalaureate degree. The eight-semester enrollment requirement is separate from and in addition to any other degree requirements.

1. Tuition rates are set by the Corporation of the University for each semester. Normally, the tuition rates for the two semesters of a given academic year will be the same.

2. Tuition payments for the baccalaureate degree are based on the norm of thirty-two courses, four courses in each of eight semesters. The minimum enrollment requirement is eight semesters, or the equivalent. The minimum tuition requirement for the program leading to the combined degrees of A.B.–Sc.B. is ten semesters of tuition credit. (Note: The Brown Corporation has enacted a provision allowing students in the five-year A.B.–Sc.B. program who complete all academic requirements in nine semesters to terminate their studies at that point, provided the Committee on Academic Standing (CAS) approves the breadth and quality of the student’s program. In that case, the tuition requirement is reduced to nine semesters.)

3. Payment of full-time tuition for a semester entitles the student to enroll in three, four, or five courses for that semester. For full-time degree candidates, tuition charges are set for the semester, not per course.

4. Enrollment Credit for Transfer Credits
   a. Students who are granted credit for Advanced Placement scores and/or transfer credit for courses completed at another college or university prior to enrollment at Brown may apply for up to four semesters of enrollment credit according to the following schedule:

<table>
<thead>
<tr>
<th>Brown Semester Course Credits</th>
<th>Advanced Standing and Enrollment Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>3–6</td>
<td>1 semester</td>
</tr>
<tr>
<td>7–10</td>
<td>2 semesters</td>
</tr>
<tr>
<td>11–14</td>
<td>3 semesters</td>
</tr>
<tr>
<td>15 or more</td>
<td>4 semesters</td>
</tr>
</tbody>
</table>

   b. Students who are granted Brown course credits by the Committee on Academic Standing for equivalent work completed at and transferred from another college or university after enrollment at Brown may apply for and may be granted advanced standing and enrollment credit according to the same schedule as in 4(a) above. All transfer credits earned after enrollment at Brown are cumulative. Advanced standing and enrollment credit for this cumulative total of transfer credits will be awarded only in semester-equivalent blocks.

   In exceptional cases the Committee on Academic Standing may allow a student to transfer the equivalent of one or two Brown semester course credits for work completed during the regular academic year. Tuition credit will be granted for each such course at the rate of one quarter of a full-semester credit subject to the following conditions:

   i. Such courses completed while the student is not currently enrolled at Brown will become part of the cumulative total of any subsequent transfer credit earned by the student and the Table in (a) above will apply.
ii. If the courses are completed as part of a dual registration arrangement (e.g., a student who is permitted to carry a less-than-normal load of courses at Brown and to pay an appropriate reduced amount of tuition in order to pursue concurrently certain specialized courses at another institution), enrollment credit for such courses will be independent of any other cumulative total of transfer credits earned by the student.

iii. Once advanced standing has been granted, a student wishing to extend his or her total period of enrollment beyond eight full-time semesters, or the equivalent, must make a special petition to the Committee on Academic Standing. If approval is granted, tuition for each course (for the extended period) will be charged at the rate of one quarter of the full-time semester rate.

iv. Transfer credit for summer school courses is allowed in accordance with provisions established by the Faculty Rules and the Committee on Academic Standing. When such credit is awarded, no enrollment credit is associated with the transfer credit granted. The academic credit awarded may not be combined in any cumulative total of transfer credits for the purpose of determining advanced standing or enrollment credit.

5. Undergraduate degree candidates who successfully complete four Brown Summer Session courses may apply for a waiver of one semester’s enrollment. See regulations for Brown Summer Session below.

6. An eighth-semester student who owes less than a full-semester tuition credit at the beginning of the eighth semester will be charged the fraction of the full-time tuition charge for that semester which will complete the eight-semester obligation and may take an equivalent number of courses. Additional courses will be charged at the rate of one quarter of the semester’s full tuition charge.

7. Regular degree candidate students who must or choose to take courses in semesters beyond the eighth semester in order to complete requirements for the baccalaureate degree will be charged tuition at the rate of one quarter of the semester’s full tuition charge for each course enrollment.

8. Degree candidate students who are given permission by the dean to register for a reduced workload (one or two courses) will be charged one quarter of the semester’s full-tuition charge for each course enrollment.

9. Students in the eight-year program leading to a baccalaureate degree and the M.D. degree (Program in Liberal Medical Education) shall make four annual tuition payments at the rate fixed for the College (for years one through four) and four annual tuition payments at the rate fixed for the Medical School (for years five through eight).

10. The minimum total tuition requirement for the concurrent baccalaureate degree and master’s degree will be equivalent to nine semesters of tuition. Students will make four annual tuition payments to the College during their four years of undergraduate study.
During the summer of graduate study and the internship year, tuition will be charged at the rate of one quarter of the semester tuition rate for each course taken.

11. The minimum enrollment requirement for the integrated five-year baccalaureate–master’s degree program.

12. The above regulations cover students who are candidates for a baccalaureate degree. For special students who are not candidates for a degree, a tuition charge of one quarter of the semester tuition rate will be made for each course taken.

Enrollment Credit Regulations Relating to Brown Summer Session Courses

For undergraduates, Brown Summer Session courses carry a course fee charge; they do not carry enrollment credit. Brown Summer Session courses may not be offered in fulfillment of enrollment requirements on a course-by-course basis for undergraduates. Graduate students, however, do receive enrollment credit for summer courses because they pay a tuition charge.

A special provision of the enrollment regulations enables undergraduates to offer Brown Summer Session courses, in partial fulfillment of the enrollment requirement, under certain specified conditions: undergraduates who have otherwise fulfilled the graduation requirements at Brown and have been enrolled in seven semesters of full-time study or an acceptable equivalent, plus have taken and passed four Brown Summer Session courses, will be granted, on request, a waiver of the final semester of their enrollment requirement.

The enrollment requirements dictate that courses taken prior to matriculation may not be combined with courses taken after matriculation in order to achieve advanced standing and enrollment credit; hence, Summer Session courses cannot be so combined. In a similar manner, summer courses taken elsewhere and transferred after matriculation may not be combined with Brown Summer Session courses to achieve advanced standing. The maximum number of summer courses from all sources for which a student may receive credit is four, with no more than two in the same summer.

Estimated Date of Completion (EDOC)

One goal of the enrollment requirement is to enable the University to manage enrollment in the College more effectively. It is essential that this be done to the maximum extent possible. Accordingly, all currently enrolled students are assigned an expected date of completion (EDOC). This information is sent annually to all students with instructions to confirm the assignments or to work out any necessary adjustment with the Registrar. Any extension of enrollment beyond the student’s official EDOC will have to be applied for by December 1 for the spring semester and June 1 for the fall semester.

The College—Student Charges

The University reserves the right to change the rates that apply to all students whenever it is deemed advisable. Published notice of any change will normally be provided in advance.

Tuition: The annual tuition charge for the year 2010–11 is $39,928 or eight tuition units. The tuition charge for part-time and special students is $4,991, or one tuition unit, per course.

Room: The dormitory charge for the academic year 2010–11 in the undergraduate residence halls is $6,522 for regular accommodations and $7,730 for dormitory apartments/suites.
**Board:** All undergraduate, graduate and medical students may elect either a twenty, fourteen, ten, or seven meal contract at an annual charge of $4,018, $3,782, $3,428, or $3,134 respectively. They may also elect a twenty- or fourteen-meal Kosher meal plan at an annual charge of $4,736 or $4,498 respectively. Consistent with Brown’s commitment to the residential college, all resident undergraduates (except RUE students) are required to participate in a meal plan throughout their first full year of enrollment. Any board plan may be changed once during the first three weeks of each semester with a refund credited to the student’s University account on a prorated basis. A student may increase his or her contract participation at any time during the academic year. A fifty dollar ($50) administrative fee is charged to a student’s University account for any meal plan contract cancellation that occurs after the start of the semester. A ten dollar ($10) fee is applied for any meal plan contract change made after the start of the fall semester. Because services offered are often modified to reflect changes in student life, a current brochure is available from the food services office.

**Nonresident Fee/Commuter Fee:** Nonresident undergraduate students in co-ops or off-campus housing and those commuting from home are charged a $616 fee for services provided by the University such as Faunce House, security services, and off-campus information and listing services.

**Health Services Fee:** A $650 fee is charged all degree candidates in residence, both full and part time. This fee is designed to cover costs of providing care at Health Services from late August through Commencement. This fee does not include Health Insurance coverage.

**Student Health Insurance:** Charge for the academic year 2010–11 is $2,348. Mandatory participation is required in the university group health and accident insurance program for students unless a waiver of participation is granted upon submission of proof of comparable coverage. Waiver deadline is June 1.

**Student Activity Fee:** A $178 fee is charged to all students for the support of registered student organizations, the activities of the Undergraduate Council of Students, and the Student Union.

**Readmission Fee:** A $70 fee is charged to all students who reenroll at the University after having been officially separated for any reason, including leave of absence.

**Late Registration Fee:** A $15 fee is charged to students who register after their normal registration period. There is an additional charge of $15 per course for all registrations after the second week of classes.

**Transcripts:** Information about ordering transcripts and the associated fees can be found at: http://brown.edu/Administration/Registrar/guidelines/records/index.html

**Property Insurance:** see under Student Residences, page 722.

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**The College—Payment of Charges**

The University bills for Semester I in late June and for Semester II in mid-November. Payment of tuition and fees are due by August 1 for Semester I obligations and by January 1 for Semester II obligations. Charges applied to the student account during the semester will be due upon receipt of the monthly electronic statement.

Students who fail to make payment in full by the prescribed deadlines are assessed a late payment charge of 1.5% per month (an annual rate of 18%) on any unpaid balance.
Outstanding balances greater than $100 will prevent a student from receiving an official transcript from the University. Outstanding balances greater than $1,000 will prevent a student from pre-registering for any subsequent semester. Students who fail to meet their financial obligation in accordance with established University regulations will have the status of their account reported to the University Student Account Committee for appropriate action, which may include cancellation of eligibility for enrollment and/or dismissal. Students expecting to receive a degree in May are required to settle their accounts by May 1 to retain eligibility for receipt of a diploma. The University reserves the right to refuse to furnish grades, transcripts, certificates, diplomas, letters of honorable dismissal or recommendations, for students who fail to pay their student account balances. The University utilizes the service of a commercial collection agency to assist in the collection of unpaid student accounts.

Upon application, a monthly installment payment plan is available through the Bursar’s Office. Additional information is available in the Bursar's Office or on the web at http://www.brown.edu/Bursar.

Checks in payment of student accounts should be made payable to Brown University in U.S. dollars and mailed to the Cashier's Office, Campus Box 1911, Providence, RI 02912. Instructions for sending payment via wire transfer are available by contacting the Cashier's Office at 401-863-2151. Payment maybe made online via U.S. personal checking/savings accounts at https://payment.brown.edu.

The College—Refund of Annual Charges

1. Tuition
   a. A student who leaves the University during or at the end of the first semester shall not be charged tuition for the second semester.
   b. A student who leaves the University (except under conditions noted in (c) below) or changes his/her enrollment status during a semester shall be eligible for tuition payment refund during the first five weeks according to the following schedule:

<table>
<thead>
<tr>
<th>Week of Withdrawal</th>
<th>Percentage Amount of Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 and 2</td>
<td>80 percent</td>
</tr>
<tr>
<td>3</td>
<td>60 percent</td>
</tr>
<tr>
<td>4</td>
<td>40 percent</td>
</tr>
<tr>
<td>5</td>
<td>20 percent</td>
</tr>
</tbody>
</table>

   If a partial refund is made, no portion of the tuition paid and not refunded will be credited to the total tuition required for the degree. When no refund is made, the four tuition units paid will be credited toward the total tuition requirement for the degree, and the number of semesters to which a student is entitled for full-time enrollment will be reduced by one.
   c. A student who is suspended, dismissed, or withdraws when under investigation for misconduct shall not have tuition refunded for the semester in which the action is taken.

2. Room
   While residence hall rooms are rented on an academic year basis, students who leave the University or change their status to married students during or at the end of the first semester are not charged room rental for the second semester. Students who leave the residence halls during the semester are charged room rental for the balance of that semester
unless the residential life office can provide a satisfactory replacement for the vacant space. A satisfactory replacement is deemed to be a student who is not currently living on campus or a student who is living in a “roomsharing” room if the total occupancy of the residence halls is in excess of normal capacity.

Prorated room refunds when applicable will be made from a schedule prepared by the Director of Residential Life and will be on file in the Office of Residential Life. A student suspended or dismissed from the University or withdrawing when under investigation for misconduct is not entitled to any refund of room rental charges for the balance of the current semester. Students seeking any further information regarding room charges and/or refunds should contact the Office of Residential Life.

3. Board
Brown Dining Services offers flexible meal plans and varied menu and service offerings. The following meal plan contract options, based on meals available per week, are available to all undergraduate, graduate, and medical students; twenty; fourteen; ten; seven; twenty Kosher/Halal; and fourteen Kosher/Halal. Consistent with Brown’s commitment to the residential college, all resident undergraduates (except RUE students) are required to participate in a meal plan throughout their first full year of enrollment.

Any students who wish to change, or upperclass students who wish to cancel their meal contract, can prior to the start of, or during the first three weeks of the fall semester. One change is permitted per semester. Meal plan contracts are in effect for the full academic year. Therefore, contracts may be changed but not cancelled during the spring semester. A credit or debit will be applied to the student’s university account based on a weekly proration of the annual contract price. Additionally, the following fee structure applies:

1. A fifty dollar ($50) administrative fee is charged to a student’s University account for any meal contract cancellation that occurs after the start of classes in the fall.
2. A ten dollar ($10) fee is applied for any meal plan contract change made after the start of the fall semester.

4. Health Services Fee
A student who leaves the University at any time after the start of the semester is not eligible for a health fee refund.

A student who leaves the University during or at the end of the first semester shall not be charged a health fee for the second semester.

5. Health Insurance Fee
Enrollment in the student health insurance plan is for a twelve-month period (August 15th to August 14th). Students who start their enrollment at Brown in the second semester are enrolled from January 15th to August 14th.

Prorated refunds are available only to students who separate from the University. Students who wish to request a prorated refund must notify the Office of Risk Management in writing within 30 days of their separation date. Details are available from the Office of Risk Management, Box 1914, (401) 863-1703.

Student account records are maintained in the bursar’s office. Questions concerning the exact amount of debit or credit balance on a student account should be directed to the bursar.

Additional information regarding student charges and payment options, please visit the Bursar’s Office website at:
The College—Financial Aid

The Office of Financial Aid is committed to partnering with students and families to explore options to finance the cost of an education at Brown. We assist undergraduate and graduate students, in understanding all aspects of the financial aid application processes for federal, state and institutional need-based grants and loans. Our office also provides information about student employment opportunities both on and off-campus.

At Brown, financial aid is one of our highest priorities. Brown is committed to meeting a family's full demonstrated financial need with a combination of federal and institutional need-based grants, student employment, and loans. Our financial aid program includes initiatives that in some cases offer awards with no expected parent contribution, and/or no loans.

The instructions and links on this website (http://www.brown.edu/about/administration/financial-aid/) will provide you and your family details regarding required application forms and documentation, as well as deadlines and other helpful information. All inquiries concerning scholarships, loans, and student employment should be addressed to the Office of Financial Aid, Box 1827, Brown University, Providence, Rhode Island 02912 or (401) 863-2721.

The College—Financing Alternatives

The Loan Office is the centralized department for all university-based loan programs. This office administers student loans for undergraduate, graduate and medical students. The University participates in the Federal Direct Lending program for subsidized and unsubsidized Stafford Loans and Plus Loans. In addition, the University offers alternative Parent Loans and the Tuition Prepayment Program, along with various employee loan programs. Financial counseling is available to the families of Brown students.

If you have any questions regarding these programs or require more information you may contact the Loan Office at Box 1950, Providence, Rhode Island 02912 or call (401) 863-3296; or please visit the Loan Office website at:

http://brown.edu/Administration/Financial_Services/Loan/index.html.

The Graduate School—Tuition Regulations, Student Charges, etc.

For the current information regarding Graduate School tuition regulations, student charges, payment of charges and financial aid, refunds, and financial support, please visit the Graduate School website at: http://www.brown.edu/gradschool/financing-support.
Medical School—Tuition and Financial Aid, Student Charges, etc.

Tuition

The tuition for the first four years of the program is the same as that of the College. Tuition for the last four years of the PLME is somewhat higher than the College tuition, but consistent with other private medical schools. Tuition is determined each year by vote of the Brown Corporation.

For the current information regarding tuition regulations, student charges, payment of charges and financial aid, refunds, and financial support for the Alpert Medical School, please visit the Alpert Medical School website at: http://med.brown.edu/financialaid.
Types of Courses Offered

- **Departmental courses** (including those offered by divisions, centers, and programs), page 132.
- Extradenpartmental **University Courses**, page 701.
- **Independent study plans**:
  - Independent study projects, including internships, page 702.
  - Group study projects, page 703.

Information concerning these courses will be found on the pages indicated, including course descriptions as appropriate; however, specific time schedules are not available in this bulletin. The University will, each spring, make available course offering information for the following academic year via the Banner Records and Registration System, available through the Brown web site at: [http://www.brown.edu](http://www.brown.edu), as well as in the form of periodic printed course schedules. Reference should be made to these sources for the courses offered each semester and for the times at which they are given.

Course information is subject to change. The University reserves the right to add or delete courses of instruction at any time without notice.

Unit of Credit

The semester course is the unit of credit. This is defined as one fourth of a student’s normal program of academic work for one semester and for purposes of evaluation may be considered the approximate equivalent of four semester hours.

Course Numbering System

Courses open only to undergraduates are numbered from 1 to 999. Courses open to undergraduate and graduate students are numbered 1000 to 1999. Courses open to graduate students and, by special arrangement, to undergraduates are numbered 2000 to 2999. Courses open only to students enrolled in the Medical School are numbered 3000 and above.

Course Availability

With very few exceptions, the courses of instruction listed in this bulletin have been offered within the past five years. Courses not offered in the past three years are marked by a
superscript dagger (†) after the course title. It is hoped that these provisions will assist students in determining what courses they are most likely to have available to them during their careers.

**Year Courses and Two-Semester Sequences**

A dash between course numbers (for example, French 10–20) indicates a year course in which the grade at the end of the first semester is normally a temporary one; the final grade submitted at the end of the course covers the work of the entire year and is recorded as the final grade for both semesters. If the second half of a year course is not completed by the end of an academic year, the grade for the first semester will become a No Credit. If the student completes the second part of a year course during a later academic year, he or she may need to notify the Office of the Registrar in order to reactivate the first part of the course.

In registering for the second half of a year course, students must register for credit if the first half was taken for credit. Similarly, if registered for audit in the first half, the second half of the course registration must also be as an audit. Exceptions must be approved by both the academic department and the Committee on Academic Standing.

A comma between course numbers (for example, Physics 21, 22) indicates a two-semester course, the first semester of which is normally prerequisite to the second semester. Two independent grades are submitted, one at the end of each semester.

**First Year Seminars**

First Year Seminars (FYS) ensure close contact between first-year students and faculty members while simultaneously offering a rigorous introduction to the concepts and methods of a particular subject area or department. Seminars have few if any prerequisites and are offered in all areas of the curriculum, from anthropology to physics to literary arts. Students receive regular feedback on the work they produce for first-year seminars, and seminar faculty often serve as informal mentors for their students long after the class has ended.

**Diversity Perspectives**

In addition to courses designated as Liberal Learning courses, the Course Announcement includes others that are designated as Diversity Perspectives (DVPS) courses. These courses focus primarily or at least substantially on the knowledge and experience of groups that are underrepresented in traditional approaches to knowledge and learning. These courses examine the ways in which disciplines, histories, and paradigms of knowledge are reconfigured by the study of diversity-related intellectual questions.

**Liberal Learning Courses**

The Liberal Learning course list was created to assist students in undertaking a broad and coherent course of study consistent with the goals of a liberal education. Courses designated “Liberal Learning” are an established part of the Brown curriculum. They are grouped under this rubric because they provide an introduction to the many ways of approaching knowledge that define a liberal education. Liberal Learning courses emphasize synthesis rather than survey and focus on the methods, concepts, and values employed in understanding a particular topic, theme, or issue. They may use either the modes of thought of a single discipline or an interdisciplinary approach, but they share the common goal of introducing students to distinctive ways of thinking and of constructing,
communicating, and discovering knowledge. Building on Brown’s conviction that liberal education requires that students be actively involved in their own educations, the pedagogical emphasis of Liberal Learning courses is on active student involvement; they therefore typically entail extensive student participation through such activities and exercises as papers, projects, reports, and class discussion.

Liberal Learning courses are identified by the initials “LILE” following their descriptions in the annual Course Announcement Bulletin.

Writing-Designated Courses
Brown students are expected to work on writing in their general studies and in the concentration. Students may begin to fulfill this expectation by taking at least one Writing-designated course. Writing-designated courses engage students in the writing process by having them draft and revise papers based on feedback about their prose. Such courses are offered across the curriculum and help students develop the ability to write well in styles appropriate to different academic disciplines.

Writing-designated Courses are designated with “WRIT” at the end of course descriptions in the annual Course Announcement Bulletin.

Center for Advanced Materials Research
The Center for Advanced Materials Research was established in 1989 as an independent academic unit at Brown. Its goal is to coordinate and facilitate research and education in materials sciences across the campus, as well as to foster inter-institutional scholarship and study of modern materials by advanced experimental and theoretical tools. The center is an umbrella organization, presently anchored within several engineering disciplines and the departments of physics and chemistry at Brown, with developing links to biology and biomedical sciences.

The organizational and administrative purpose of the center is threefold:
1. To catalyze and enable multi-investigator, interdisciplinary faculty research teams in modern materials sciences, to enhance the development of such programs, and to provide effective operation within a block research grant framework.
2. To administer several central research laboratory facilities, including the Electron Microscope Facility, Microelectronics Facility, and the Joint Engineering Physics Instrument Shop (JEPIS machine shop). These facilities provide essential resources for undergraduate courses from several science departments and for Ph.D. thesis research.
3. To explore the development of interdepartmental educational programs in modern materials science education both on and off campus. These include the Institute for Elementary and Secondary Education’s annual institute “Thinking with Stuff.” In addition, the center sponsors an educational outreach program through the National Science Foundation Materials Research Science and Engineering Center (MRSEC) block research program. This MRSEC program currently includes a summer research experience for undergraduates and a K–12 school visitation program offering advanced materials science demonstrations.
The center welcomes inquiries, especially in the areas of scientific issues and the availability of its sophisticated laboratory facilities. The Center for Advanced Materials Research is directed by Professor William Curtin, Professor of Engineering.

For additional information, please visit the center’s website at: http://www.brown.edu/Departments/Advanced_Materials_Research/

**Africana Studies**

Professors Chinua Achebe, B. Anthony Bogues, Paget Henry, Lundy Braun, Tricia Rose (Chair), Ruth J. Simmons, John Edgar Wideman; Associate Professors Anani Dzidzienyo, Nancy Jacobs, Elmo Terry-Morgan, Corey D. B. Walker; Assistant Professors Francoise N. Hamlin, Keisha-Khan Y. Perry; Visiting Professors Charles E. Cobb, Jr., Walter Green, George Lamming, Okey Ndibe.

Located in the historic Churchill House, the Department of Africana Studies examines the artistic, historical, literary, and theoretical expressions of the cultures of Africa and the African Diaspora, especially in the United States, the Caribbean and Latin America. Our faculty highlights innovative knowledges produced by the critical study of race, class, gender, nation, and sexuality from an interdisciplinary perspective.

**Undergraduate Program**

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html or http://www.brown.edu/Departments/Africana_Studies/undergraduate_concentration/.

In order to develop requisite competency, Africana Studies concentrators must complete eight (8) semester-long courses offered by or cross-listed with the Department. Concentrators may also petition the Department to accept other appropriate courses.

The Department encourages study in Africa, the Caribbean or Latin America during the student’s junior year. While the Department actively supports programs in South Africa, Tanzania, Ethiopia, Brazil, and the English-speaking Caribbean, concentrators must complete at least six (6) courses in residence at Brown.

The Department also encourages the acquisition of language competencies, in addition to English, which are spoken in Africa and the diaspora. Since no continental African language is currently offered at Brown, concentrators who study abroad and acquire certified competency in any African language are welcome to petition the Department for competency credit.

**Graduate Program**

The Department of Africana Studies offers a graduate program leading to the Ph.D. in Africana Studies. The program features three areas of emphasis: History, Politics and Theory; Literary, Expressive and Performance Cultures; and Feminism, Gender and Sexuality. Graduate students in the program will receive rigorous training in interdisciplinary analysis of cultural, economic, political, and social issues, as well as national and transnational perspectives on social and human development in Africa and in the African diaspora in the United States, the Caribbean and Latin America.
Courses of Instruction

Primarily for Undergraduates

0090. An Introduction to Africana Studies
This course introduces students to the discipline of Africana Studies by critically exploring and analyzing the links and disjunctures in the cultural, economic, political, and intellectual practices and experiences of Africans and persons of African descent throughout the African diaspora. The course features an interdisciplinary approach in developing the conceptual, theoretical, and analytical frameworks necessary for study in the field. C. D. B. Walker.

0110. Freshman Seminar Series

0110A Facing the Past: The Politics of Retrospective Justice
History is characterized by many forms of gross injustice, as well as by efforts to prevent, redress, or make amends for them. This seminar examines a series of case studies in retrospective justice, including war crimes tribunals, truth and reconciliation commissions, national apologies, and reparations movements, as well as the work of Brown’s recent Steering Committee on Slavery and Justice. Enrollment limited. Written permission required. Staff.

0120. Philosophy of Race and Gender
Prejudice of many kinds, such as racism and sexism is so embedded in our modern social institutions, and so traditional and pervasive that we often fail to notice it. Furthermore, race and gender have been used repeatedly to explain differences. This course is a rigorous examination of the philosophical meanings of race and gender, from a variety of historical, anthropological and feminists perspectives. Staff.

0160. Twentieth-Century Africa
An introduction to recent African history, the course combines chronological and topical approaches. It is organized around the major epochs of colonialism, decolonization and post-colonial independence, but within those periods, we will concentrate on themes such as health, environment, development, the state and artistic expression. Readings draw heavily on primary sources. Three exams and two projects, including group work. N. J. Jacobs.

0170. Afro-American History and Society Before 1800
Focuses on the history of Africans and persons of African decent in the part of North America that now constitutes the U.S. Centers on the 18th century, but gives some attention to the 17th and 19th centuries as well. Most of the readings are devoted to the English colonies, but some concern themselves with Dutch, French, and Spanish settlements. Staff.

0190. Caribbean History and Society Before 1800
Examines some of the themes important in the multiracial societies of the Caribbean from the 17th through the early years of the 19th century. Explores Creole societies, plantation economies, ethnicity, maroon societies, class and racial divisions, acculturation, syncretic religions, and patterns of slave resistance. Danish, Dutch, English, French, and Spanish settlements are studied. Staff.
0200. Modern Caribbean History and Society
This course will critically examine five themes in modern Caribbean history and society: What is the Caribbean? Nationalism, religion, economic development, and popular culture. These themes will be discussed with reference to the different geographical, racial, cultural and political spaces, which comprise the Caribbean. B. A. Bogues.

0210. Blacks in Latin American History and Society
Explores the role of blacks in the national histories and societies of Latin America, with specific attention to slavery, race relations and their domestic and external implications, race and class, and political and cultural movements among blacks. A. Dzidzienyo.

0220. Introduction to African American History since Emancipation
This course explores African American History through the lens of black freedom struggles. The struggles take all forms, between black and white from local to national levels, within and between black communities, and between men and women. This course assumes some familiarity with basic U.S. History and will utilize a variety of primary sources from autobiographical material to visual art and music as well as the usual monographs and articles. Aside from reading, students will be required to do some research, and write historical prose. 2 papers; 2 exams. F. N. Hamlin.

0280. Race, Slavery, Modernity and Knowledge
This course will review some of the central texts that constitute the different meanings of modernity and discuss how these texts became part of our framework for thinking about modernity, the human self and its different representations. The course will also engage texts that make attempts to complicate the meanings of modernity through a set of engagements with the issues of slavery, colonialism and race. Some key words in the course are: modernity, knowledge production, double-consciousness, social construction of race, racial slavery, coloniality. Enrollment limited. Written permission required. B. A. Bogues.

0560. Psychology of the Black Experience
This course is designed to facilitate understanding of African American psychological experiences. We begin by critically reviewing historical approaches to the psychological study of Black people. We then shift to an examination of the themes, and research currently being generated by those involved in the quest for scholarly self-definition and for redefinition of the psychological fabric of the Black experience. Staff.

0570. 20th Century Black Feminist Thought and Practice in the U.S.
This course will explore the ways that black women in the U.S. have experienced racial and gendered discrimination as well as what sorts of strategies (e.g., political, intellectual, narrative and creative) black women have devised in response. We will be especially concerned with elements of African-American feminist thought and its articulation in writings, music, literature and practice/activism in the 20th century U.S. T. Rose.

0580. Black Theology
"In this era of Black Power... theology cannot afford to be silent." This lecture course will plumb the depths of James H. Cone's statement by critically interrogating the cultural, political, and theoretical dimensions of the development and evolution of Black Theology. The course will consider the nature and task of theology with particular reference to its contested role in American public life, the complex relation between theology, race, and radical politics, and the connections and disjunctures between Black Theology and the fields of history, literature, and philosophy. C. D. B. Walker.

0600. Race, Gender and Urban Politics
This course will introduce students to the methods and practice of studying black urban life with a primary focus on U.S. cities. We will critically examine the urban cultural studies debates concerned with race, gender, class and sexuality. The approach of the course will
be interdisciplinary, drawing upon works from anthropology, literature, history, music, and film. Topics include tourism, immigration, poverty, popular culture, gentrification, violence and criminalization. K. Y. PERRY.

0620. African–American Life in the City
This course examines the social and cultural history of black urban communities by examining the foundation of black communities in Chicago, New York and Los Angeles. We will: examine how migration and the intersections of race, class, culture and gender shape life in urban places; reveal the structural forces that define black urban communities; and explore urban African–American expressive forms. T. ROSE.

0630. Drama and War in Africa
This course is an historical, political and topical examination of the subject of War on the African continent as seen through the lens of artistic response. Class discussions will be based on the different Stage, Screen and Radio Dramas that will serve as course materials. We will analyze reflections by African artists and scholars on the violent conflicts that have characterized the region’s recent history, as well as closely related international perspectives, such as those evident in Hotel Rwanda and The Last King of Scotland. We will also explore the ways that other members of society (especially women and children) deal with such crises. Canonical African dramatists like Fugard, Ngugi, Soyinka and Ousmane will be referred to, but emphasis will be laid upon the New Voices emerging from a range of African nations, including Rwanda, Uganda, Congo, Senegal, Sudan and South Africa, that have engaged with the subject of war. B. A. BOGUES.

Using an interdisciplinary methodology this course will examine three current issues in African societies: War, Violence and Sovereignty; the Politics of Gender in the African post-colony and the meanings of History, Trauma and Public Memory in some African societies. We will undertake this examination by “thinking about Africa differently,” that is by thinking about these three issues outside of the dominant set of images, tropes and ideas that have conventionally constructed a particular version of Africa. B. A. BOGUES.

0710 Topics in Africana Studies

0710A. Racial and Gender Politics in Contemporary Brazil
Brazil is commonly understood as an example of a “racially democratic” nation, but as scholars have recently shown, racism permeates all aspects of Brazilian society. This course traces the development of the theorization of race, racial identity and race relations in contemporary Brazil. The approach of the course will be interdisciplinary, drawing upon works from anthropology, literature, history, music, and film. Topics will include colonialism and enslavement, nationalism, social activism and popular culture. We will also consider how Brazilian social relations differ from or conform to other racialized patterns in other nation-states in the Americas. Particular attention will be placed on the interrelationship between race, gender, class, and nation. K. Y. PERRY.

0710B. Ethics of Black Power
In his now classic text Blood in My Eye, George Jackson writes "All revolution should be love inspired". This course will plumb the depths of Jackson's remark by critically interrogating the ethical dimensions of the Black Power concept and the cultural, ideological, and political interventions influenced by the conceptual revolution. We will assess the ethical parameters of the various ideological tendencies that influenced the conceptual formulation and political articulation of Black Power including Black
Nationalism, Feminism, Liberalism, Marxism-Leninism-Maoism and Pan-Africanism. C. D. B. WALKER.

0760. Topics in Africana Studies

0760A. Rastafarianism
This course explores the philosophy, history, politics, and theology of Rastafari, one of the Caribbean’s most influential and misunderstood liberation movements. B. A. BOGUES.

0850. The Politics of Gender in the Caribbean Novel
This course will examine 20th Century Caribbean Literature as a genre, which poses challenges to colonialism and raises profound questions of sovereignty. It will examine how Contemporary Caribbean Literature contributes to the world of literature in general. G. LAMMING.

0880. Hip Hop Music and Cultures
This course is a study of the impact of changing social attitudes and cultural manifestations in America on the development of African-American music from the Be-Bop Movement (early 1940s) to the Hip-Hop Movement (late 1990s). Enrollment limited. T. ROSE.

0890. Narratives of Power
Close readings and critical discussion of some of the most influential discussions of power in the past two centuries. Seeks to develop an appreciation of the complexity and elusiveness of discourses of power. STAFF.

0950. History, Literature and the Caribbean Novel
This course examines the ways in which literature is influenced by major historical events with special reference to the literatures of the Caribbean. Students will undertake a critical examination of the fictional representation of Europe’s encounter with Africa and Asia in the Americas. G. LAMMING.

0980. Fela Anukalpo Kuti and the Social, Cultural, Political, and Aesthetic Implications of AfroBeat
Fela! The social, cultural, political and aesthetic implications of Afrobeat. This course will examine how all of the above converge in the development and evolution of Afrobeat, with a particular focus on the impact of “colonialism” on African society and culture. Interested students should have an interest in cross-cultural analysis, music appreciation, and the willingness to explore and investigate West African/Nigerian/Yoruba society and culture. STAFF.

0990. Black Lavender: A Study of Black Gay and Lesbian Plays and Dramatic Constructions in the American Theatre
An interdisciplinary approach to the study of plays that address the identities and issues of black LGBT people and offers various perspectives from within and without the black LGBT artistic communities. Focuses on analysis of unpublished titles. Also includes published works by Baraka, Bullins, Corbitt, Gibson, Holmes, West, and Pomo Afro Homos. Some evening screenings of videotapes. Enrollment limited. Written permission required. E. TERRY-MORGAN.

For Undergraduates and Graduates

1010. Special Topics in Afro-American Studies

1020. Special Topics in Africana Studies

1020A. Black Cultural Studies
T. ROSE.
1020B. Freedom in Africana Political Thought  
This course will be a comparative analysis of freedom as a central value in political thought. It will do this by comparing the knowledge and practices of freedom to slaves in the Haitian Revolution, the ideas of freedom in the Civil Rights Movement, and then finally the conceptions of freedom in South Africa. B. A. BOGUES.

1020C. The Afro–Luso–Brazilian Triangle  
Examines three historical components of the South Atlantic in terms of history, culture, and contemporary political and economic consequences. European colonialism in Africa and Brazil constitutes the baseline for this exploration, but the long and tardy nature of Portuguese colonialism in Africa in comparison with other European colonial powers, especially in its post–World War II manifestations, is our starting point. A. DZIDZIENYO.

1050. Seminar in Africana Studies  
1050A. Advanced RPM Playwriting  
E. TERRY-MORGAN.

1050B. Africana Feminism  
STAFF.

1050D. Intermediate RPM Playwriting  
E. TERRY-MORGAN.

1050E. Introduction to RPM Playwriting  
E. TERRY-MORGAN.

1050G. Narrating the Radical Self  
How black women in the United States and elsewhere have written about their lives in autobiographies will be the focus of this course. We will discuss black women’s use of autobiographical writing to document their own individual experiences in political movements as well as to provide key insights into how black people throughout the black diaspora have organized in recent history. K. Y. PERRY.

1050H. Introduction to Post–Colonial African and African Diasporic Theatre  
This class will explore the theatrical works and ideology of a selected group of playwrights from Africa, the Caribbean, and the United States. It will focus on the ways in which these artists have creatively and syncretically responded to varied forms of colonialization and creolization while paying attention to the post–colonial social and historical context that continues to impact and influence these modes of artistic production. STAFF.

1050K. RPM Playwriting: Playwriting Strategies From Contemporary Black Theatre  
E. TERRY-MORGAN.

1050L. RPM Playwriting: Advanced and Staging  
E. TERRY-MORGAN.

1050M. Roots of African American Fiction: Oral Narrative through Richard Wright  
J. E. WIDEMAN.

1050N. Journalism and Black Popular Culture  
STAFF.

1050P. Art and Civic Engagement: Creativity/Reality  
K. A. BAXTER.
1060A. *Africa since 1950*
This seminar considers the recent African past historically, but with an emphasis on subaltern subjects. We begin with general discussions about the discipline of history. Turning to the recent past in Africa, our particular focus will be on the challenges of subaltern history, including the problems of sources, of subalterns as subjects, and of generalizing subaltern experiences. Enrollment limited. Written permission required. N. J. JACOBS.

1060C. *Contemporary African Philosophy*
An examination of some of the most influential work on problems of identity and being, theology and theodicy, time and history, method and evaluation, race and racism, postcoloniality and liberation in contemporary African philosophy. Readings include the work of Anthony Appiah, Frantz Fanon, Kwame Gyekeye, Pauline Hountondji, D.A. Masolo, John Mbiti, Kwame Nkrumah, Léopold Senghor, Tsenay Serequeberhan, among others. STAFF.

1060D. *Harlem Renaissance*
Explores the literature, music, and art of the so-called Harlem Renaissance, within the context of broader transformations in African American and American culture and politics in the decade of the 1920s. Readings include books by Langston Hughes, Zora Neale Hurston, Nella Larsen, Alain Locke, Wallace Thurman, and Claude McKay; contemporary essays, reviews and manifestoes; and recent critical studies. STAFF.

1060E. *West African Writers and Political Kingdom*
Do West African writers have a role to play in the changing political landscape of their countries? An examination of the ways and means through which a select group of West African writers have dealt with issues that relate to the role of the state in the management of individual and group relations, the politics of gender, civil and military relations, and the construction of new forms of civil society. A. DZIDZIENYO.

1060F. *Philosophy and Race*
This advanced seminar in Africana philosophy will examine critical texts and thinkers that articulate the problems, methods, and techniques for interrogating the interrelationships between the discourse of philosophy and modern conceptions of race. The seminar will move to consider contemporary engagements in this area by drawing on readings and thinkers from analytical, continental, feminist, marxist, and pragmatist philosophical traditions. Enrollment limited. Written permission required. C.D.B. WALKER.

1060G. *Black Radical Tradition*
This advanced seminar in Africana philosophy will explore the contours of insurgent forms of Africana social and political philosophy. With a temporal focus on the twentieth century, we will concern ourselves with explicating the dominant themes, theoretical orientations, and methodological understandings that in/form constructions and articulations of the varieties of Africana feminism/womanish, black nationalism, Marxism–Leninism–Maoism, Pan–Freudianism, and radical democracy. Enrollment limited. Written permission required. C.D.B. WALKER.

1060H. *Racial Frontier in South African History*
This seminar will focus on racial categories in South Africa. We will explore dynamic categories of race from the 17th through 20th centuries. Topics include the relationship of race and class; racial violence; the transmission of culture and knowledge across racial boundaries; intimate relations over racial boundaries; segregation; and race and nation. We will give attention to critiquing the ways that
historians have represented race and the ways that conceptions of the category have evolved within the discipline, but the emphasis will be on recent scholarship. Students will be expected to participate actively in the seminar, to write one book review, and one research paper. Enrollment limited to 20. N. J. Jacobs.

1060I. Africana Philosophy of Religion
Who, or rather, what is God to the oppressed? This advanced seminar in Africana philosophy will examine the various theories, methods, and arguments that engage perennial questions that arise when contemplating God. The seminar will focus on questions of philosophical method and theological exposition while also being critically attuned to modes of social and cultural analysis and critique, particularly those perspectives inspired by forms of critical theory, feminist theory, and Marxist theory. Limited enrollment. C.D.B. Walker.

1060J. Africana Philosophy
C.D.B. Walker.

1060K. African Literature After Actable: Emerging African Writers
In this course we will analyze how contemporary, emerging and marginally-read African writers contest the traditional and widely-held interpretations, understanding and assumptions of African literature. We will read and think about African literature in the contemporary post-colonial and post-apartheid moment in Africa. Authors discussed include Dumbed Marcher, Zoo Recomb and Binyavanga Wainaina, among others. Staff.

1060L. Varieties of American Philosophical Experience
In contrast to Pragmatist and European-oriented views of American philosophy, this course will emphasize the colonial dimensions and features of American philosophy that emerged out of the colonial soil of early America. Out of this soil sprang extended debates between Native Americans, Euro-Americans and African Americans over the legitimacy of the hegemony that Euro-Americans were establishing over increasing portions of North America. This course will view American philosophy as having within it two opposing traditions that have been engaged in ongoing angry dialogues: the dominant or Prosperian tradition of Euro-Americans and the subjugated or Caliban tradition of Native Americans and African Americans. In this course, our focus will be on the philosophical exchanges between Euro-Americans and African Americans. P. Henry.

1070. RPM: Traditional and Contemporary Elements of Intertribal Indigenous Theater in America
Utilizes Rites and Reason Theater's research-to-performance method of developing new play scripts to examine the development and relationship of the colonial Euro-American art form, theatre, to its existence within the Indigenous intertribal (Native American Indian) communities in America. Staff.

1080. The Life and Work of W. E. B. Du Bois
From the publication of The Souls of Black Folk in 1903 until his death in Ghana sixty years later, W. E. B. Du Bois remained one of America's most penetrating analysts of what he called "the color line." Students read and discuss a selection of Du Bois's writings from his career as journalist, essayist, sociologist, historian, poet, political leader, and pioneering Pan-Africanist. Prerequisite: one course in AC, AF or US History. Written permission required. Staff.
1110. *Voices Beneath the Veil*
Plays written by Afro-American playwrights and presented on the American stage between 1858 and the 1990s are examined as cultural and historical documents of Afro-American realities. Supplementary readings from the humanities and social sciences provide critical framework for in-class discussions and student papers. Enrollment limited. Written permission required. E. TERRY-MORGAN.

1120. *African American Folk Traditions and Cultural Expression*
A research, development, and performance workshop designed to explore, examine, and articulate various folk traditions and cultural expressions of African Americans. Readings include slave narratives, folktales, and the works of Hughes, Hurston, Bass, and Baraka. Topics covered are music as the African American language of choice; Africanisms in Afro-American culture; and race, color, class, gender, and culture. Enrollment limited. Written permission required. STAFF.

1140. *Women, the State and Violence*
Examines the role of black women in 20th-century political movements, including with the turn-of-the-century antilynching campaigns, the southern civil rights movement, the black liberation movement, and contemporary educational activism for human rights. Central concerns include history of American radicalism and analyses of antiracist experiences, and the politics stemming from African American women’s leadership. Prerequisites: AFRI 1500 and/or AFRI 1250. Enrollment limited. Written permission required. STAFF.

1150. *Afro-Caribbean Philosophy*
An introduction to the field of Afro-Caribbean philosophy. The first half focuses on the history of the field, identifying its African background and surveying some of its major schools, such as the Afro-Christians, the poeticists, the historicists, and existentialists. The second half consists of a more intensive comparative focus on the ontologies and epistemologies of two of these schools. P. HENRY.

1160. *Public Health in Africa: History, Politics, and Practice*
Examines the ways in which medical knowledge has been produced in sub-Saharan Africa. Treats all medical discourses and practices—including biomedicine and “indigenous” and pluralist medicines—as culturally-based systems of knowledge production. Explores the political economy of health and disease and the role of medicine and medical practices (hygiene, epidemiology, demography) in producing and maintaining power in both the colonial and postcolonial periods. L. BRAUN.

1170. *African American Women's History*
Recovers black women's history and renegotiates American history. Throughout the seminar, discussions will analyze the various tensions that complicate black women's lives, from accommodation to resistance, or gender issues versus racial issues, or the class tensions that pervade the African American community. Through the series of readings loosely hinged around themes and concepts, students will gain knowledge and understanding of the rich social, intellectual, political and economic networks and activities that African American women undertook on a daily basis in order to survive, progress and uplift. The course encourages the development of a broader and more comprehensive grasp of the complexities American, racial and gender histories. Must have taken at least one Women's History course and one U.S. history course. F. N. HAMLIN.

1210. *Afro-Brazilians and the Brazilian Polity*
Explores the history and present-day conditions of Afro-Brazilians, looking specifically at the uses of Africana in contemporary Brazil, political and cultural movements among Afro-Brazilians, domestic politics and its external dimensions, and Brazilian race relations within a global comparative framework. Texts from a variety of disciplines. A reading knowl-
edge of Portuguese is not required but students so advantaged should inform the instructor. A. DZIDZIENYO.

1250. Women in the Civil Rights Movement
This seminar focuses on women in the civil rights movements, spanning the years of 1955-1968. This course examines issues of gender, race, sexuality, social protest, nonviolent civil disobedience and self-defense during the height of activism against apartheid in the United States and for civil rights. F. N. HAMLIN.

1260. The Organizing Tradition of the Southern Civil Rights Movement
This seminar aims to fill in some of the gaps of the official canon by emphasizing that the modern (1954–1966) southern civil rights movement was not as it is mainly portrayed, a movement of mass protest in public spaces led by charismatic leaders; but rather, a movement of grassroots community organizing - quiet day-to-day work. STAFF.

1280. Writing about Race in the Post Civil Rights Era
This seminar is an explanation of the transformation of racial policies, relations and rhetorics since the end of the civil rights era in the United States. We will examine the complex ways race has remained central to U.S. society and yet has dramatically shifted, examining terms such as color-blind society; integration; political race; racialized (and gendered) community formation. Enrollment limited. Written permission required. T. ROSE.

1360. Africana Studies: Knowledge, Texts and Methodology
This course will explore the issues of Africana Studies as a discipline by engaging in a series of critical readings of the central texts, which laid the protocols of the discipline. The course will also raise issues of knowledge production and methodologies. This course is a senior capstone seminar. B. A. BOGUES.

1410. Africans and the West: Studies in the History of Ideas
This course will examine the political thought of a selection of Africana thinkers from the period of slavery to the 20th century. It will examine the political thought of thinkers like, Franz Fanon, Ida B. Wells, Cugoano, CLR James, W.E.B. DuBois and Rastafari. The course will be an exploration of black radical intellectual tradition and its different meanings. B. A. BOGUES.

1440. Theorizing the Black Diaspora
This seminar will focus on the theorization of the black diaspora as a way to explore the various articulations of gendered racism and resistance against that racism throughout African–descendant communities. Course readings will highlight the scholarship of black women who have contributed to the internationalization of radical black vis–a–vis theories of diaspora, transnationalism, transformative politics, identity formation, and community. Enrollment limited. Written permission required. K.Y. PERRY.

1470. Southern African History

1500. Incarceration, Education, and Political Literacy
This seminar (w/out audits) in politics and social justice is open to juniors/seniors. Captivity has become a critical political- social phenomenon in U.S. democracy, given that the United States has over two million people in prison/jails/INS detention centers. This two-part, one-year long course examines and maps (using cyber technology) captivity and criminality in the United States, focusing on race, gender, politics and literacy. Students are strongly urged to take both semesters; the second semester course as practicum, with training in cyber-technology and community-based learning/literacy, is open only to those who complete the fall course (Pt I) and the grade option for the second part of the course will be S/NC.
1540. Black Popular Cultures
This course is an historical and topical examination of the development of black popular cultures. We will explore the debates about popular culture and specifically examine the ways that race (as well as gender, sexuality and class) shape these debates. In addition we will explore specific black popular cultural practices (music, dance, film, radio, theater, etc.) as well as the larger contexts for their production and reception. Enrollment limited. Written permission required. T. ROSE.

1580. Contemporary African Women’s Literature
The aim of the course is to introduce students to some of the major prose female writers in contemporary African Literature. Enrollment limited. Written permission required. A. A. AIDOY.

1600. History, Nation, Popular Culture and Caribbean Politics
Examines Jamaican popular music as an ideological site of resistance to Creole nationalist versions of Caribbean history and politics. It grapples with the meanings of race, history, and nation-state as contested notions in Jamaican/Caribbean society tracing an alternative genealogy of Caribbean history and politics. B. A. BOGUES.

1710. Topics in Africana Studies
1710A. Political Visions and Community Formations
This course aims to consider the depths of connection between forms of racialized, gender, class and sexual oppression vis a vis the creation and maintenance of community and intimate social bonds among the oppressed. We will read sociologists, historians and others who have worked at this intersection and musicians and writers such as: Morrison, Bambara, Baldwin, Hill-Collins, Hansberry, soul and neosoul artists. T. ROSE.

1750. Eastern African History
A lecture course examining the history of Eastern Africa from earliest times until 1963. The area includes the Great Lakes region, the Horn of Africa, Madagascar, and the East African Coast. The major topics are: precolonial interactions, the development of states and stateless societies, contact with other Indian Ocean people, the slave trade, colonial rule, and independence movements. STAFF.

1800. Race, Empire and Modernity
Taking Cicero’s notion of empire as “ways of life”; this course will survey the history of empires as forms of rule. It will explore how race has been deployed in the various types of empire. The course will pay particular attention to empires in modernity since 1942. The course will think about the various technologies of rule and their discourses of power. B. A. BOGUES.

1820. Contemporary African Political Philosophy
This course examines some contemporary responses to the human condition in Africa. Topics will include Democracy, human rights, instability, social justice, identity, community and solidarity. These topics will be approached through the works of Canonical figures such as Leopold Senghor, K. Nkrumah, Frantz Fanon, Steve Biko and the recent analytical (T. Kiros), Hermeneutical (T. Serequeberhan), Existential (L. Gordon) Historicism and poetics (P. Henry) and Postcolonial Mislolocation (M. Diawara). P. HENRY.

1850. The Civil Rights Movement: History and Legacy
Explores the origins, conduct and complex legacy of the Civil Rights Movement. Topics include: historical roots of the movement; the campaign against legal segregation; the birth of S.N.C.C.; Black Power; the impact of the Cold War, Vietnam and the coming of African independence; and the movement’s impact on other political struggles, including move-
ments among women, Latinos, and Native Americans. Enrollment limited. Written permission required. STAFF.

1950. *Philosophy, Literature and the Caribbean Novel*
This is a thematic course on the philosophical and literary themes which emerge from the Caribbean novel and writing in general. Enrollment limited. Written permission required. G. LAMMING.

1970. *Independent Reading and Research*

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**Center for Alcohol and Addiction Studies**

Celebrating 24 Years of Bridging the Gap in Addictions Research and Education

The Center for Alcohol and Addiction Studies, through its affiliation with the Brown Medical School, occupies a unique position within the University. The center brings together more than 90 faculty and professional staff across eleven University departments and seven affiliated hospitals to promote the identification, prevention, and effective treatment of alcohol and other drug use problems in our society through research, education, training, and policy advocacy.

The Center’s faculty members have active research programs in the areas of the neurobiology of alcohol, nicotine and other substance use, behavioral genetics, cross addictions, smoking among substance abusers, alcohol/drug treatment and assessment, adolescent nicotine and substance use and dependence, technology transfer and policy. The Center has most recently created a neurobiology core of scientists whose focus is identifying the neurobiological pathways associated with alcohol and drug abuse and dependence using both human and animal models.

Research and education are the Center’s chief activities. To expand its commitment to substance abuse education and to train the next generation of researchers, the Center has established a postdoctoral training program in alcohol treatment and early intervention research. Since 1985, more than 77 Fellows have completed the training program and gone on to pursue academic and research careers at major institutions nationwide. The Center recently established similar postdoctoral training in drug abuse prevention and intervention, and in juvenile forensic psychology.

For further information, please visit our website at: www.caas.brown.edu.

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**American Civilization**

Faculty in the Department of American Civilization include Professors Barton St. Armand (American Civilization and English), Mari Jo Buhle (American Civilization and History), Lynn Davidman (American Civilization and Judaic Studies), Elliott Gorn (Chair, American Civilization and History), and Steven Lubar (American Civilization); Associate Professors James T. Campbell (Africana Studies, American Civilization and History), Matthew Garcia
The Department of American Civilization at Brown University encourages the interdisciplinary study of the diverse cultures, groups, and experiences that make up American life. As one of the oldest American Studies programs in the nation, its students and faculty represent a community of innovative scholars committed to defining new directions in research, teaching across the disciplines, and reaching out to diverse audiences.

Undergraduate Program
For a complete description of the standard concentration program leading to the A.B. degree, please visit http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs
The graduate program in American Civilization provides students with rigorous training in the methods of interdisciplinary work while allowing them the freedom to follow their own academic interests and goals. Graduate students design their own courses of study within the guidelines set up by the department, working with faculty both in the department and throughout the university. Recent graduate students have been doing exciting new work in areas as diverse as African American history, Asian American and Latino culture and politics, childhood development, public history, transitional popular culture, film, material culture, religion, and the history of sexuality and gender.

The primary goal of the graduate program in American Civilization is to train students to become knowledgeable and productive scholars and public humanists who will significantly contribute to the communities in which they work and live. The program produces graduates who are:

- knowledgeable about the changing and complex intellectual landscape of the modern university;
- originators of new and innovative research across the disciplines; and
- part of a new generation of active and committed teachers and public humanists.

Recent graduates of the department have gone on to work in archives, museums, and historical societies, as well as a variety of college and university departments including history, English, women’s studies, communications, and American studies.

Master of Arts in American Civilization
Under special circumstances, students may seek a terminal A.M. degree in American Civilization. Candidates spend one academic year in residence and complete eight courses. This program is most appropriate for international students. All students who seek admission to the terminal A.M. program in American Civilization must first communicate with the Director of Graduate Studies. Most students seeking an A.M. degree should apply to the A.M. in Public Humanities.
Master of Arts in Public Humanities

Candidates for the A.M. in Public Humanities undertake a two-year program, generally two years of coursework, including two practicums. Working with the faculty of the Department, they will design a course of study that will prepare them with the skills needed for a career in public humanities (for example, museums, historic preservation, community cultural development) as well as a solid academic preparation in the subject areas of interest. There are three required classes (an introduction to American Civilization, an introduction to public humanities, and methods of public humanities). In addition, all students will undertake two practicums.

Doctor of Philosophy

Students in the Ph.D. program spend their first year taking eight courses, one of which must be an introductory seminar. Upon successful completion of these courses, they are awarded an A.M. in American Civilization. Students may opt for an A.M. in Public Humanities instead of the A.M. in American Civilization. The A.M. in Public Humanities calls for an internship, usually taken during the summer after the first year, and additional coursework taken during the second year. In their second year, Ph.D. students complete one graduate professionalization seminar and one graduate research seminar as well as begin preparing for their preliminary examinations. Students select four faculty to be on their examination board and design with each a bibliography in the specific field of study on which they will be tested. The four proposed fields, along with a statement of their unifying themes or elements, are then submitted to the department faculty for approval. In the third year, students are examined by their four field advisors in a two-hour oral examination. After passing the preliminary examination and completing the required coursework, students are advanced to candidacy for a Ph.D. With the approval of the American Civilization faculty, each student begins the doctoral dissertation under the guidance of a thesis director and two readers chosen from the university faculty. Students are expected to complete the research and writing of their dissertations within five years. In order to receive the Ph.D. in American Civilization, students are also required to gain teaching experience. They serve as teaching assistants to faculty or, when possible, teach undergraduate seminars of their own design within the Department of American Civilization.

For additional information, please visit the Department website at: http://www.brown.edu/Departments/AmCiv/.

Courses of Instruction

Primarily for Undergraduates

0150. First Year Seminar
Restricted to first-year students. Enrollment limited. Written permission required.

0190. Seminar in American Civilization
Restricted to first-year students and sophomores. Enrollment limited. Written permission required.

0750. Introduction to American Civilization

For Undergraduates and Graduates

1250. Topics in Material Culture Studies
1250A. *American Folk Art*
Examines material expressions of folk culture in America from the 18th century to the present. Focuses on the study of regionally idiosyncratic artifacts decorated beyond necessity and emphasizes the importance of the cultural context in which they were made and used. Visits to local burying grounds and museum collections during class and a Saturday field trip. Concludes with an original research project and a final paper. R. P. EMLEN.

1250B. *Gravestones and Burying Grounds*
Students examine gravestones and burying grounds as primary documents in the study of American cultural history. Themes include the forms of written language and visual imagery in colonial New England, changing roles of women and minorities in society, historical craft practices, implications of stylistic change, attitudes towards death and bereavement, and the material evidence of discrete cultural traditions. Include field trips. R. P. EMLEN.

1250F. *Houses and their Furnishings in Early America*
Old houses and the objects used to furnish them are interpreted as material evidence of domestic life in colonial and early national America. Through slide lectures and field trips, this class examines Providence’s historic buildings, museum collections, and public archives as primary documents in the study of cultural history. R. P. EMLEN.

1250E. *The Neoclassical Ideal in America, 1775-1840*
This course examines the art, architecture, and domestic furnishings of America in the early national period. It focuses on material culture as a reflection of the new nation’s self image as a democratic and enlightened society. Includes class visits to local burying grounds and museum collections, and a Saturday Boston field trip. R. P. EMLEN.

1520. *Technology and Material Culture in America: The Urban Built Environment*
A slide-illustrated lecture course that examines the development of the urban landscape. Covers American building practices and the effects of human-made structures on our culture. Examines technological and behavioral aspects of architectural design and urban development. Topics include housing, factories, commercial buildings, city plans, transportation networks, water systems, bridges, parks, and waterfronts. At least one field trip. A companion course to AC 153. P. M. MALONE.

1530. *Technology and Material Culture in America: The Automobile in American Life*
Examines the cultural significance of the automobile. Employs materials and methodologies from various disciplines to study this machine and the changes it has produced in our society and our landscape. Slide lectures cover such topics as the assembly line, automobile design, roadside architecture, suburbs, auto advertisements, and the car in popular culture. P. M. MALONE.

1550. *Methods in Public Humanities*
A survey of the skills required for public humanities work. Presentations from local and national practitioners in a diverse range of public humanities topics: historic preservation, oral history, exhibition development, archival and curatorial skills, radio and television documentaries, public art, local history, and more. Includes field trips to museums and other sites in the Eastern United States. S. D. LUBAR.

1610. *Special Topics in American Civilization*
1610C. *American Popular Culture*
This interdisciplinary course examines the history of popular culture in the industrialized United States, drawing on methodologies from different fields, and using a variety of evidence, including minstrel song sheets, amusement parks, television, and romance novels. We look at the audience, the producers and the texts presented by American popular culture both domestically and internationally.  S. SMULYAN.

1610E. *Americans Abroad*
Explores the image of the American artist and expatriate in an international and interdisciplinary context. Lectures, class discussions, reports and papers.  B.L. ST. ARMAND.

1610G. *Asian American History*
A survey of the history of Asians in the U.S. from the early 19th century to the present. Focuses on the changing patterns of immigration, labor, community building, and civil rights struggles.  R. G. LEE.

1610J. *Body and Soul: Health and Sexuality, 1860-1920*
Examines the history of women/gender in relation to discourses about sexuality (both physical and mental) in the era of the Civil War through the progressive era. It samples a variety of ideas and movements, including efforts to regulate sexuality and initiatives to advance women into the medical and “helping” professions. Specialization is given to issues of class, race and ethnicity.  M. J. BUHLE.

1611R. *Bourgeois Blues: Class Conflict in African American and Caribbean Literature and Film*
This course investigates class differentiation and its effects in African-diaspora novels, autobiographies, and films (such as The Good Negress, Brothers and Keepers, Crick Crack Monkey, and “Sugar Cane Alley”). Alongside these literary works and films, we will read a wide range of critical/theoretical essays on class and class conflict and the intersection between class and race, gender, sexuality, and nationality.  A. R. KEIZER.

1611P. *Converts, Drop-Outs and Returnees*
This course focuses on processes, practices and meanings involved as people move into and out of religious communities. America has been called a “supermarket of religious alternatives”; here we will examine the impact of this religious marketplace and people’s freedom to choose their own religions in terms of their decisions to convert to and/or deconvert from various religious groups.  L. DAVIDMAN.

Guns and Graphics: The Detective Novel and Comic Book in the United States
Popular genres like the detective novel and comic book are compelling and widely circulated markers of the political and social concerns of a culture. These concerns, of course, vary over time. Being historically vigilant, then, we will survey a variety of detective fiction and graphic novels to examine the political imperatives and cultural aesthetic at play in them.  R. E. RODRIGUEZ.

1611U. *History of American Technology*
Technologies reflect and transform American society and culture. This course examines the invention, introduction, and use of new machines and systems, with a focus on infrastructure, manufacturing, and information and communication technologies. Special attention paid to labor, business, political and cultural contexts of technological change.  S. D. LUBAR.
1610S. *Immigration to the United States from the Sixteenth Century to the Present*
Explores 350 years of immigration to what is now the U.S. Organization is both chronological and topical. We will reconstruct and compare the major waves of immigration, consider casual theories of migration, examine U.S. immigration policy over time, debate the economic impact of immigration, and discuss the institutions and strategies that immigrants have designed to facilitate adaptation. R. A. MECKEL.

1611J. *Sex, Love, Race: Miscegenation, Mixed-Race and Interracial Relations*
This class will explore the conditions and consequences for crossing racial boundaries in North America. We will take a multidisciplinary approach, exploring literary, anthropological, and historical writings along with several feature and documentary film treatments of the subject. M. J. GARCIA.

1611L. *The Sixties without Apology*
Encompasses what happened to social movements and American society in the “sixties”. How the “sixties” have come to represent a phase of society in rebellion against political and economic structures and against widely held values on sexuality, drugs, and fashion, as well as race, class and gender. Film and television clips, music, poetry and comic strips will be used extensively. P. BUIE.

1640. *History of American Women since 1880*
This course introduces students to the major themes of United States women’s history from the 1880’s to the present. We will look at the experiences of a diverse group of women in the United States as well as the ideological meaning of gender as it evolved and changed over the 20th century. We will trace the impact multiple identities (race, class, region, religion) have had on women’s social and cultural activism.

1700. *Interdisciplinary American Seminar*
Usually taken in the junior year, this seminar is required of all concentrators in American Civilization.

    **American Studies: Junior Year Seminar**
    This course is designed to immerse entering American Civilization concentrators in the underlying theories, methods and approaches of American Studies in the hope of providing them with a general understanding of the field’s essential parameters and thus enabling them to navigate with some coherence a multidisciplinary concentration. S/NC. R. A. MECKEL.

1740. *African American History, 1876 to the Present*
Examines the history of African Americans from the end of Reconstruction to the present. Topics include: the retreat from Reconstruction and the coming of Jim Crow; Booker T. Washington and his critics; migration and the rise of urban ghettos; the Harlem Renaissance; the Civil Rights movement; the “War on Poverty”; and the contemporary welfare debate. J. T. CAMPBELL.

1800. *Honors Seminar*
Required of American civilization concentrators planning to write an honors thesis. Written permission required. S/NC.

1900. *Undergraduate Seminars in American Civilization*
These seminars are primarily for juniors and seniors. Undergraduates only. Priority will be given to senior and junior concentrators in American civilization. May be repeated for credit. Enrollment limited. Written permission required.

1970. *Independent Reading and Research*
Required of all honors candidates in the senior year.
2010. *Introduction to Interdisciplinary Methods*
Introduction to interdisciplinary studies required of all first-year graduate students in American civilization. Graduate students from other departments may enroll with permission of the instructor. R. G. LEE.

2220. *Topics in American Studies*

2500. *Museum Interpretation of the American Experience*
A seminar examining methods of museum interpretation, the ways that museums convey information to the public with exhibits, tours, demonstrations, films, video tapes, slide shows, interactive computer programs, publications, and other techniques. We will visit museums that have an historical or anthropological focus and read theoretical and critical writings on the public interpretation of American material culture. P. M. MALONE.

2520. *American Studies: Method and Theory*
Examines the methodological and theoretical underpinnings of current and past American studies scholarship. Designed for American civilization graduate students. S/NC. S. SMULYAN.

2550. *Theorizing Asian America†*

2600. *Readings in African American History and Culture*
Introduction to the burgeoning scholarly literature on African American history and culture. Topics examined include: blacks in the Atlantic World; origins of North American slavery; race and the American Revolution; emancipation and its aftermath; the Jim Crow south; the Great Migration; Garveyism; the Harlem Renaissance; the Civil Rights Movement; and race in American popular culture. J. T. CAMPBELL

2650. *Introduction to Public Humanities*
This class, a foundational course for the MA in Public Humanities, will address the theoretical bases of the public humanities, including topics of history and memory, museums and memorials, the roles of expertise and experience, community cultural development, and material culture. S. D. LUBAR.

2670. *Practicum in Public Humanities*
Practicums in public humanities provide practical, hands-on training that is essential for careers in museums, historic preservation, and cultural agencies. Students will work with faculty to find appropriate placements and negotiate a semester’s or summer work, in general a specific project. Available only to students in the Public Humanities M.A. program. THE STAFF.

2680. *Practicum in Public Humanities*
Practicums in public humanities provide practical, hands-on training that is essential for careers in museums, historic preservation, and cultural agencies. Students will work with faculty to find appropriate placements and negotiate a semester’s or summer work, in general a specific project. Available only to students in the Public Humanities M.A. program.

2690. *Public Humanities Institutions: A Systems Perspective*
What does it take to run a public humanities institution? This course explores the “behind the exhibits” systems of planning, administration, governance, revenue generation, finance and marketing. Throughout the course, students will explore the challenges/tensions that develop between fulfilling the mission and developing sustainable organizations.
2970. Preliminary Examination Prep  
For graduate students who have met the tuition requirement and are paying the registration  
fee to continue active enrollment while preparing for a preliminary examination. No course  
credit.

2920. Independent Reading and Research  

2990. Thesis Preparation  
For graduate students who have met the tuition requirement and are paying the registration  
fee to continue active enrollment while preparing a thesis. No course credit.

Annenberg Institute for School Reform

The Annenberg Institute for School Reform develops, shares, and acts on knowledge that  
improves the conditions and outcomes of schooling in America, especially in urban  
communities and in schools serving disadvantaged children. The institute’s programs focus  
on three broad areas that, together, significantly impact equity and excellence in schooling:  
(1) teaching and learning supports – offering strategies and tools to help educators examine  
and improve instructional practices in ways that enhance student achievement; (2) systems  
support – helping districts build capacity for supporting high-performing schools  
systemwide and form local partnerships to expand educational opportunities; and (3) civic  
supports – bringing municipal leaders and community members to the forefront of local  
efforts to transform their public schools. In collaboration with other education reform  
organizations, the institute conducts research and development, convenes stakeholders on  
issues of urban education, catalyzes and supports local action, and disseminates the results  
of its work.  

Established at Brown in 1993, the institute received that same year a gift of $50  
million as part of Ambassador Walter H. Annenberg’s $500-million “challenge” to public  
education. The institute is accountable to a board of overseers appointed by the University  
Corporation. Some 45 professional and administrative staff work at the institute. Warren  
Simmons is the executive director.

Additional information may be found at: http://www.annenberginstitute.org/.

Anthropology

Professors D. Anderson, Fruzzetti, Gutmann (VP International Affairs), Hollos, Houston,  
Kertzer (Provost), Leis, Lutz (Chair), Rubertone, Simmons, Warren; Associate Professors  
Smith, Townsend; Assistant Professors Brink Danan, Faudree, Hamdy, Leinaweaver,  
Scherer; Adjunct Professor (Research) W. Anderson; Adjunct Associate Professor  
Symonds; Visiting Assistant Professors ahl, Hodzic; Post. Docs Davis, Fisher, Ryzewski,  
Schulthies, Sievanen, Stokes-Rees.

Graduate instruction in the Department of Anthropology prepares students for professional  
careers in sociocultural anthropology, archaeology, and linguistics as teachers, researchers,  
museum specialists, and as professionals in other areas where anthropological expertise  
may be required. The faculty have wide-ranging, yet overlapping and complementary,
theoretical and methodological interests. They have conducted field research throughout the world—in Africa, North America, Latin America, the Arctic, Europe, the Middle East, Asia, Oceania, and Australia. The faculty are also active in various extradepartmental units at Brown, including the Haffenreffer Museum of Anthropology, The Population Studies and Training Center, The Watson Institute for International Studies, Laboratory of Circumpolar Studies, John Carter Brown Library, Joukowsky Institute for Archaeology and the Ancient World, Center for the Study of Race and Ethnicity, and Division of Biology and Medicine, which provide support for interdisciplinary research. The areas with particular programs or concentrations of faculty in which graduate student applications are particularly encouraged include:

**Anthropology and Population.** A research specialization of several faculty in the department and a special track in the Ph.D. program. Birth and reproduction, marriage and sexual relations, migration and movement, and illness and death are crucial demographic events and are also processes of central and long-standing interest to sociocultural anthropologists. Students in the anthropology and population track study these events and processes by taking courses in population studies and in anthropological demography as well as the core courses of the department’s curriculum. They also work closely with faculty affiliated with the multidisciplinary Population Studies and Training Center.

**Politics, Development, and Culture.** In part through its multiple links to the Watson Institute, the department offers special training in the anthropological analysis of modern political life and development. Also of interest are issues of militarization, political violence, democratization and foreign aid, and war.

**Archaeology.** The analysis of variability and change in human culture through the study of the physical remains of the past. Brown’s archaeology program is based on the study of prehistory, historical archaeology, and ethnoarchaeology, the two latter examining variability in the recent past. Prehistory, especially in areas like the Arctic, North America, Asia, and Mesoamerica, are well represented and provides a focus on the remote past.

**Ethnicity, Race, and Trans-Nationalism.** Faculty in the department research and teach about ethnic and racial identities and formations, genocide, cultural citizenship, transnationalism, mestizaje, and racism. Specific strengths include the integration of ethnicity, race and nationalism in research on gender/sexuality, population, and politics. The department works closely with the Center for the Study of Race and Ethnicity in America at Brown.

**Gender/sexuality.** Many faculty study aspects of gender identities, relations, and inequalities through contemporary ethnography and ethnohistorical research. Among the numerous topics of research are gender/sexuality systems, fertility and reproduction, gender and health, parenthood, engendered bodies, feminism, men and masculinities, gender and race, and gender and development.

**Medical Anthropology.** The anthropological study of human health, which examines the complex interaction of biology and culture, explores the diverse ways that humans use cultural resources to cope with illness and develop medical systems. Medical Anthropology intersects with a range of faculty interests and areas of expertise. Faculty research and course offerings address issues such as HIV/AIDS, reproduction, gender and health, psychology and health, population dynamics and health, international health programs, and American biomedical and public health practice.
Museum Studies. In conjunction with the Haffenreffer Museum of Anthropology (see pg. 708), the department offers a special program leading to the master’s degree in anthropology–museum studies as an option for Ph.D. students. In addition to core courses and other requirements of the regular A.M. program, students take two seminars on the study, analysis, and exhibition of material culture, and on museological study and practice.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

Students are admitted to the A.M., Ph.D. program. All requirements for the master’s degree should be completed in two years, and after gaining permission to continue for the Ph.D., all requirements for the doctoral degree should be met within an additional five years.

A.M. in Anthropology

Students must gain credit for eight approved courses, and demonstrate research and analytical skills in an approved research paper.

A.M. in Anthropology/Museum Studies

In addition to meeting the requirements for the regular A.M. degree, students must take two specialized seminars, and their research paper must be in some way museum-related. This degree takes advantage of Haffenreffer Museum of Anthropology collections and activities.

Ph.D. in Anthropology

In addition to fulfilling the general requirements set by the Graduate School, students must successfully complete A.M. degree requirements and gain permission to continue for the doctorate. They must write an acceptable proposal for and pass the preliminary examination; teach at least two semesters as teaching assistant or have comparable experience; fulfill the foreign language requirement; prepare an acceptable proposal for doctoral research; and write and successfully defend the dissertation.

The Preliminary Examination is an oral examination lasting approximately three hours and administered by a student’s faculty advisor and committee. It should be taken during the fifth or sixth semester (that is, the first or second semester after the completion of the A.M. degree requirements). Its purpose is to enable the faculty to evaluate a student’s mastery of anthropological literature and ability to explain in detail the ways in which his or her interests relate to the discipline as a whole. The examination is based on a detailed proposal which consists of sections of narrative and bibliography. In the narrative the student describes (1) at least one area (but often two) of methodological and theoretical interest such as archaeological method and theory, gender, historical archaeology, ecological anthropology, anthropological demography, ethnicity, etc., drawing on world-wide literature; and (2) the ethnography or archaeology of at least one major world area (e.g. sub-Saharan Africa) and the theoretical problems pertinent to that area. When the preliminary examination is successfully completed, the student becomes a doctoral candidate.

Teaching Experience is most often gained by serving as a Teaching Assistant for at least two semesters.
Foreign Language. By the time the student begins the dissertation research project, he or she is expected to have acquired the necessary language skills for the field site. The preparation might require courses in other departments or cross-registration at another university. At any rate, means by which the language skills are to be acquired and proficiency evaluated are to be discussed with the student’s committee well before the dissertation proposal is presented to the committee. Foreign students must also demonstrate a knowledge of English and pass TOEFL with a score of 550 or better.

Other Skills. Students are expected to acquire the background and skills necessary for undertaking a major research project for the dissertation, as determined in collaboration with their Ph.D. committees. This may require further language training, statistics and computer language training, or specialized archaeological field techniques.

The Dissertation Research Proposal should be accepted by a student's committee prior to applications to research foundations for support, normally in the third year in the program. It becomes a basis for original field research and for the doctoral dissertation and its defense. Students carry out field research anywhere in the world for variable periods of time but usually approximately one year.

The Dissertation and Defense. The dissertation committee consists of at least four faculty members—three from inside and one from outside the department. Detailed instructions for preparing dissertations are available at the Graduate School. For additional information, please visit the Department’s website at: http://www.brown.edu/Departments/Anthropology/.

Courses of Instruction

Primarily for Undergraduates

0066. Seminars
Enrollment limited to 20 freshmen. Written permission required.

0100. Introduction to Cultural Anthropology
This course provides an introduction to cultural anthropology, surveying its defining questions, methods, and findings. We will examine the history and utility of anthropology's hallmark method, ethnography, the long-term immersion of the researcher in the culture under study. We will compare cultural anthropology's findings and comportment in other cultures to its conclusions and conduct in our own. No prerequisites. STAFF.

0110. Anthropology and Global Social Problems
The course introduces anthropology approaches to some of the central problems humans face around the world, including environmental degradation and cultures of consumption, hunger and affluence, war, racial division and other forms of inequality. Explains theories of social change and notions of the good society. STAFF

0125. Violence and the State
This course allows students the opportunity to interrogate the relation between violence and the state. Students will be introduced to a variety of analytical frames through which to understand both the concept of violence and that of the state from an anthropological perspective. Through diverse case studies we will consider topics such as what it means to see and be seen by the state, the rationalization of "exceptional" violence, and domination through symbolic violence. The course has no prerequisites, but a foundational course in the social sciences is recommended.
0200. *Culture and Human Behavior*
The goal is to challenge our beliefs about some taken for granted assumptions about human behavior and psyche by examining cultures with different conceptions of personality, self and cognition. Will examine the issues of the role of nature and nurture in development, the nature of intelligence, coming of age, the association of psychological characteristics with gender and the naturalness of emotions. M. C. HOLLOS.

0300. *Culture and Health*
An introduction to the field of Medical Anthropology. Lecture reading and discussion will examine the social context of health and illness, looking at the diverse ways in which humans use cultural resources to cope with disease and develop medical systems. The course will provide an introduction to the overall theoretical frameworks that guide anthropological approaches to studying human health related behavior. Medical anthropology offers a unique and revealing perspective on the cultural diversity that characterized the universal human experience of sexuality, disease, aging, mental illness, disability, inequality and death.

0301. *Gender and Politics*
This course focuses on ideologies of gender and sexuality cross-culturally and how they influence peoples' involvement in political processes. We begin with a broad working definition of politics-power dynamics and arrangements whereby groups are affected by one another. The course looks at the circumstances under which peoples' gender and sexual identities are mobilized into social movements, and the conditions and social consequences of public visibility. Our broader aim is to understand ways in which gendered inequalities produce--and are produced by--forms of political exclusion, as well as innovative ways in which people transform existing structures of power. STAFF

0302. *Anthropology of Gender and Globalization*
We live in a global world in which the movements of people, goods, and ideas cause productive frictions, transforming the prevailing formations of gender and sexuality. This course examines the intersections of gender and globalization by looking at how globalization shapes cultural constructions and political configurations of gender, and exploring how an ethnographic focus on gender sheds light on various aspects of globalization. Topics covered include anthropological theory of gender and sexuality, gender and global capital, gender and the (colonial) state, and gender and global politics (including gender activism, human rights, and development). Open to undergraduates only.

0310. *Human Evolution*
Examination of theory and evidence on human evolution in the past, present and future. Topics include evolution and adaptation, biocultural adaptation, fossil evidence, behavioral evolution in primates, human genetic variation and contemporary human biological variation. S. T. MCGARVEY.

0400. *Growing Up Ethnic and Multicultural*
Explores the complex issues of growing up as an ethnic, bicultural, or a multicultural person and how these dual or multiple identities affect or interact with individual behavior, priorities, the sense of self, and how individual identity is formulated and defined. Cross-cultural and interdisciplinary approaches combining anthropology, comparative human development, interethnic communication, life history, and literary works are used. Enrollment limited. Written permission required. STAFF

0500. *Discovering the Past: Introduction to Archaeology and Prehistory*
This course is an introduction to the biological origins and cultural developments of mankind over the past 4 millions years. In particular we shall address the following:
human evolution, the methods and aims of archaeological research, human dispersal throughout the world, first from Africa to Eurasia, and from there to North and South America, Australia and the Pacific. We will look into hunting and fishing and gathering lifeways. We will study the beginnings and results of settled life, agriculture, and animal domestication, the evolution of complex societies and rise (and fall) of Civilization. STAFF

0510. *Who Owns the Past?*
This class examines the relationship between the Western world and African indigenous cultures, heritage, and ideas of the past. By looking at the history of science in reference to the treatment of Africans and African material culture, we will question who owns the rights to an indigenous past. STAFF

0520. *Classic Mayan Civilization*
Examines the history, culture, and society of the Classic Maya, with special emphasis on Preclassic precursors, dynasties, environmental adaptation, imagery, architecture, urban form, and the Maya collapse. S. D. HOUSTON.

0800. *Sound and Symbols: Introduction to Linguistic Anthropology*
An introduction to the relationship between language and culture. Questions we consider include: how does language create social realities? How does language construct us as individuals and mark us as members of groups? What role does language play in processes like socialization, globalization, and domination? Topics we cover include theories of language as a symbolic system, language differences and inequality, political speech, and creative use of language in performance, literature, advertising, and mass media. We also consider language use in specific social contexts, such as classrooms, courtrooms, medical and scientific settings, policy debates, and political campaigns. Enrollment limited to 40. P. FAUDBREE.

For Undergraduates and Graduates

1020. *AIDS in Global Perspective*
Communities around the world are affected in different ways by the HIV-AIDS pandemic. This course is concerned with cross-cultural variation in knowledge, perception, and treatment of AIDS in a global context. Twenty-five years into the global epidemic, how does social and cultural variation influence the continued spread or management of the disease? In addition to reading significant anthropological works related to the meaning of AIDS in cultural context, the course will address major public health initiatives related to the global AIDS pandemic, and offer an anthropological critique of their design, implementation and success. Enrollment limited to 40. STAFF.

1100. *Circumpolar Ethnography*
An examination of the traditional and modern lifeways of native peoples across the Arctic and subarctic from European Lapland through Siberia, Alaska, Canada, and Greenland. Topics covered are society; ethnic relations; religion (Shamanism); art; and politics, including issues of land claims and home rule. D. D. ANDERSON.

1110. *African Issues in Anthropological Perspective*
Western ideas of Africa are dominated by images of a primitive and timeless past and of a present characterized by poverty, AIDS, famine, and violence. In reality, Africa is a vast continent with a rich history and a population of half a billion people who live in very varied physical, economic, political, and cultural environments. We will read fiction by African authors, see African films, look at African art, and listen to African music. Goals of the course are: 1) Learn about the lives of a variety of Africans at particular times and in
particular places, 2) Know the outline of the history that has formed the African present, 3)
Understand specific world views and patterns of belief that have been described as typically
African, and 4) Investigate the possibility, and the problems, of generalizing about Africa.
P. E. LEIS.

1119. **Andean Anthropology**
The area studies paradigm continues to provide solid information about "culture areas," and
the rich ethnography and archaeology of Andean societies is no exception. Particular
strengths emerging from this literature include studies of land use, religious syncretism,
textiles, and collateral themes: continuities and recognizable features of "Andean culture"
(*lo andino*), gender relations, migration, and politics. Throughout, we will analyze the ways
that history, ecology, and the broad notion of reciprocity (*ayni*) cross-cut each of these. The
result will be a close and in-depth study of cultural practices within three Andean countries
(Peru, Ecuador, and Bolivia), the majority populations of which continue to be indigenous
(predominantly Quechua- and Aymara-speaking). These are countries within which recent
political and social changes have produced far-reaching transformations. Prerequisite: one
course in Anthropology or Classics. J. B. LEINAWEAVER

1120. **Peoples and the Cultures of the Americas**
Examines the diverse cultures and history of the Americas - especially Brazil, Peru,
Mexico, and the Caribbean. Topics include the organization of labor, cultural and artistic
practices, changing conventions of gender and family, international migration, national and
local identities, indigenous rights, and protest and rebellion. STAFF

1122. **American Indian Art and Artifacts**
Drawing on the rich North American Indian collections of the Haffenreffer Museum of
Anthropology, the goal of this course is to examine theoretical approaches to the artifacts
of indigenous people and analytical strategies for their research and interpretation. Insights
from anthropology, art history, American Indian perspectives, and conservation are
explored. Meets at the museum.

1123. **Native North Americans in the Twenty-first Century**
An examination of the process of land alienation of Native Americans through the
enactment of federal laws to settle the frontiers and protect the wilderness. Through the use
of oral history, ethnographies, film, historical documents, and the public record, the course
compares Native American and Euro-American perspectives on the ownership of land and
rights to resources. D. D. ANDERSON.

1124. **United States Culture**
The United States is often described as “multi-cultural”. This course examines dominant
cultural values such as equality, choice, privacy, and responsibility. It also investigates
aspects of the social structure of the United States such as inequality, power, race/ethnicity,
kingship, and gender. Individual lives illustrate the ways that people living in the United
States negotiate cultural values and confront social institutions. N. W. TOWNSEND.

1130. **Peoples and Cultures of Southeast Asia**
An introduction to the anthropological study of Southeast Asia. Emphasis is placed on
understanding the diversity of cultures and societies through both space and time.

1131. **Peoples and Cultures of India**
An introduction to the anthropological study of Southeast Asia. Emphasis is placed on
understanding the diversity of cultures and societies through both space and time. L. M.
FRUZZETTI.
1140. *European Ethnography*
Familiarizes students with the societies and cultures of Europe from an anthropological perspective. Historical material provides for the understanding of current cultural, linguistic, religious, and ethnic variation. Major emphasis on the analysis of a range of contemporary communities from peasant to urban, from East to West, and from North to South. M. C. HOLLOS.

1150. *Middle East in Anthropological Perspective*
A seminar focusing on anthropological methods of analyzing and interpreting Middle Eastern cultures and societies. Emphasizes the study of kinship, tribal structure, social organization and gender relations, ethnic groups relations, and urban-rural distinctions. Draws upon insights from these topics as a basis for understanding contemporary social, economic, and political dynamics in the region. STAFF.

1151. *Ethnographies of the Muslim Middle East*
This course is an introduction to ethnographic studies of the Muslim Middle East, with particular focus on: religion, language, modernity, gender, and expressive culture. This is not a comprehensive survey of Middle Eastern history or politics. Rather, it is a critical examination of the ways in which anthropologists have sought to capture Middle Eastern life, and the problems that have pervaded anthropological representation, both methodologically and theoretically. Thus, in this course you will learn, through the ways in which American anthropologists have sought to depict Middle Eastern "others," the processes by which we come to understand cultural difference, as well as the ways in which this encounter can shed light on our own selves and practices. A previous course in anthropology is suggested. S. F. HAMDY.

1210. *Culture and Cognition†*
Are there cultural differences in thought and perception? If so, what are these differences and to what are they attributable? Reviews the history of the controversy on "primitive thought," the influence of culture and environment on perception and concept formation, the development of cognitive operations, and differences in logical processes and decision making in other cultural contexts. M. C. HOLLOS.

1211. *Cross Cultural Perspectives on Children*
Explores how the behavior and psychological functioning of children are shaped by culture and how different cultures tend to produce children with characteristic personalities, selves, thought patterns and behaviors. Every cultural community provides developmental pathways for children. These pathways are shaped by history and by the goals of parents, communities and children themselves. The course will focus on how human knowledge is transmitted through multiple cultural channels in both informal and formal contexts. *This is a service-learning course* in which students provide a needed service: Mentoring and tutoring Liberian young people in a literacy program. This will serve as a basis for conducting research on this refugee population and the final paper will be the recording of oral histories from teenagers. Enrollment limited to 30. M. C. HOLLOS.

1220. *Comparative Sex Roles*
Covers specific cross-cultural issues of gender, cultural roles, the status of women, and their structural position in society. Themes of gender representations in the field of economics, ritual, and politics underline the concerns of the course. Though African and Asian communities are the primary focus, aspects of American society are drawn into consideration when relevant. L. M. FRUZZETTI.
1221. Anthropology of Masculinity
Contemporary anthropological and historical study of masculine identities and practices throughout the world, focusing on topics such as the cultural economies of masculinity, cultural regions and images of manhood, male friendship, machismo, embodied masculinity, violence, power, and sexual fault lines. Prerequisite: Prior course in Social Science or instructor's permission required. STAFF.

1222. Kinship Compared: Relations, Families, and Connections
In all cultures people see themselves as related more closely to some people than to others and they usually experience that relation in terms of some shared substance such as blood. Beyond these generalizations there is an enormous variety of ways in which people live in, build, and maintain connections with others - in nuclear and extended families, peer groups, friends, ethnic groups, and so on. This course is about kinship as an idea, as an experience, and as an institution. In the midst of divorce and blended families, new reproductive technologies, and adoption we will investigate kinship and connection in our own lives, in a range of other cultures, and within the discipline of Anthropology. N. W. TOWNSEND.

1223. Gender, Nature, the Body
This course is an interrogation of the ways in which gender difference comes to be conceived of as "natural" in modern science, popular science, and in popular culture. What is the connection between the science of gender difference and the colonial encounter? What are some different ways of imagining gender difference? How are gender inequalities structured and perpetuated by science and political economy? Through careful reading of historical and anthropological texts, we will learn about various ways in which gender systems are constructed and resisted, how science is used to construct gender, but also how gender politics influence scientific outcomes and practices. Case studies that we will read about include: the colonial encounter and scientific taxonomy, the medicalization of childbirth and labor, historical understandings of male-female continuities, the emerging science of sex difference and sexual orientation, gender inequality and ecological exploitation. STAFF.

1224. Human Trafficking, Transnationalism, and the Law
Designed to give students an opportunity to engage in transnational research on social issues through an extended case study of a new generation of international norms that identify and combat "human trafficking." The course format combines seminar discussions, lectures, and small group exercises. Students will learn by doing. As we consider legal instruments, UN and U.S. documentary archives, anti-trafficking media such as films and websites, and the prosecution of criminal networks, we will experiment with alternative methodologies for analyzing them. We will study the relation of texts to the social and political contexts of their production and circulation. K. B. WARREN.

1227. Science, Activism, and Politics of Gender
How did much of the world agree that female genital cutting should be ended? This course explores grassroots and international campaigns in Africa and the West, effects of asylum and criminal laws, and international organizations' attempts to create evidence-based, scientific governance to end cutting. We will focus on ethnographies that problematize these interventions by analyzing their histories, cultural politics, contradictory effects on local communities, and global political ramifications. By examining interventions against cutting, this course offers a methodological and conceptual blueprint for researching local-global production of human rights crises and efforts to resolve them. Enrollment limited to 20. Not open to first year students. STAFF.
1229. *Democracy and Difference: Political Anthropology, Citizenship, and Multiculturalism*
In seemingly endless contexts, the term "democracy" is employed toward a wide range of political and social goals. This course examines the question of cultural citizenship - the right to be different while remaining part of the national community - as observable in places where liberal democracy's focus on the individual citizen clashes with communal wishes for collective representations of difference. By reading case studies from multiple locales, this course examines the attempts of democratic regimes to govern varied populations through the lens of political anthropology. M. BRINK-DANAN.

1230. *Political Anthropology*
Anthropological perspectives on politics, ranging from political processes in small-scale nonliterate societies to those in industrialized states. Special attention is given to the uses of symbolism and ritual in politics. Topics include: how is political legitimacy established and maintained? how are certain political views of the world created? what is the relationship between political change and the reinterpretation of history? STAFF.

1231. *Kings, Courts, and Aristocracy*
Explores the nature and variety of kingship, royal courts, and aristocracy through comparative evidence, with strong emphasis on historical data, architecture, and archaeology. Test cases will be examined in Mesoamerica, Europe, Africa, and Asia. S. D. HOUSTON.

1232. *War and Society*
Cross-cultural and historical perspectives on war and its larger social context. Course readings and lectures use political economic, cultural, and feminist approaches to understanding war and its effects on social life. Case studies will be drawn from several eras and areas of the globe, including the Rwandan genocide, Central American counterinsurgency wars of the 1980s, and the war in Iraq. C. A. LUTZ.

1233. *Ethnographies of Global Connection: Politics, Culture and International Relations*
Historically, IR and Anthropology examined interactions within and among bounded objects, whether sovereign states or small-scale societies. Increasingly, through, they explore flows, circulations and exchanges across borders, and their impact on different societies. Through case-studies, the course will analyze evolving understandings of "globalization" and "culture," and explore how effectively different genres of research and representation capture their complex interactions. STAFF

1234. *Anthropology and Utopia*
A wide-ranging reading and discussion class that will address such questions as: Does Anthropological description contribute to the design of good societies? Have Anthropologists been looking for Utopia? What does Anthropology suggest is wrong with existing societies? Whose job is it to judge societies? How would Utopias be like to live in? How have people tried to build Utopias? Have they failed completely? Is failure inevitable? Is a better world possible? What would it look like? How would we get there? N. W. TOWNSEND.

1240. *Religion and Culture*
Looking at religion as a mode of thought, we examine theories that attempt to explain the origins, world-wide manifestation, and vitality of myths, rituals, magic, witchcraft, and other ways of thinking and acting that are typically associated with (or against) the concept of religion. Collaterally, we examine the methodologies by which we hope to understand the meaning of these concepts. STAFF
1241. Science and Culture
This course is an introduction to methods and topics in the anthropology of science and technology, including: social inequalities in science, race, gender, post-coloniality, and the globalization of bio-technologies. The course will focus on ethnographies and films about science and culture, covering topics such as the social implications of genetic testing, bioprospecting and the environment, the development of pharmaceuticals, and repercussions of nuclear technologies. S. HAMDY.

1242. Bioethics and Culture
This course is an introduction to the work of medical anthropologists who have engaged with social and ethical implications of medical practice and biotechnologies. In this class we look at bioethical problems as ways to understand larger social questions and look at the ways in which society as a whole influences bioethical questions and decisions. Particular emphasis will be on questions about the beginnings and ends of life, genetic testing, pharmaceuticals, psychiatry, health inequalities, and organ transplantation. Prerequisites for the course are: a previous course in medical anthropology (e.g. Culture and Health) or a previous course in science studies. S. HAMDY.

1250. Film and Anthropology: Identity and Images of Indian Societies
The course examines representation of Indian society in film and anthropological literature. We compare how gender, national identity, religious practices, and historical events are portrayed in films and anthropological literature. We will explore the relationship between visual and textual, showing how film reflect and make comprehensible anthropological concepts of Indian culture, and creates different images of the society. L. M. FRUZZETTI.

1251. Violence and the Media
The role of media in shaping perceptions of violent conflict. Analysis of constructions of the "violent other", "victims", and "suffering", the use of culture, ethnicity, and psychopathology as tropes for articulating the motivations of violent perpetrators. Multiple subject positions and political interests will be considered. Case studies include the Cold War, conflicts, insurgencies urban riots, the genocide, and terrorism. Pre-requisite: a previous course in Anthropology, or permission of the instructor. Enrollment limited to 60. K. B. WARREN.

1305. Medical Humanities: Critical Perspectives on Illness, Healing and Culture
Medicine is arguably the most humanistic of the hard sciences, one that strives to ensure the basic dignity of individuals. In our increasingly globalized world, access to medical care is recognized as a fundamental human right. However, there continues to be considerable debate over the "best" ways to provide medical services to economically and culturally diverse communities across the globe, given the complex ways that people prioritize and perpetuate their health. Drawing on a range of disciplines, this seminar explores the multifaceted relationships between biomedicine and cultural understandings of illness, both in the US and worldwide. Instructor permission required. Enrollment limited to 25 juniors and seniors.

1310. International Health: Anthropological Perspectives
This upper-level medical anthropology course focuses on the social and cultural complexity of health problems in developing nations, employing anthropological approaches to public health. International health issues such as HIV/AIDS, malaria, tuberculosis, leprosy, reproductive health, violence, and mental illness will be examined. The historical, political and socio-cultural dimensions of international health problems will be explored through reading ethnographic case studies. STAFF
1320. *Anthropology and International Development: Ethnographic Perspectives on Poverty and Progress*
Examines international development from an ethnographic perspective, looking critically at issues of poverty and progress from local points of view. Course is organized around the premise that culture is central to understanding processes of development. Broad development themes such as public health, agriculture, democracy, and the environment will be explored through readings representing a wide range of regions and cultures. Enrollment limited. Written permission required. D. J. SMITH.

1321. *Impact on Colonialism: Gender and Nationalism in India*
This course is designed to look into colonial and post-colonial identities within the disciplines of history and literary studies. We will adopt an anthropological approach to those subjects, taking the cultural anthropology and construction of gender as the guideline for the analysis. Topics will include: orientalism, and gender; nationalism and religion. Enrollment limited. Written permission required. L. M. FRUZZETTI.

From child soldiers to starving refugees, Americans are inundated with media images of violent suffering in the developing world. Our politicians frequently present international humanitarian intervention as an unequivocal good, without examining the actual outcomes of aid initiatives. This course uses tools from anthropology to explore the motivations for global aid, along with the concrete--and often unexpected--effects it produces on the ground. Foregrounding an ethnographic approach, we seek to understand the enduring influence of the concept of "rights," the ways that local populations both welcome and resent humanitarian work, and the successes and failures of international charitable organizations.

1323. *The Culture and politics of Colonial Cities: Migration, Markets, and the Diaspora*
Two colonial powers (British Empire and Portuguese) form the basis for this comparative approach to unravel and comprehend how the colonial policies differed in the two regions. Colonial cities have a special mystique, and studying them in the present unravels socio-historical and political connections to make the present more meaningful. For the post-colonialism, we address migration and the Diaspora, the participation of the groups under analysis in transnational economy and in local and global markets. In focusing on the Diaspora, we will seek to tie the history and cultural development to the wider issue of Diaspora and the displacement of people, the search for opportunities, migration and the global markets.

1400. *Race, Culture, and Ethnic Politics*
A seminar addressing the subjects of race, culture, and ethnicity, focusing on minority groups in the U.S. Seeks to clarify the philosophical and theoretical issues in contemporary America using a cross-disciplinary approach. Enrollment limited. Written permission required. L. M. FRUZZETTI.

1411. *Nations within States*
Examines the interactions between small-scale indigenous societies (often referred to as Fourth World Nations) and the modern states within which they now exist. The relationship is obviously asymmetrical, yet these ethnic or “racial” minorities have the support of world opinion and international organizations. The sociocultural, economic, and political structure of these nations within states is the focus of the course. D. D. ANDERSON.
1420. *Ethnicity, Race, and Gender in the Americas*
The historical and contemporary ethnography of ethnicity, race, and gender in the Americas. Topics include racism, multiculturalism, affirmative action, immigration, nationalism, acculturation, cultural autonomy, slavery, colonialism, and genocide. **STAFF**

1450. *Living with Conflict*
Exploration into ways in which cultural groups perceive and approach situations of conflict and how these situations in turn shape cultural practices, beliefs, and norms within the group. Examples are taken from ethnographies of different parts of the world and include a discussion of customs that help mitigate conflict among members of the group as well as conflict between groups. **D. D. ANDERSON.**

1530. *American Indian Archaeology*
Traces the development of North American Indian cultures through the comparative study of prehistoric archaeological remains. Topics include the origins of Native Americans, Native American hunting-gathering lifeways, and the rise of the Native American agricultural societies. Emphasizes analyses of subsistence modes, settlement patterns, and symbolic systems. **D. D. ANDERSON.**

1540. *Power, Profit, and Pillage: The Rise and Fall of Trading Kingdoms in Asia*
A course survey of the pre- and protohistoric archaeology of the eastern half of Asia. Topics include the origins and evolution of agricultural societies, the emergence of village and urban life, and the rise of states and kingdoms. The early states were often characterized and even reinforced by elaborate symbolic and religious systems expressed through ritual, art, and architecture—topics also covered by the course. **D. D. ANDERSON.**

1550. *Ancient Environments*
This course teaches students how scientists investigate ancient environments and climate change and how these are related to ancient people and culture history. Students will learn about methods ranging from pollen and soil analysis to climate reconstruction and ecology. The class will look at a number of archaeological case studies in which climate or environment are believed to have been integral in past cultural developments. Case studies include the Levant, Mesopotamia, Polynesia, the American Southwest, and the Maya area. Students will be evaluated on class participation, weekly writing assignments, and final research papers. Prerequisite: ANTH 0500 or instructor permission.

1570. *American Indian Archaeology*
This course traces the development of North American Indians and culture through a comparative study of prehistoric archaeological remains. Some of the questions addressed will be: When where and why did people first migrate into North America? Were these people responsible for the mass animal extinction at the end of the last Ice Age? What accounts for the similarities and differences in the politics and adaptations of Native Americans. **D. D. ANDERSON.**

1600. *Hunter-Gatherer Adaptations*
Addresses the question: to what extent can the concept of the ecosystem, as developed in evolutionary biology, explain variability in human behavior? Examines the literature on contemporary hunting and gathering societies, both human and nonhuman, as well as relevant findings in archaeology and human biology. Background in general biology and anthropology is helpful, but not required. **R. A. GOULD.**

1620. *Global Historical Archaeology*
The course examines historical archaeology as a multidisciplinary approach to the study of the historic past. Draws in recent research from different parts of the world, including North
America, South Africa, Australia, the Caribbean, and South America, to illustrate historical archaeology’s contributions to interpreting peoples’ everyday lives and the diversity of their experiences in the post-1500 era. Written permission required. P. E. RUBERTONE.

1621. **Material Culture Practicum**
Combines theory with hands-on study of material culture in historical archaeology. Students gain skills and experience in identifying, dating, recording, analyzing, and interpreting artifacts and conduct individual or team research projects. Enrollment limited to 15. P. E. RUBERTONE.

1623. **Archaeology of Death**
Explores the study of death and burial from archaeology’s unique comparative and long-term perspective. What insights does it provide about the human condition? How have human remains illuminated the lived experiences of people in the past? What do funerary objects reveal about beliefs and social relations? Gravestones and monuments about emotions and memory? Also examines current challenges to the excavation and study of graves. P. E. RUBERTONE.

1624. **Indians, Colonists, and Africans in New England**
The course explores the colonial and capitalist transformation of New England’s social and cultural landscapes following European contact. Using archaeology as critical evidence, we will examine claims about conquest, Indian Extinction, and class, gender and race relations by studying the daily lives and interactions of the area's diverse Native American, African American, and European peoples. P. E. RUBERTONE.

1640. **Mesoamerican Archaeology**
This course examines the archaeology of Mesoamerican civilizations. Students will learn the similarities and differences between such cultures as the ancient Olmec, Zapotec, Maya, Toltec, and Aztec that inhabited this region from 1200 BC through the Spanish conquest. Readings and lectures will highlight the different ways in which scholars look at the past as they reconstruct ancient ways of life. S. D. HOUSTON.

1650. **Ancient Maya Writing**
Nature and content of Mayan hieroglyphic writing, from 100 to 1600 CE. Methods of decipherment, introduction to textual study, and application to interpretations of Mayan language, imagery, world view, and society. Literacy and Mesoamerican background of script. Enrollment limited. Written permission required. S. D. HOUSTON.

1660. **The Ancient Body: Past Ideas about Human Physicality**
Course addresses the burgeoning literature on the human body, especially the meanings attached to it through time and across cultures. Anthropology, history, and archaeology offer the principal sources of evidence for this introduction to past ideas about the body. Enrollment limited. Written permission required. S. D. HOUSTON.

1670. **Global Origins of Plant and Animal Domestication**
A seminar providing the basic information on the prehistory of the Circum Artic of Northern Fennoscandia, Russia, and North America. Not open to first year students. D. D. ANDERSON.

1680. **Foragers, Farmers, Feasts, and Famines: An Anthropology of Food**
An exploration of the human experience of food and nutrition from evolutionary, archaeological, and cross-cultural perspectives. The course will review the various approaches employed by anthropologists and archaeologists to understand diet and subsistence in the past and present. Starting with the evolutionary roots of the human diet in Plio-Pleistocene Africa, we will trace patterns of human subsistence to the present,
including the social and health implications of the agricultural revolution. We will then explore modern foodways in cross-cultural perspective, focusing on the interplay of ecology, politics, technology, and cultural beliefs.

1710. Biological Issues in Human Origins and Variability
This course examines the fossil record of human ancestors and evidence for cultural origins in relation to evolutionary theory in biology. We will review studies of living primates as well as modern genetic and DNA research for measures of contemporary human variability. Finally, we will explore forensic applications and case studies. STAFF.

1720. The Human Skeleton
More than simply a tissue within our bodies, the human skeleton is gateway into narratives of the past—from the evolution of our species to the biography of individual past lives. Through lecture and hands-on laboratory, students will learn the complete anatomy of the human skeleton, with an emphasis on the human skeleton in functional and evolutionary perspective. We will also explore forensic and bioarchaeological approaches to the skeleton. By the course conclusion, students will be able to conduct basic skeletal analysis and will be prepared for more advanced studies of the skeleton from medical, forensic, archaeological, and evolutionary perspectives. Enrollment limited to 20. Not open to first year students. Instructor permission required. A. SCHERER.

1800. Sociolinguistics, Discourse and Dialogue
An investigation of the study of language and language behavior. Centers on the study of variation in language as seen in the social and cultural context of language use. This course will feature practice in writing fictional and dramatic dialogue based on real-life discourse. Presupposes some familiarity with basic linguistics (ANTH 0800, CLPS 0030, or equivalent). STAFF.

1810. Language and Power
This course considers how language and power relate to each other in social life. We first consider theoretical approaches to the politics of language use, such as Foucault on discursive formations, Bourdieu on language as social capital, and Bakhtin on the oppression inherent in standard languages. We then consider specific issues, including joking as linguistic resistance, language death and revitalization, the cochlear implant debate, and racializing discourses. We end with language use in the U.S. "culture wars," covering such topics as the Ebonics controversy, language and electoral politics, hate speech, and English language legislation. P. L. FAUDREE.

1900. History of Anthropology: Anthropological Theories
Looks at the way anthropological methods and theories have interlaced through history to understand the dominant concerns in present-day anthropology. What were the important issues that influenced the discipline's history? Who were the significant, and not so well known, historic personalities who shaped anthropological practice and gave it its identity? N. W. TOWNSEND.

1910. Senior Seminar
Aims to provide a "capstone" to a concentration in anthropology through readings on, and critical discussions of, enduring and contemporary questions about our own society, about anthropology, and about reality. Topics vary from year to year. STAFF.

1940. Ethnographic Research Methods
To understand the different theoretical assumptions that shape research efforts; to examine how hypotheses and research questions are formulated; and to appreciate the ethical and scientific dimensions of research by hands-on experience in fieldwork.
1950. *Archaeological Field Work*  
Training in archaeological lab and field techniques for archaeologists. Topics include the nature of field archaeology, tools of the trade, interdisciplinary field techniques, ethics, excavations methodology, survey and GIS, systematic vs. ad hoc excavation, artifact analysis, site and artifact preservation. Students gain experience as practicing archaeologists through the active investigation of local historical and archaeological sites in the College Hill area. **STAFF**

1970. *Individual Research Project*  
Primarily for Graduates

2000. *History of Ethnological Theory*  
A seminar investigating some themes in the history of anthropological theory. Starting with the delineations of the scope and nature of social science by Marx, Durkheim, and Weber, the seminar then considers various explorations of the concepts of structure, function, and agency, concluding with Bourdieu’s reformulation of social anthropology for a new generation in the form of practice theory. S/NC. **STAFF**

2010. *Principles of Cultural Anthropology*  
A seminar exploring fundamental theoretical and ethnographic currents in 20th-century cultural anthropology. S/NC. **STAFF**

2015. *Cosmopolitan Ethnography*  
Contributes to anthropological understandings of globalism, political and urban anthropology, with a focus on one particular theoretical orientation that may guide research design and/or analysis. In addition to studying this particular philosophy through which they might understand culture, this course offers a model for the adoption of any given theoretical lens that might be taken up, critiqued, and otherwise put to use in cultural analysis. S/NC. **STAFF**

2020. *Methods of Anthropological Research*  
A seminar on the methodological problems associated with field research in social and cultural anthropology. Designed to help students prepare for both summer and dissertation research. S/NC. **STAFF**

2025. *Research Design and Ethnographic Methods in Anthropology*  
The purpose of this seminar is to help graduate students conceptualize ethnographic research, formulate a research problem, develop a research design, consider its ethical implications, design appropriate methodologies and prepared the proposal for IRB approval. The methodologies will be discussed with a view to arriving at a critical understanding of the ethical, political and theoretical issues embedded in them and the way in which they fit into our conception of anthropological practice. S/NC. **STAFF**

2030. *Advanced Field Methods*  
A seminar for advanced graduate students returning from field research or preparing for dissertation field work. Case studies are used for a critical examination of research design and date analysis. S/NC. **STAFF**

2035. *Professional Preparation for Anthropologists*  
This course covers research ethics and politics, writing of proposals, theses, and articles, publishing, public speaking, CVs and resumes, and the job search. S/NC. **STAFF**
2040. **Advanced Social Theory**
This seminar is for graduate students who have taken ANTH 2000 and ANTH 2010 or equivalent graduate introductory courses in anthropological theory. Topics to be explored in this seminar include contemporary theories of globalization, hybridity, the politics of identity, class, cultural citizenship, democracy, social suffering, structural violence, agency, human rights, militarization, the body, multisited ethnography, and writing culture. S/NC. M. C. GUTMANN.

2050. **Ethnography**
Each week this class will study classic and contemporary ethnographies. We will carefully examine the methods involved in research for the books and how the ethnographies were written. Ethnographies will be chosen for their importance in the field of anthropology and will cover a broad range of topical and geographic fields. We will also read some social history. S/NC. STAFF

2100. **Seminar on the Americas**
This seminar focuses on long-standing concerns in Latin American studies and political anthropology relating to contemporary issues in the anthropology of Brazil and Mexico including social movements, race/ethnicity/nation, class, sexualities, violence, and militarism. S/NC. STAFF

2110. **Critical Perspective: Social and Cultural Issues in Africa**
Focuses on debates over significant social and cultural issues in Africa. Historical and cultural continuities are premised as a way of understanding political, economic, and religious complexities in present-day Africa. S/NC. P. E. LEIS.

2200. **Problems in Sociocultural Anthropology**
The topic of the seminar varies from year to year. S/NC.

2200A. **International Health**
This graduate seminar (upper-class undergraduates may seek permission from the instructor) focuses on the social and cultural complexity of health problems in developing nations, exploring anthropological approaches to public health. International health issues will be investigated using historical, ecological, epidemiological, political-economic, and ethnomedical perspectives, and the role of “applied” anthropology will be explored. D. J. SMITH.

2210. **Analysis of Social Structure**
This course will discuss the analysis of kinship and the construction of the person cross-culturally. S/NC. L. M. FRUZZETTI.

2240. **Anthropological Approaches to the Body**
This course is an in-depth exploration of theoretical and analytical approaches to the body in socio-cultural anthropology. Topics covered include: the body as site and sign of the social order; theories of embodiment and the cultivation of the self; bodily order and social ritual; the senses; the relationship between bodily epistemology and socio-political structures; the commodification of the body; technological intervention in the body; the visualization of the bodily interior; and state interventions and regulations of bodily processes. S/NC. S. HAMDY.

2250. **Problems of Psychological Anthropology**
S/NC. THE STAFF

2255. **Gender, Liberalism, and Postcolonial Theory**
What makes gender useful to think with? What work is it charged with doing—in the "real" world and in scholarship? What is the explanatory and analytical potential of a category that
has been appropriated to divergent ends? Drawing on multiple disciplines in the humanities and social sciences, this course operates at two registers throughout: it offers students a productive set of analytical tools for theorizing gender and sexuality in culture and society; and it constructs a genealogy of anthropological analysis of gender and sexuality from a postcolonial perspective, exploring how ethnography and postcolonial theory have challenged liberal feminism. Open to seniors and graduate students. S/NC. STAFF

2261. Globalisms: Empires and Social Movements
This seminar explores globalism in two of its contemporary forms, including empires and global networks of social movements. Focuses on theories of empire and on their implications for anti-war and anti-corporate movements in particular. S/NC. C. A. LUTZ.

2262. Social Analysis, Public Goods and Social Movements
This seminar explores some of the political, ethical, and social issues and dilemmas involved in using social analysis to advance public interests. S/NC. C. A. LUTZ.

2263. Colonialism and Neocolonialism
A seminar addressing the concepts of colonialism, postcolonialism, and nationalism. The nature of colonial "rule of law," the stages of the dissolution and formation of "African" native states, and the notion of "traditional" power are all examined in a comparative context using Francophone and Anglophone case studies in Africa. S/NC. STAFF

2264. Ethnicity, Race, and Nationalism
Study of key issues debated by anthropologists regarding ethnicity, race, and nationalism, with examination of concepts such as identity, cultural citizenship, transnationalism-globalization, gender, home, and acculturation-hybridity. S/NC. STAFF

2270. Ethnography and Women's Literature of Non-Western Societies
Interdisciplinary and cross-cultural exploration of representation in ethnographic and literary texts. Confronts the apparent analytical opposition of objectivity and subjectivity and addresses the challenge in the academy of "writing culture." Encourages connections between women writers in the Third World and American minority discourse to deepen understanding of global politics and the poetics of culture. S/NC. STAFF

2300. Anthropological Demography
A seminar devoted to the investigation of the interface of anthropology (especially sociocultural anthropology) and demography. A wide variety of demographic topics—fertility, mortality, marriage, migration—are considered, and the links between anthropological and demographic writings on and approaches to these areas are examined. S/NC. STAFF

2301. Interdisciplinary Perspectives on Population
Brown University’s 10 years of excavations has created a lens through which to examine the complexities of the Nabataeans and their culture. The main information about the Nabataeans comes primarily from their extant monuments. There are also literary and epigraphic sources. This seminar will create a constellation of readable ideas, although we will still be left with many open questions about these people. STAFF.

2302. Field Methods for Anthropological Demography
Concentrates on methods for collecting or producing data that bear on demographic issues and that are suitable for demographic analyses. Topics include: fertility histories, life histories, genealogies, household surveys, networks, and social units. Particular emphasis on the social contexts of data production, local meanings, and discovering appropriate categories and units of analysis. S/NC. STAFF.
2303. Anthropology of Fertility and Reproduction
A seminar examining the social significance and cultural meanings of human fertility and reproduction, including the social and cultural consequences of different fertility levels, the variety of people involved in decisions about reproduction, the allocation of responsibility for parenthood, and the political implications of contemporary debates about the meanings of biological and social reproduction. S/NC. M. C. HOLLOS.

2304. Issues in Anthropology and Population
This seminar is intended for graduate students and postdoctoral fellows interested in anthropological approaches to population issues and is normally taken as the second course in a two-course sequence that begins with Anthropology 206. The overarching theme of the seminar is the contributions that sociocultural anthropology can make to the understanding of population processes. S/NC. STAFF

2310. Graduate Seminar on Violence
This seminar deals with contemporary anthropological approaches to violence, governance, and transnationalism. As faculty and graduate students, we have worked together to identify important ethnographic experiments that provide novel anthropological framings of major global issues. Our goal is to interrogate anthropological writing, explore its relation to field research, and trace anthropological appropriations of contemporary social theory from a variety of sources. Prerequisites: three previous courses in Anthropology. S/NC. STAFF

2320. Ideology of Development
An examination of different development theories and their relationship to field application. The analysis of project preparation and implementation is used to question the goals and objectives of Western and indigenous notions of progress and change within a social and economic context. Third World countries are utilized as case studies to address related issues, such as the meaning of development. S/NC. L. M. FRUZZETTI.

2321. Coming to Terms with India: Anthropology of Colonialism and Nationalism
This course is designed to look into the impact of colonialism, nationalism and the postcolonial identities of the person in India. In addition to the primacy of the anthropological focus, the seminar will also draw from cultural studies and history. Our engagement will be with topics of nationalism, religion, and caste and class formation during colonial and postcolonial rule. Additional topics using the anthropological approach will include orientalism and gender; the location of national minorities within the Indian democracy and the future of fundamentalism; post-colonialism and the emerging new person. S/NC. L. M. FRUZZETTI.

2400. Museums and Material Culture
This seminar discusses anthropological approaches to material culture in museum contexts, by developing themes, selecting objects, and preparing a preliminary script for an exhibition in Manning Hall. This year, "Humans and Nature." (ANTH 2400 is followed by ANTH 2410. Students can enroll in each course independently). Instructor permission required. S/NC. THE STAFF

2410. Exhibitions in Museums
The goal of this seminar is to implement in Manning Hall an exhibition script developed in ANTH 2400, on "Humans and Nature" (see that course). Topics discussed and put into practice include: representation of cultures modern museum displays; thematic development; interpretation, handling, and mounting of objects in contextually rich and engaging museum environments; conservation; audience assessment. S/NC. STAFF
2420. Museums in Their Communities
This seminar examines in detail the internal workings of museums (of anthropology, art, history, science, etc.) and their place in their communities. Accessions, collections management, conservations, education, exhibition, marketing, research, and museum management are among the topics discussed. S/NC. STAFF

2500. Problems in Archaeology
This seminar examines the relationship of various lines of archaeological inquiry to general theories of economic behavior. The goal of the seminar will be to determine which archaeological approaches “connect up” best with the grand, social scientific theories of human economies. S/NC. STAFF

2501. Principles of Archaeology
Examines theoretical and methodological issues in anthropological archaeology. Attention is given to past concerns, current debates, and future directions of archaeology in the social sciences. S/NC. STAFF

2510. Circumpolar Archaeology
A specialized course dealing with advanced problems in Arctic archaeology. Although primarily oriented toward the northern specialist, the seminar is designed to present, by example, methodological and analytic problems that are applicable to most archaeological areas and to hunting, fishing, and gathering societies. S/NC. STAFF

2520. Mesoamerican Archaeology and Ethnohistory
Seminar focusing on current issues in the archaeology and history of Mesoamerica, including Mexico and Northern Central America. Draws on rich resources at Brown, including the John Carter Brown Library. S/NC. S. D. HOUSTON.

2530. Archaeology of Tribes and States
Explores concepts of complexity and inequality and how these have been used to study the origins and development of complex society. Categories such as tribes, chiefdoms, the state, etc. are evaluated as conceptual tools for understanding the rise of civilizations and early state formation, as well as transformations in later historical contexts. S/NC. STAFF

2540. Historical Archaeology
Examines historical archaeology as a complex field of inquiry that draws on multiple sources of evidence and incorporates a wide range of theoretical and methodological approaches. Asks how historical archaeology can take best advantage of this richness and diversity to address questions of interest in anthropology and history. S/NC. P. E. RUBERTONE.

2541. Ethnohistory
Examines Indian/European encounters and interactions in North America and Latin America. Explores the conjunction of anthropology and history, combining both theoretical orientations from and methodology of the two disciplines, with particular emphasis on the problems posed by comparative analyses. S/NC. STAFF

2550. Archaeological Research Methods, Theory and Practicum
The seminar is designed to help the student development good research and analytical skills in archaeology. By focusing on research design, analytic techniques, the relationship between theory and methodology, and the development of research proposal and/or reports, we shall examine how both scientific and humanistic theoretical concerns can be sources of meaningful archaeological questions, and how these questions can be transformed into viable research problems. S/NC. STAFF
2800. Linguistic Theory and Practice
An introduction to theoretical and methodological issues in the study of language and social life. We begin by examining semiotic approaches to language. We turn to classical research on language as a structured system - covering such topics as phonology and grammatical categories - but we focus on the implications of such work for broader social scientific and humanistic research. We then consider areas of active contemporary research, including cognition and linguistic relativity, meaning and semantics, pronouns and deixis, deference and register, speech acts and performativity, interaction, verbal art and poetics, reported speech, performance, and linguistic ideology. S/NC. B. SCHULTHIES.

2900. Teaching Practicum
S/NC. STAFF.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit. STAFF.

2980. Reading and Research

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit. STAFF.

Applied Mathematics

Professors Dafermos, Dupuis, Falb, Gatsonis, Geman, Gidas, Gottlieb, Guo, Hesthaven, Karniadakis, Lawrence, Mallet-Paret, Maxey, McClure, Mumford, Rozovsky, Shu, Strauss, and Su; Associate Professors Bienenstock, Wang; Assistant Professors Hult, Menon; Professors Emeriti: Bisshopp, Davis, Fleming, Freiberger, Grenander, Hsieh, Kushner, Sirovich.

The Division of Applied Mathematics offers standard concentration programs leading to the Sc.B. degree, the A.B. degree, the Sc.M. degree, and the Ph.D. in applied mathematics. The concentrations have considerable flexibility and allow students to pursue courses of study to suit individual needs and interests. Programs are designed by the student and a faculty advisor to provide both strong terminal degrees and preparation for more advanced study in applied mathematics, mathematics, engineering, or any of the sciences. The broad interdisciplinary character of the division and the strong science departments in the University make possible a diversity of programs which may emphasize applications to the physical sciences, computer sciences, engineering, economics, biomedical sciences, etc. The current standard programs of this nature are applied math–biology, applied math–economics, and applied math–computer science.

Since the summer of 1941, Brown University has continuously supported instruction and research in applied mathematics to meet the needs of universities, industry, and government for engineers, physicists, and mathematicians whose training extends beyond the accepted boundaries of their respective fields. The instructional program includes courses in mathematical fundamentals, as well as introductory and advanced courses in particular fields of applied mathematics. Emphasis in the program is placed on the development of the ability to formulate and analyze mathematical problems which arise in science and technology. Training in research is stressed, and instruction is integrated with
a research program covering both theoretical and some experimental aspects of various
fields.

The division emphasizes the importance of modern computing methods in the study
of applied mathematics. Within the division there is a fully supported network of desktop
computers and workstations with resources for image processing and video production. The
Technical Center for Advanced Scientific Computing and Visualization (see page 298),
with which the division is affiliated, maintains advanced parallel computing systems and a
CAVE for interactive 3-D visualization.

Scientific computing as a method of research is inherently multidisciplinary. It has
experienced a period of phenomenal growth in response to the demonstrated successes of
computational methods in advancing the understanding of fundamental scientific problems,
the existence and increased availability of supercomputers to university researchers, and
the current initiatives of federal agencies to stimulate research and education in large-scale
scientific computing. In response to this growth, the division has participated in
establishing several centers for the coordination of a variety of instructional and research
activities spread across the Divisions of Engineering and Applied Mathematics, and the
Departments of Physics, Geological Sciences, Chemistry, Psychology, and Computer
Science.

In September, 1964, the Center for Dynamical Systems was formed within the
Division, and in 1974 it was renamed the Lefschetz Center for Dynamical Systems in honor
of one of its founders. It is a center for research on differential equations and on the theory
and applications of dynamical systems. In addition to its members in the Division, there are
several members in the Department of Mathematics and in the Division of Engineering.
This center has a worldwide reputation and is one of the largest of its kind.

The Center for Fluid Mechanics, Turbulence, and Computation involves faculty and
students from several departments on campus and provides resources for research in fluid
mechanics. There is a growing interest within the division in the application of mathematics
to the nonphysical sciences, particularly to problems arising in biology, medicine,
linguistics, psychology, and economics. The division is represented in the Center for
Biophysical and Biomedical Engineering, the Center for Gerontology and Health Care
Research, the Center for Neural Sciences, and the Committee on Statistical Science (see
catalogue entry under Statistical Science), which promote cooperation among faculty from
several departments.

The Brain Sciences Program, which includes more than seventy-five faculty from ten
departments, is an innovative program designed to promote collaborative theoretical and
experimental studies in various aspects of brain development and function. Some of the
topics studied are: How do neurons communicate with each other? How does the brain wire
itself? How do perception and cognition emerge from the activity of networks of neurons?
How could we build machines that emulate brain functions?

Since applied mathematics involves many disciplines, students of varied backgrounds
find their way into the graduate program. A strong background in and predilection for
mathematics is essential, but an undergraduate may have majored in engineering, physics,
biology, economics, psychology or other sciences.

The division is not formally structured into isolated research groups and in fact
stresses applied mathematics as a discipline in its own right. One can, however, distinguish
the following research interests and activities of present staff members: (1) applied
probability and mathematical statistics, (2) computing science and numerical analysis,
(3) stochastic control theory and optimization, (4) ordinary, functional, and partial
differential equations, (5) fluid mechanics, and (6) solid mechanics.
Undergraduate Programs

The department offers the following concentrations:
- Applied Math
- Applied Math-Biology
- Applied Math-Computer Science
- Applied Math-Economics

For a complete description of these concentration programs leading to the bachelor's degree, please visit: [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

Graduate Programs

**Master of Science.** The general requirements for this degree are the satisfactory completion of the equivalent of one year of study at a graduate level with the program of courses subject to the approval of the division. The student may also be required to complete satisfactorily a project or thesis.

**Doctor of Philosophy.** The general requirements for the degree of Ph.D. in applied mathematics include the satisfactory completion of the basic courses at a graduate level approved by the division, the passing of a preliminary examination, the teaching assistant obligation, the completion of a project of research and the writing of a dissertation, a final examination on the dissertation, and a public presentation of the dissertation.

For additional information on the department’s undergraduate and graduate programs, please visit the department’s website at: [http://www.dam.brown.edu/](http://www.dam.brown.edu/).

Courses of Instruction

**Primarily for Undergraduates**

0070. *Introduction to Applied Complex Variables*

Applications of complex analysis that do not require calculus as a prerequisite. Topics include algebra of complex numbers, plane geometry by means of complex coordinates, complex exponentials, and logarithms and their relation to trigonometry, polynomials, and roots of polynomials, conformal mappings, rational functions and their applications, finite Fourier series and the FFT, iterations and fractals. Uses MATLAB, which has easy and comprehensive complex variable capabilities.

0090. *Introduction to Mathematical Modeling*

We will explore issues of mathematical modeling and analysis. Five to six self-contained topics will be discussed and developed. The course will include seminars in which modeling issues are discussed, lectures to provide mathematical background, and computational experiments. Required mathematical background is knowledge of one-variable calculus, and no prior computing experience will be assumed.

0120. *Mathematics of Finance*

The current volatility in international financial markets makes it imperative for us to become competent in financial calculations early in our liberal arts and scientific career paths. This course is designed to prepare the student with those elements of mathematics of finance appropriate for the calculations necessary in financial transactions.

0160. *Introduction to Scientific Computing*

For student in any discipline that may involve numerical computations. Includes instruction for programming in MATLAB. Applications discussed include solution of linear equations (with vectors and matrices) and nonlinear equations (by bisection, iteration, and Newton's
method), interpolation, and curve-fitting, difference equations, iterated maps, numerical differentiation and integration, and differential equations. Prerequisite: MATH 0100 or its equivalent.

0180. Modeling the World with Mathematics: An Introduction for Non-Mathematicians
Mathematics is the foundation of our technological society and most of its powerful ideas are quite accessible. This course will explain some of these using historical texts and Excel. Topics include the predictive power of 'differential equations' from the planets to epidemics, oscillations and music, chaotic systems, randomness and the atomic bomb. Prerequisite: some knowledge of calculus.

0330, 0340. Methods of Applied Mathematics I, II
Mathematical techniques involving differential equations used in the analysis of physical, biological and economic phenomena. Emphasis on the use of established methods, rather than rigorous foundations. I: First and second order differential equations. II: Applications of linear algebra to systems of equations; numerical methods; nonlinear problems and stability; introduction to partial differential equations; introduction to statistics. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or AP68 or AP68 for a minimum score of 5.

0350, 0360. Methods of Applied Mathematics I, II
Follows AM 0330, 0340. Intended primarily for students who desire a rigorous development of the mathematical foundations of the methods used, for those students considering one of the applied mathematics concentrations, and for all students in the sciences who will be taking advanced courses in applied mathematics, mathematics, physics, engineering, etc. Three hours lecture and one hour recitation. MATH 0180 is desirable as a corequisite. Prerequisite: MATH 0100.

0410. Mathematical Methods in the Brain Sciences
Basic mathematical methods commonly used in the cognitive and neural sciences. Topics include: introduction to differential equations, emphasizing qualitative behavior; introduction to probability and statistics, emphasizing hypothesis testing and modern nonparametric methods; and some elementary information theory. Examples from biology, psychology, and linguistics. Prerequisite: MATH 0100 or equivalent.

0650. Essential Statistics

For Undergraduates and Graduates

1070. Quantitative Models of Biological Systems
An introduction to the use of quantitative modeling techniques in solving problems in biology. Each year one major biological area is explored in detail from a modeling perspective. The particular topic will vary from year to year. Mathematical techniques will be discussed as they arise in the context of biological problems. Prerequisites: introductory level biology, APMA 0330, 0340, or 0350, 0360, or written permission. Offered in alternate years.

1080. Inference in Genomics and Molecular Biology
Sequencing of genomes (human and other) has generated a massive quantity of fundamental data that is revolutionizing the life sciences. The focus of this course is on drawing traditional and Bayesian statistical inferences from these data, including: alignment of biopolymer sequences; prediction of their structures, regulatory signals, and compositional characteristics; significances in database searches; phylogeny; and functional genomics.
Emphasis is on inferences of the discrete high dimensional objects that are common in this field. Statistical topics: parameter estimation, hypothesis testing and false discovery rates, statistical decision theory, and Bayesian posterior inference. Recommended: APMA 1650 or MATH 1610 or equivalent; BIOL 0200 or equivalent; and experience with Matlab or another programming language.

1170. Introduction to Computational Linear Algebra
Focuses on fundamental algorithms in computational linear algebra with relevance to all science concentrators. Basic linear algebra and matrix decompositions (Cholesky, LU, QR, etc.), round-off errors and numerical analysis of errors and convergence. Iterative methods and conjugate gradient techniques. Computation of eigenvalues and eigenvectors, and an introduction to least squares methods. A brief introduction to Matlab is given. Prerequisites: MATH 0520 is recommended, not required.

1180. Introduction to Numerical Solution of Differential Equations

Basic probabilistic problems and methods in operations research and management science. Methods of problem formulation and solution. Markov chains, birth-death processes, stochastic service and queueing systems, the theory of sequential decisions under uncertainty, dynamic programming. Applications. Prerequisite: APMA 1650 or MATH 1610, or equivalent.

1210. Operations Research: Deterministic Models
An introduction to the basic mathematical ideas and computational methods of optimizing allocation of effort or resources, with or without constraints. Linear programming, network models, dynamic programming, and integer programming.

1260. Introduction to the Mechanics of Solids and Fluids
An introduction to the dynamics of fluid flow and deforming elastic solids for students in the physical or mathematical sciences. Topics in fluid mechanics include statics, simple viscous flows, inviscid flows, potential flow, linear water waves, and acoustics. Topics in solid mechanics include elastic/plastic deformation, strain and stress, simple elastostatics, and elastic waves with reference to seismology. Offered in alternate years.

1330, 1340. Methods of Applied Mathematics III, IV

1360. Topics in Chaotic Dynamics
Overview and introduction to dynamical systems. Local and global theory of maps. Attractors and limit sets. Lyapunov exponents and dimensions. Fractals: definition and examples. Lorenz attractor, Hamiltonian systems, homoclinic orbits and Smale horseshoe orbits. Chaos in finite dimensions and in PDEs. Can be used to fulfill the senior seminar requirement in applied mathematics. Prerequisites: differential equations and linear algebra.
1650. *Statistical Inference I*
APMA 1650 begins an integrated first course in mathematical statistics. The first half of APMA 1650 covers probability and the last half is statistics, integrated with its probabilistic foundation. Specific topics include probability spaces, discrete and continuous random variables, methods for parameter estimation, confidence intervals, and hypothesis testing. Prerequisite: MATH 0100, 0170, 0180, 0190, 0200, or 0350, or AP68 or AP68 for a minimum score of 5.

1660. *Statistical Inference II*
APMA 1660 is designed as a sequel to APMA 1650 to form one of the alternative tracks for an integrated year’s course in mathematical statistics. The main topic is linear models in statistics. Specific topics include likelihood-ratio tests, nonparametric tests, introduction to statistical computing, matrix approach to simple-linear and multiple regression, analysis of variance, and design of experiments. Prerequisite: APMA 1650 or equivalent, basic linear algebra.

1670. *Statistical Analysis of Time Series*
Time series analysis is an important branch of mathematical statistics with many applications to signal processing, econometrics, geology, etc. The course emphasizes methods for analysis in the frequency domain, in particular, estimation of the spectrum of time-series, but time domain methods are also covered. Prerequisites: elementary probability and statistics on the level of APMA 1650, 1660. Offered in alternate years.

1680. *Nonparametric Statistics*
A systematic treatment of distribution-free alternatives to classical statistical tests. These nonparametric tests make minimum assumptions about distributions governing the generation of observations, yet are of nearly equal power to the classical alternatives. Prerequisite: APMA 1650 or equivalent. Offered in alternate years.

1690. *Computational Probability and Statistics*
Examination of probability theory and mathematical statistics from the perspective of computing. Topics selected from random number generation, Monte Carlo methods, limit theorems, stochastic dependence, Bayesian networks, probabilistic grammars. Offered in alternate years.

1700. *The Mathematics of Insurance*
The course consists of two parts: the first treats life contingencies, i.e. the construction of models for individual life insurance contracts. The second treats the Collective Theory of Risk, which constructs mathematical models for the insurance company and its portfolio of policies as a whole. Suitable also for students proceeding to the Institute of Actuaries examinations. Prerequisites: Probability Theory to the level of APMA 1650 or MATH 1610. Offered in alternate years.

1710. *Information Theory*
Information theory is the study of the fundamental limits of information transmission and storage. This course, intended primarily for advanced undergraduates, and beginning graduate students, offers a broad introduction to information theory and its applications: Entropy and information; lossless data compression, communication in the presence of noise, capacity, channel coding; source-channel separation; lossy data compression.

1720. *Monte Carlo Simulation with Applications to Finance*
The course will cover the basics of Monte Carlo and its applications to financial engineering: generating random variables and simulating stochastic processes; analysis of simulated data; variance reduction techniques; binomial trees and option pricing; Black-Scholes formula; portfolio optimization; interest rate models. The course will use MATLAB as the standard simulation tool. Prerequisites: APMA 1650 or MATH 1610.
1850. *Introduction to High Performance Parallel Computing*

1880. *Advanced Matrix Theory*
Canonical forms of orthogonal, Hermitian and normal matrices: Rayleigh quotients. Norms, eigenvalues, matrix equations, generalized inverses. Banded, sparse, non-negative and circulant matrices. Prerequisite: APMA 0340 or 0360, or MATH 0520 or 0540, or permission of the instructor.

1930. *Senior Seminar*

1940. *Senior Seminar*

1970. *Independent Study*

Primarily for Graduates

2050, 2060. *Mathematical Methods of Applied Science*
Introduces science and engineering graduate students to a variety of fundamental mathematical methods. Topics include linear algebra, complex variables, Fourier series, Fourier and Laplace transforms and their applications, ordinary differential equations, tensors, curvilinear coordinates, partial differential equations, and calculus of variations.

2110. *Real Analysis*
Provides the basis of real analysis which is fundamental to many of the other courses in the program: metric spaces, measure theory, and the theory of integration and differentiation.

2120. *Hilbert Spaces and Their Applications*
A continuation of APMA 2110: metric spaces, Banach spaces, Hilbert spaces, the spectrum of bounded operators on Banach and Hilbert spaces, compact operators, applications to integral and differential equations.

2130. *Methods of Applied Mathematics: Partial Differential Equations*

2140. *Methods of Applied Mathematics: Integral Equations*

2160. *Methods of Applied Mathematics: Asymptotics*
Calculus of asymptotic expansions, evaluation of integrals. Solution of linear ordinary differential equations in the complex plane, WKB method, special functions.

2170. *Functional Analysis and Applications*
Topics vary according to interest of instructor and class.

2190, 2200. *Nonlinear Dynamical Systems: Theory and Applications*
2210. *Topics in Nonlinear Dynamical Systems*
This topics course focuses on applications of dynamical systems to nonlinear waves and patterns such as travelling waves and spiral waves. Among the topics that will be covered are exponential dichotomies, spectral theory of travelling waves, Fredholm theory, and Lyapunov-Schmidt reduction for homoclinic orbits with applications to waves in nonlinear optics and fluids. The prerequisite for the course is a solid (rigorous) grounding in nonlinear dynamics, typically APMA 2190-2200 or equivalent.

2230, 2240. *Partial Differential Equations*
The theory of the classical partial differential equations, as well as general first order theory. Basic analytic tools include the Fourier transform, distributions, Sobolev spaces, and techniques of harmonic and functional analysis. More general linear and nonlinear equations, with examples drawn from physics, differential geometry, and the applied sciences. Generally, semester II of this course concentrates on several special topics chosen by the instructor.

2260. *Introduction to Stochastic Control Theory*
The course serves as an introduction to the theory of stochastic control and dynamic programming technique. Optimal stopping, total expected (discounted) cost problems, and long-run average cost problems will be discussed in discrete time setting. The last part of the course deals with continuous time deterministic control and game problems. The course requires some familiarity with the probability theory.

2350. *Advanced Elasticity*

2360. *Topics in Continuum Mechanics*
Devoted to one or more advanced topics in continuum mechanics not covered in detail by the regular courses. Examples are: nonlinear viscoelastic constitutive equations, strain gradient and micropolar theories of elasticity, coupled mechanical and thermal or electromagnetic phenomena, continuum thermodynamics.

2370. *Plasticity*
Theory of the inelastic behavior of materials with negligible time effects. Experimental background for metals and fundamental postulates for plastic stress-strain relations. Variational principles for incremental elastic-plastic problems, uniqueness. Upper and lower bound theorems of limit analysis and shakedown. Slip line theory. Representative problems in structural analysis, metal forming, indentation, strain and stress concentrations at notches, and ductile failure.

2390. *Viscoelasticity*

2410. *Fluid Dynamics I*
An introduction to fundamental concepts of the mechanics and thermodynamics of fluid flow. Major topics include compressible and incompressible flows, viscous and inviscid flows, and vorticity dynamics.

2420. *Fluid Dynamics II*
A continuation of APMA 2410. Topics include: low Reynolds number flows, boundary layer theory, wave motion, stability and transition, acoustics, and compressible flows.

2470, 2480. *Topics in Fluid Dynamics*
Initial review of topics selected from flow stability, turbulence, turbulent mixing, surface tension effects, and thermal convection. Followed by focussed attention on the dynamics of dispersed two-phase flow and complex fluids.

2550. *Numerical Solution of Partial Differential Equations I*
Finite difference methods for solving time–dependent initial value problems of partial differential equations. Fundamental concepts of consistency, accuracy, stability and conver-
gence of finite difference methods will be covered. Associated well-posedness theory for linear time-dependent PDEs will also be covered. Some knowledge of computer programming expected.

2560. Numerical Solution of Partial Differential Equations II
Examines the development and analysis of spectral methods for the solution of time-dependent partial differential equations. Topics include key elements of approximation and stability theory for Fourier and polynomial spectral methods as well as attention to temporal integration and numerical aspects. Some knowledge of computer programming expected.

2570. Numerical Solution of Partial Differential Equations III
We will cover finite difference and other methods for solving hyperbolic partial differential equations. Background material in hyperbolic partial differential equations will also be covered. Algorithm development, analysis, implementation and application issues will be addressed. APMA 2550 or equivalent knowledge in numerical methods will be a prerequisite.

2580. Computational Fluid Dynamics
An introduction to computational fluid dynamics with emphasis on incompressible flows. Reviews the basic discretization methods (finite differences and finite volumes) following a pedagogical approach from basic operators to the Navier-Stokes equations. Suitable for first-year graduate students, more advanced students, and senior undergraduates. Requirements include three to four computer projects. Material from APMA 1170 and 1180 is appropriate as prerequisite, but no prior knowledge of fluid dynamics is necessary.

2610, 2640. Theory of Probability
A two-semester course. Semester I includes an introduction to probability spaces and random variables, the theory of countable state Markov chains and renewal processes, laws of large numbers and the central limit theorems. (APMA 2110 may be taken concurrently.) Semester II provides a mathematical foundation to probability theory and covers conditional probabilities and expectations, and limit theorems for sums of random variables.

2660. Stochastic Processes
Review of the theory of stochastic differential equations and reflected SDEs, and of the ergodic and stability theory of these processes. Introduction to the theory of weak convergence of probability measures and processes. Concentrates on applications to the probabilistic modeling, control, and approximation of modern communications and queuing networks; emphasizes the basic methods, which are fundamental tools throughout applications of probability.
2670. **Mathematical Statistics I**
Advanced Statistical Inference. Emphasis on the theoretical aspects of the subject. Frequentist and the Bayesian approaches, and their interplay. Topics include: general theory of inference, point and set estimation, hypothesis testing, and modern computational methods (E-M Algorithm, Markov Chain Monte Carlo, Bootstrap). Students should have prior knowledge of probability theory, at the level of APMA 2630 or higher.

2680. **Mathematical Statistics II**
The course provides a solid presentation of modern nonparametric statistical methods. Topics include: density estimation, adaptive smoothing, cross-validation, bootstrap, classification and regression trees and their connection to the Huffman code, projection pursuit, the ACE algorithm for time series prediction, support vector machines, and learning theory; the course will provide the mathematical underpinnings, but it will also touch upon some applications in computer vision/speech recognition, and biological, neural, and cognitive sciences. Prerequisite: APMA 2670.

2690. 2700. **Topics in Statistics and its Applications**

2720. **Information Theory**

2810. **Seminars in Applied Mathematics**

2820. **Seminars in Applied Mathematics**

2970. **Preliminary Examination Preparation**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. **Research in Applied Mathematics**

2990. **Thesis Preparation**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

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**Artemis A.W. and Martha Sharp Joukowsky Institute for Archaeology and the Ancient World**

Professors Alcock (Director), Allen, Anderson, Bodel, Bonde, Cherry, Harvey, Holloway (Emeritus), Houston, Joukowsky (Emerita), Lubar, Winkes (Emeritus); Assistant Professors Bestock, Harmansah, Molholt; Visiting Professor Becker; Visiting Assistant Professor Kampen; Adjunct Lecturer Watters; Postdoctoral Fellows Davis, Fisher, Marston, Ryzewski, Straughn.

The Artemis A.W. and Martha Sharp Joukowsky Institute for Archaeology and the Ancient World promotes the investigation, understanding, and enjoyment of the archaeology and art
of the ancient Mediterranean, Egypt, and Western Asia. The Institute’s faculty and facilities provide a campus hub for research and teaching in this complex and compelling part of the world, including active fieldwork projects, diverse graduate and undergraduate curricula, and public outreach activities.

Currently in a period of rapid innovation and expansion, the newly established Institute is committed to encouraging interdisciplinary research and student training, as well as to building an archaeological community with strong links to related units at Brown and beyond.

The Joukowsky Institute offers a graduate course of study leading to the Ph.D. degree, and an undergraduate concentration. For a description of these programs, and for more about the Institute’s activities, see our website:  

http://www.brown.edu/Departments/Joukowsky_Institute/

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html

Courses of Instruction

Primarily for Undergraduates

0030. Foundations of Western Art in Antiquity
Examines the art of Greece and Rome for its significance to the modern world and in the context of the diversity of the parent cultures. Includes monuments of antiquity from the pyramids of Egypt to the Athenian Parthenon, the Pantheon in Rome to the Hagia Sophia in Constantinople. Explores Pompeian frescoes and recent archaeological discoveries. A foundation for study of almost any branch of Western humanism.

0050. Archaeological Field Work
Focuses on the aims, scope, and tools of field archaeology, and the nature of archaeological evidence. Emphasizes interdisciplinary field work techniques and the composition, function, and responsibilities of an excavation staff. Examines systematic versus ad hoc excavations and their respective problems of preservation. Students excavate model sites in a laboratory and present a team report upon completion. Enrollment limited. Written permission required.

0100. Field Archaeology in the Ancient World
Always wanted to be Indiana Jones? This course, focusing on the Mediterranean world and its neighbors in antiquity, interprets field archaeology in its broadest sense. In addition to exploring “how to do” archaeology – the techniques of locating, retrieving and analyzing ancient remains – we will consider how the nature of these methodologies affects our understanding of the past. S. E. ALCOCK.

0360. Archaeology of Anatolia
Offers an archaeological survey of Anatolian civilization including an analysis of the settlements, history, art, architecture, and characteristics of specific sites and their artifacts, from prehistoric to Hellenistic periods.

0370. Archaeology of Mesopotamia
A cultural and historical survey of Mesopotamia, tracing its origins and developments from prehistory to 6th-century Babylon. Both archaeological sites and literature are examined,
as are works of art and sources for social and political history. Prerequisite: AE 3 or equivalent background in archaeology.

0380. Archaeology of Iran
An archaeological survey of the origins and development of the Iranian civilizations. Analysis of settlements, history, art, architecture, and characteristics of specific archaeological sites and their artifacts ranging from prehistoric to the Hellenistic period.

0390. Archaeology of Palestine
Traces the prehistory of Palestine (modern Israel, Syria, Lebanon, Jordan) from its beginnings in the Paleolithic to end of the Byzantine period. Surveys history of archaeological research in this area, emphasizing significant excavations and their artifacts. Develops an understanding of the art, architecture, and modes of life of humankind from age to age, the changes introduced from one period to another, and causes and effects of those changes. K. M. GALOR.

0410. Mediterranean Bronze Age
The Bronze Age of Crete and Greece studied in relation to foreign influence and internal development. The following topics receive particular attention: the coming of the Greeks, the decipherment of the Linear B script, the stratigraphy of the Palace of Knossos, and the dissolution of the Mycenaean kingdoms.

0420. Greek Art and Architecture
All media are discussed and, while the emphasis of the course is on a different period each year, a comprehensive introduction to the entire history of Greek art, architecture, and archaeology is always provided. No prior background is required.

0450. Archaeology of Jerusalem
Examines the archaeology of the city of Jerusalem from David’s conquest in ca. 1000 B.C.E. through the Crusaders’ defeat in 1187 A.D. The contemporary literary sources as well as the more recent scholarly debates and discoveries help us understand the material remains of the relevant periods. K. M. GALOR.

0520. Roman Art and Architecture
An introduction to the Roman major monuments in Roman art at the point when the Empire emerged up to the time of the creation of the Pantheon. No prior background required.

0600. Introduction to Islamic Archaeology
This course will survey the archaeology of the regions under the political authority of Muslim states from the seventh century A.D. until the rise of the Ottoman Empire. We will examine Muslim societies through the archaeological record of their cities, monuments, and artifacts. We will consider both the “core” Islamic lands of the Middle East and its “periphery” such as Muslim Spain, sub-Saharan Africa, Central Asia, and the Indian subcontinent.

0770. Food and Drink in Classical Antiquity
Everybody eats - but patterns of eating (and drinking) vary dramatically from culture to culture. This course traces the mechanics of food production and consumption in the ancient Mediterranean world, considers how diet marked symbolic boundaries, gender differences, and in general explores the extent to which the ancient Greeks and Romans “were what they ate.” S. E. ALCOCK.

0800. Alexander the Great and the Alexander Tradition
This course focuses on a single historical figure, Alexander the Great, using him as a point of departure for exploring a wide range of problems and approaches that typify the field of
Classical Studies. How knowledge of Alexander has been used and abused provides a fascinating case study in the formation and continuous reinterpretation of the western Classical tradition. J. F. CHERRY.

For Undergraduates and Graduates

1150. *Urbanism in the Archaeological Record*
Investigates urbanism in pre-industrial societies, contrasting several archaeological regions during different time periods. Discusses factors influencing evolution of and approaches to urbanism. Focuses on regions/ancient sites in Mesopotamia, Egypt, Anatolia, the Aegean, Syria, Europe, China, and pre-Hispanic Mexico. Discusses their spatial organization, physical planning, and socio-economic complexities. Prerequisite: One from among ARCH 0360, 0370, 0380, 0390, EGYT 1430, 1440. Enrollment limited. Written permission required.

1160. *Archaeology Collections Policies*
Studies ancient objects in collections from historical, functional, material, and aesthetic angles to understand their original cultural context. Uses case studies to demonstrate changing theory, practice, and legal and ethical implications of museum and dealer acquisition. (Previous experience with Archaeology, Anthropology, Classics, and/or Art History required).

1200. *Topics in Old World Archaeology and Art*

1200B. *Pompeii*
Pompeii and its neighboring towns are the best examples for studying the life, art, and architecture of a Roman town. This seminar covers the works of art and the life in the town as reflected in the monuments excavated over the past 250 years. Enrollment limited. Written permission required. R. M. WINKES.

1200C. *Roman Iberia*
The archeology, art, and architecture of Iberia during the Roman presence from the Punic Wars to the beginning of the Arab conquest. The artifacts and monuments discussed will not only represent artistic production from Roman administrative expressions, but also a mixture of styles between indigenous art (such as Celtic) or expressions of syncretism or other cultural symbioses. Enrollment limited. Written permission required. R. M. WINKES.

1200F. *City and the Festival: Cult Practices and Architectural Production in the Ancient Near East*
This course will explore urbanization, formation of urban space, and architectural projects in relation to cult practices and commemorative ceremonies in the Ancient Near East. Investigating case studies from early cities of fourth millennium BC Mesopotamia to Iron Age Syria and Anatolia, we will study processes of the making of urban and extra-urban landscapes in the socio-religious context of festivals. Enrollment limited. Written permission required.

1200G. *Arabia and the Arabs: The Making of an Ethnos*
This course will survey the archaeology and history of the Arabs and Arabia from before their emergence in the historical record to the modern period. Our particular focus concerns their relationship with the rise of Islam as well as the imperial politics of the pre-Islamic Near East. A major issue that frames these inquiries is the concept of ethnicity and its projection into the past. Enrollment limited. Written permission required.
1200H. Islamic Landscapes: Cities, Frontiers, and Monuments
This course will examine the built environments of the Islamic Period Middle East through the growing archaeological and historical record of its cities, frontiers, and monuments. How has the landscape of this region become transformed by its relationship with a dynamic Islamic tradition? Key issues examined are the notion of the “Islamic city”, sacred space, and the spatiality of Muslim/non-Muslim relations. Enrollment limited. Written permission required.

1200I. Material Worlds: Art and Agency in the Near East and Africa
This course investigates technological processes of artifact production in the material culture of ancient and contemporary Near East and Africa. Archaeological and ethnographic case studies will be explored to understand the social relations behind skilled craftsmanship in architecture and “art”. Circulation of craft knowledge, cultural biography of artifacts, constitution of cultural identities, and memory through material processes will be central topics. Enrollment limited. Written permission required.

1310. Ancient Painting
Examines selected topics in ancient painting with emphasis on the remains of ancient fresco decoration. Topics are Paleolithic Painting, Aegean Bronze Painting, Etruscan Painting, Greek Painting of the Fifth and Fourth Centuries (text evidence), Roman Painting, Roman Painting as reflected in Mosaic.

1440. Synagogues, Churches, and Mosques
Reviews the discoveries and related scholarship of ancient synagogues, churches, and mosques in ancient Palestine. Focuses on their architectural and decorative as well as their spiritual and religious characteristics, and examines how those institutions influenced each other throughout their history of development. K. M. GALOR.

1450. Qumran and the Dead Sea Scrolls
Examines the scholarly interpretations of the site and the scrolls. Attempts to determine the relationship between the archaeological and textual evidence. K. M. GALOR.

1550. Who Owns the Classical Past?
The purpose of this course is to offer a forum for informed discussion of a variety of difficult questions about access to the classical past, and its modern-day ownership and presentation, seen primarily from the perspective of material culture (archaeology, art, museum displays, etc.). J. F. CHERRY.

1970. Individual Study Project in Old World Archaeology and Art
Primarily for Graduates

2010. Problems in Old World Archaeology

2010B. Approaches to Archaeological Survey in the Old World
Recent decades have witnessed a marked development of interest in regional approaches to the ancient world and its landscapes. This seminar will explore the history of this development, as well as survey’s impact on the work of both ancient historians and archaeologists. Topics to be covered include survey design and methodology, and the wider implications and lessons of regional analysis. J. F. CHERRY.

2010C. Architecture, Body and Performance in the Ancient Near Eastern World
This seminar investigates the relationship between bodily practices, social performances, and production of space, using case studies drawn from ancient
Mesopotamia, Anatolia, and Syria. Employing contemporary critical theories on the body, materiality and social practices, new theories of the making of architectural spaces and landscapes will be explored with respect to multiple geographical, historical contexts in the Ancient Near East.

2010D. *Archaeology and Religion: Excavating the Sacred from Prehistory to Islam*
This course explores methodological approaches and theoretical underpinnings of scholarly (and sometimes unpopular) interpretations of the archaeological record as evidence for the religious life of past societies, considering how archaeologists have treated the analytical categories of ritual, religion, ideology, and the sacred. These discussions will be examined through Mediterranean case studies as a key region in the archaeology of religion.

2010E. *Archaeology in the Information Age*
Archaeology must circulate the material past in two dimensions. The right combination of image (maps, plans, photographs) and text has long defined professional archaeology. However, the current explosion of digital media has spurred profound shifts in all domains of archaeological practice and documentation. This course encourages reevaluation of archaeological media, which pertains to information technology across the humanities and sciences.

2020. *Research Seminar in Greek Art and Architecture*
May be repeated for credit.

2030. *Research Seminar in Roman Art and Architecture*
May be repeated for credit.

2040. *Research Seminar in Old World Archaeology*

2540. *Roman, Byzantine and Early Islamic Jerusalem*
Jerusalem constitutes one of the most important archaeological sites connected to the origins of Judaism, Christianity and Early Islam. Early and recent studies and discoveries, as well as old and new theories, will be examined in the seminar with special emphasis on the Roman, Byzantine, and Early Islamic periods. Prerequisite: knowledge in archaeological methodology. K. M. GALOR.

2550. *Qumran and the Dead Sea Scrolls*
This course is structured as a seminar on the archaeology of Qumran and the Dead Sea Scrolls. The site will be examined in its larger geographical, historical and archaeological context. The goal is to become familiar with the different scholarly interpretations of the site. Prerequisites: solid background in at least one of three fields: archaeology, Judaism, and Early Christianity. K. M. GALOR.

2820. *Special Topics in Old World Art and Archaeology*

2980. *Individual Reading*

2981. *Thesis Research*
Individual reading for the Master’s degree.

2982. *Individual Reading for Dissertation*
Reading leading to selection of the dissertation subject. Single credit.

2983. *Dissertation Research*

2970. *Preliminary Examination Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination.
2990. Thesis Preparation
For graduate students who are preparing a thesis and who have met the tuition requirement and are paying a registration fee to continue active enrollment. No course credit.

Art

Art History is listed under History of Art and Architecture.
Studio Art is listed under Visual Art.

Biochemistry

Programs in biochemistry draw on the resources of the Division of Biology and Medicine and the Department of Chemistry. For a complete description of the standard concentration program leading to the Sc.B. degree, please visit http://www.brown.edu/Administration/Registrar/concentration.html.

There are two graduate programs leading to the Ph.D. in biochemistry. They are (1) Molecular, Cell Biology and Biochemistry in the Division of Biology and Medicine (see page 195), and (2) Biochemistry in the Department of Chemistry (see page 241). The formal degree requirements are those of the individual programs.
Biology and Medicine

Program in Biology

Department of Ecology and Evolutionary Biology: Professors Bertness, Brainerd, Deegan, Ducklow, Gatesy, Giblin, Hanlon, Hobbie, Janis, Melillo, Morse, Peterson, Rand, Rastetter, Schmitt, Shaver, Swartz, Tatar, Witman; Associate Professors Neill, Roberts; Assistant Professors Amaral-Zettler, Dunn, Edwards, Huber, Leslie, Mark Welch, Porder, Ramachandran, Rich, Sax, Simmons, Smith, Tang, Vallino, Weinreich; Adjunct Professor Sala; Adjunct Assistant Professors Baier, Early, Jenkins, Metzger, Stinchcombe; Lecturer Ritter; Teaching Associate Jackson; Research Associates Chatelet, Moritz; Investigator Villa-Cuesta.

Department of Molecular Biology, Cell Biology and Biochemistry: Professors W. Atwood, S. Beale, A. Dahlberg, A. Fausto-Sterling, S. Gerbi, J. Sedivy (Chair), G. Wessel; Associate Professors P. Gruppuso (Associate Dean of Medicine), E. Nillni (R), A. Rosmarin, K. Wharton; Assistant Professors A. Brodsky, R. Creton (R), A. DeLong, W. Fairbrother, R. Freiman, S. Gregory (R), J. Klysik (R), T. Lange (R), T. Serio, J. Singer, J. Thompson (R); Adjunct Professor D. Cane; Adjunct Associate Professors J. Suggs, M. Thompson.

Department of Molecular Microbiology and Immunology: Professors C. Biron (Chair), S. Hajduk, P. Knopf (E), S. Lederberg (E), P. Shank, J. Wands; Associate Professors L. Brossay, A. Campbell; Assistant Professors R. Bennett, W. Chu, T. Salazar-Mather, G. Yap; Instructor M. Gil (R).

Department of Molecular Pharmacology, Physiology and Biotechnology: Professors K. Agarwal (E), W. Bowen, S. Cha (E), S. Chu (Research - E), J. Conrad, L. Goldstein (Vice-Chair), C. Hai, E. Hawrot (Chair), D. Jackson, J. Kauer, M. Lysaght (R), D. Marsh (E), J. Marshall, E. Mathiowitz, D. Mierke, M. Povar (E), P. Richardson, H. Vandenburgh, A. Zimmermann; Associate Professors M. Godard, R. Miech (E), J. Morgan, T. Palmore; Assistant Professor L. Blair (R), D. Ciombor (R), K. Harnett (R), D. Hoffman-Kim, W. Peit; Adjunct Professors R. Dowben, N. Holstein-Rathlou (R); Adjunct Associate Professors A. Agins, F. Gentile, D. Livingston, Adjunct Assistant Professors B. Bready, M. Kreitza, R. Li, S. McDonough, J. Niedzwiecki, K. Shefali, B. Zielinski; Investigator M. Rioult-Pedotti.

Department of Neuroscience: Professors D. Berson, E. Bienenstock, R. Burwell (J), B. Connors (Chair), L. Cooper (J), J. Donoghue, J. Fallon, J. Kauer (J), D. Lipscombe, J. Marshall (E), J. McIlwain (E), M. Paradiso, J. Sanes, A. Simmons (J), J. Simmons; Associate Professors R. Patrick, D. Ress, D. Sheinberg; Assistant Professors C. Aizenman, A. Dunaevsky, M. Mehta; Lecturer J. Stein; Assistant Professor (Research) S. Cruikshank; Investigator L. Hochberg, M. Kositsky, W. Truccolo.

Medical School

Department of Clinical Neurosciences: Professors J. Easton (Co-Chair), M. Epstein (E) (Co-Chair), E. Feldmann, J. Friedman, G. Gascon (E), J. Gilchrist, S. Greenblatt, C. Johanson, S. Louis (E), D. Mandelbaum, G. Noren, B. Ott; Associate Professors A. Chodobski, G. Friehs, S. Salloway, B. Walters, J. Wilterdink, I. Yaar; Assistant Professors L. Alderson, A. Blume, W. Brown, J. Duncan, J. Harrington, P. Sampath, C. Wu; Clinical Professor J. Stoll (E); Clinical Associate Professors J. Chirico-Post,
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Department of Community Health: Professors Allen, Buka, Gans, Gatsonis, Hogan, Kehler, Kelsey, Marcus, McFarvey, Monti, Mor, Rakowski, Rohsenow, Savitz, Teno, Wetle (Chair), Wilson; Associate Professors Barnett, Borsari (Research), Clark, Intrator, Jackson, Michaud, Miller, Ombao, Operario, Papandonatos, Resnik, Vivier; Assistant Professors Galarraga, Kim, Linkletter, Lo ucks, Lurie, Triche, Trivedi, Wellenius, Williams, Wu; Assistant Professor (Research) Burdzovic Andreas, Ciccolo, Duan, Feng, Gareen, Gjelsvik, Gozalo, Gwaltney, Hernandez, Houseman, Justus, Kuo, Laws, Lee, Leggio, Liu, Magill, Martin, Mastroleo, Metrick, Pearlman, Risica, Rosen, Spillane, Squires, Weitzon, White, Zhang; Adjunct Professors Becker, Bentkover, Florin, Goldberg, Kiel, Rose, Wood, Assaf (Research), Bell; Adjunct Assistant Professors Apodaca, Baylin, Bettina, Christian, Don, Due, Esposito-Smythers (Research), Gambassi, Grabowski, Hustad, Kelly, Leite-Morris, Mackillop, Miller, Nolan, Salvatore, Shenassa; Verhoeck-Offedahl, Clinical Professors Ferri, Follick, Wilson; Clinical Assistant Professors Bandyopadhyay, Berrill, Caron, Fulton, Gunim, Gifford, Hollinshead, Ill, Jefferson, Jiang, Kim, Laliberte-Cote, Marshall, Minugh, Murphy, Shield, Simon, Tinajero, Vanderslice; Research Associate AhnAllen, Boce, Colby, Glasser; Teaching Associates Baier, Griffin, Jacobs, Koller, Kung, Leddy, Quilliam, Rochon, Schwartz, Skeels, Smith; Investigators Cai, Donatelli, Lepore, Tyler.

Department of Dermatology: Professors Dufresne, Mcdonald, Weinstock; Associate Professors Miglia, Robinson-Bostom, Telang; Assistant Professors Chang, Dill, Lapidus; Adjunct Professor Arndt; Adjunct Associate Professor Rohrer; Adjunct Assistant Professor Kaminer; Clinical Professor Bercovitch; Clinical Associate Professors Angermeier, Farrell, Glinick; Clinical Assistant Professors Basile, Bharier, Bruno, Carney-Godley, Feder, Iler, Jellinek, Kawaoka, Kroumpouzos, Kuperman-Beade, Moskowitz, Pomerantz, Schneider, Snyder, Solis, Toba, Vittimberga, E. Welch, R. Welch, Wilkel.

Department of Diagnostic Imaging: Professors Cronan, Dupuy, Mayo-Smith, Murphy, Tung; Associate Professors Eglin, Lambiase, Mainiero, Rogg; Assistant Professors Atalay; Beland, Boxerman, Caiati, Chang, Dubel, Evangelista, Grand, Herlicez, Jayaraman, Lazarus, Lourenco, Pizzulo, Prince, Soares; Associate Professors (Clinical) Brody, Gold, Haas, Mccarten, Noto, Ridlen, Song, Wallach; Assistant Professors (Clinical) Ahn, Cassese, Davis, Donegan, Gil, Golding, Hillstrom, Khalil, Koelliker, Levine, Movson, Neumann, Piccolello, Yoo; Assistant Professor (Research) Park; Adjunct Associate Professor Abbott; Clinical Associate Professors Murphy, Spencer; Clinical Assistant Professors Healey, Jay, Noel, Ryvicker, Shapiro; Clinical Instructor Chernsky, Hampson, Jaffan, Kowal, Staudinger; Teaching Associates Jacob, North; Research Associates Cerezo, Zafar.

Department of Emergency Medicine: Professors Becker, Jay, Lewander, Zink; Associate Professors Chodobski, Chun, Lockhart, Mello, Merchant, Savitt, Steele, Sucov, Sumer, Williams; Assistant Professors Amanullah, Baruch, Beaudoin, Brown, Choo, Clyne, Feden, Fowler, Garro, Gibbs, Goldlust, Hudepohl, Kobayashi, Levine, Liebmann,
Mcgregor, Napoli, Overly, Ranney, Raukar, Schweigler, Shah, Tubbs, Valente; Adjunct Assistant Professors Cahill, Day, Jagminas, Partridge, Shapiro; Associate Professors (Clinical) Duffy, Hack; Associate Professor (Research) Linakis; Assistant Professors (Clinical) Baird, Callahan, Chapman, Cirollo, Daniel, Fearon, Foggle, Gaines, Gutman, Jacobs, Lauro, McPeake, Meredith, Palmisciano, Porter, Seigel, Smith, Sweeney, Szmydynger-Chodobska, Warren; Clinical Associate Professors Bubly, Kulak, Nathanson, Nestor, Proano, Sullivan, Clinical Assistant Professors Constantine Cummings, Germano, Gregg, Greve, Griscom, Haronian, Jenouri, Kaplan, Kopp, LaFleur, Lindquist, Monti, Rayner, Riedel, Robinson, Schwam, Siegel, Sparhawk, Sutton, Thomas, Wiley; Clinical Instructors Bernaba, Binder, Daria, Forman, McNamara, Zack; Research Associates Bromberg, Elsaid; Teaching Associates Garro, Jackson, Murphy, Pliakas.


**Department of Orthopaedics:** Professors R. Aaron, E. Akelman, Q. Chen, M. Ehrlich (Chair), A. Schiller (Adj), P. Trafton, A. Weiss; Associate Professors J. Crisco, A. Green, M. Hulstyn, H. Keepligh (R), R. Terek; Assistant Professors D. Ciombor, C. Digiovanni, C. Eberson, J. Katarinic, M. Palumbo; Senior Research Associate D. Moore; Research


Department of Radiation Medicine: Professors A. Glicksman (E), D. Wazer (Chair); Associate Professors V. Band (Adj), M. Engler (Adj), D. Shearer, J. Tsai (Adj); Assistant Professors T. Boyle (Adj), T. Dipetrillo, S. Hauser (Adj), A. Mahajan (Adj), J. McGrath (Adj), J. Morr (Adj), K. Ulin (Adj), Z. Zheng; Instructor J. Mignano (Adj); Research Associate G. Cardarelli; Clinical Associate Professors P. Chougule, P. Maddock, B. Webber (E); Clinical Assistant Professors R. Brotman, D. Joyce, G. Masko, M. Puthawala, S. Triedman.

Graduate Programs

Biology and Medicine

The Division of Biology and Medicine offers nine programs of graduate study leading to the degrees of A.M., Sc.M., and Ph.D. These programs are thematically based: Biology: Molecular Biology, Cell Biology, and Biochemistry, Molecular Pharmacology and Physiology, Pathobiology, Ecology and Evolutionary Biology, Computational Biology, Biomedical Engineering, Artificial Organs, Biomaterials, and Cellular Technology, Neuroscience; and Public Health: Biostatistics, Epidemiology, and Health Services Research. The Division also offers a program leading to the master of public health degree and a program in the Medical School leading to the degree of doctor of medicine.

See the Graduate School website (http://gradschool.brown.edu/go/phdprograms) for current information about degree options in each graduate program.

The Sciences Library, http://dl.lib.brown.edu/libweb/about/scili/, located at the corner of Thayer and Waterman Streets, houses the collections in the biological sciences along with those in the physical sciences. An increasing portion of the library's collections is available digitally through licensed or networked resources. The library currently has licenses to over 300 research databases and approximately 52,000 full-text online journals, approximately 60% of which are in fields related to the sciences. Access to the library's collection is available through Josiah, the Brown University Library online catalog http://josiah.brown.edu/, as well as the library's other search tools and online resources on the library web site http://library.brown.edu.

Brown's research network, featuring advanced facilities situated on campus and at partner institutions, encourages discovery and innovation with state-of-the-art equipment and resources that include: Genomics and Proteomics Core, Bio-imaging facility, Mouse transgenic, and Knockout Core Animal Care Facilities, Plant Environmental Center, Water Flume, RI BioBank. More information about the Division's Research Facilities can be found here: http://biomed.brown.edu/research/.

Students entering graduate programs generally have appropriate preparatory course work as well as significant research experience. Courses are chosen with the advice of program counselors, and may include, in addition to divisional offerings, courses offered by other university departments. As a part of the doctoral training most students will be required to participate in the teaching of one or more courses related to the program.

The Program in Molecular Biology, Cell Biology, and Biochemistry: The graduate program in molecular biology, cell biology, and biochemistry is intended for highly qualified students who plan to pursue a career which includes research in biology or medical sciences. Admission is generally limited to candidates for the Ph.D. degree. The program is interdisciplinary, focusing on molecular and cellular aspects of developmental biology, genetics, genomics and gene expression, signal transduction, oncogenesis, immunology, protein biochemistry, structural biology, proteomics, cell surface receptors, molecular modeling, DNA/RNA protein interactions, epigenetics, and virology.

The Program in Molecular Pharmacology and Physiology: The graduate program in molecular pharmacology and physiology offers advanced training appropriate for academic and research careers in the fields of biology and medical sciences that include molecular and structural pharmacology; neuropharmacology; cellular, comparative, and organ systems physiology; and chemical biology. Programs of study and research are developed individually in consultation with the student's adviser and advisory committee and are designed to ensure expertise in the student's principal field. Admission is ordinarily limited
to applicants for the Ph.D. Entering students are expected to have strong undergraduate qualifications in chemistry, mathematics, and physics as well as the biological sciences. To fulfill Ph.D. requirements, students must pass a preliminary research examination, complete and publicly defend a doctoral dissertation, and participate in the undergraduate teaching programs of the Division of Biology and Medicine. Students must demonstrate mastery of advanced biochemistry, molecular genetics, cell biology, as well as pharmacology and physiology.

The Program in Pathobiology: The graduate program in pathobiology is an interdisciplinary and interdepartmental program devoted to biomedical research into the mechanisms of human diseases. The three major research and teaching thematic areas are Toxicology & Environmental Pathology, Immunology & Infectious Diseases, and Cancer biology. Training may be obtained in the areas of immunopathology, pulmonary pathology, chemical pathology, environmental and viral carcinogenesis, cancer biology, toxicologic pathology, extracellular matrix biology, hepatology and infectious diseases. The techniques of modern molecular biology, cell biology and biochemistry are used to characterize structural, functional and chemical abnormalities occurring at the sub-cellular, tissue and organ level. Students are required to complete courses in pathology while establishing proficiencies in cell biology, biochemistry and statistics. They also complete graduate level courses whose contents emphasize immunology, molecular biology, cancer biology, electron microscopy, radiobiology, experimental surgery and related sciences.

The Program in Ecology and Evolutionary Biology: The graduate program in ecology and evolutionary biology is intended for highly qualified students who plan to pursue a career that includes research or teaching in ecology and/or evolutionary biology. Admission to graduate study is open to candidates for the Ph.D. degree. Individual programs are designed to meet each student's needs and interests while providing a strong background in ecology, evolutionary biology and related disciplines. All students are expected to attain proficiency in ecological and evolutionary theory, quantitative research methods, statistical analysis, writing, and oral presentation. Depending on the student's interests, s/he may be expected to demonstrate proficiency in other areas such as functional morphology or genetics and genomics. This proficiency may be attained through course work, seminars, independent reading, and laboratory and field programs.

Faculty strengths include foci in environmental biology and marine ecology, evolutionary genetics, and functional morphology. A joint graduate program with the Marine Biological Laboratories includes additional research opportunities. There are strong interactions with other graduate programs at Brown including Molecular Biology Cellular Biology and Biochemistry, Engineering, Geological Sciences, Computer Sciences, and Applied Mathematics. Students complete a core curriculum of graduate seminar classes tailored to cover their major disciplines and their Ph.D. research. A preliminary examination is held at the end of the second year and the Ph.D. dissertation is defended in the fifth or sixth year. Completed theses must be submitted in proper form to the Graduate School.

The Program in Computational Biology: The computational biology program is interdisciplinary and results from the collaboration of several academic units: Applied Mathematics; Computer Science; Ecology and Evolutionary Biology; and Molecular Biology, Cell Biology and Biochemistry. The Ph.D. degree will be conferred by one of the participating departments; the requirements have been correspondingly adjusted. The Center for Computational Molecular Biology (CCMB) at Brown is a world-class center for research and scholarship in this new discipline. The interdisciplinary interaction of biology and
Computational and mathematical sciences has led to the recognition of Computational Molecular Biology as a cutting-edge and rapidly-expanding discipline.

The Center concentrates its efforts on a number of fundamental biological themes: algorithmic methods and statistical inference in genomics, comparative genomics and evolution, gene regulatory networks, regulatory genomics, mathematical models of genetic variation, genome-wide association studies, and cancer genomics.

CCMB computing resources include a set of multi-processor compute clusters and data storage servers with 392 processors. The CCMB Cluster is the largest dedicated computing system on campus for computational biology and bioinformatics applications.

The Program in Biomedical Engineering: The biomedical engineering program at Brown provides cutting-edge, interdisciplinary, graduate-level education at the interface of engineering, biology, and medicine. The program features an interdisciplinary approach in four complementary research areas: repair and regenerative medicine, neuro-engineering, motion sciences/biomechanics and biomedical devices and imaging. Research in these areas is advancing the understanding of fundamental problems in engineering, biology and medicine, while developing new therapies to improve the quality of life for people with medical problems. The program is distinguished by its quantitative rigor and strong collaborative connections between academic science, clinical medicine, and industry. Graduate students take engineering, biology and medical school courses, gain valuable clinical experience at nearby teaching hospitals associated with the Warren Alpert Medical School at Brown and engage in stimulating internships at companies commercializing biomedical technologies. These opportunities, coupled with dissertation research, give graduate students both the intellectual and the practical skills required for developing today's emerging science into useful biomedical technology and therapies.

The biomedical engineering program offers an Sc.M that consist of eight semester courses, not more than three for thesis research and at least five structured, advanced-level courses, at least two of which must be in biology and two in engineering; as well as submission of a masters thesis.

The Ph.D program offers an approved sequence of courses including at least six structured, upper-level courses, with a minimum of two each in biology and engineering and two at the 200 level; teaching experience, original research, qualifying examination and acceptance of the doctoral dissertation.

The Program in Artificial Organs, Biomaterials, and Cellular Technology (ABC): The ABC graduate program was initiated in 1986 in order to meet the interests of graduate students in the specialized field of biomedical engineering, as well as the interests of medical students in the science and technology underlying organ-replacement therapy. The major goal of the ABC program is to prepare graduates for academic and industrial careers in medical biotechnology and tissue engineering. Through exposure to materials science, device fabrication, tissue-culture techniques, and experimental surgery, students are prepared to actively participate in the creative and productive aspects of these diverse and expanding arenas of medical science. Admission to the program in artificial organs, biomaterials, and cellular technology is restricted to current Brown undergraduate students who are interested in applying for a fifth-year master's degree.

The Program in Epidemiology, Biostatistics, and Health Services Research: The Graduate Program in Epidemiology, Biostatistics and Health Services Research, based in the Department of Community Health, is structured along two broadly defined tracks focusing on epidemiology and biostatistics respectively. The department offers comprehensive course work leading to an Sc.M in epidemiology and Sc.M in biostatistics,
as well as to a Ph.D. in epidemiology and a Ph.D. in biostatistics. Students can also follow a minor concentration in health services research within epidemiology. The graduate program in epidemiology is designed to provide methodologic and subject matter training in the study of the multiplicity of biological, behavioral, and social factors that influence the determinants of disease, its treatment, and its consequences and outcomes.

The graduate programs in Biostatistics are designed to provide training in theory, methodology, and practice of statistics in biology, public health, and medical science. The program provides comprehensive training in theory and methods of biostatistics, but is highly interdisciplinary and requires students to acquire expertise in a field of application. The Ph.D. program is intended to enable graduates to pursue independent programs of research; the MS program provides training for application of advanced methodology in professional and academic settings.

For further information on all programs, please visit http://bms.brown.edu/Commhealth/dept.

The Program in Neuroscience: The graduate program in neuroscience is designed to educate and train scientists who will become leaders in the field and contribute to society through research and teaching. Each student takes a series of courses tailored to his or her background and goals, chosen in consultation with faculty advisors. Each student must also pass a comprehensive examination, propose and defend a thesis topic, complete a substantial body of original research, and write and defend a doctoral dissertation. The core of the training involves close interaction with faculty to develop expertise in biological, behavioral, and theoretical aspects of neuroscience. Interdisciplinary work is encouraged and may be undertaken in the Departments of Neuroscience, Cell and Molecular Biology, Pharmacology, Ecology and Evolutionary Biology, Physiology, Psychology, Cognitive and Linguistic Sciences, Physics, Computer Science, and Applied Mathematics.

In addition to formal course work and research, a number of activities and events enhance graduate training. There are numerous seminar series, including the Neuroscience Colloquium Series, in which speakers from U.S. and international universities and research institutes present their latest research findings. Throughout the academic year, journal clubs meet weekly to discuss the most recent research literature. Recent journal clubs have focused on molecular neurobiology, cellular neurophysiology, computational neuroscience, synaptic plasticity and development, learning and memory, motor control, and visual physiology and perception, and skills. There is an annual workshop on scientific ethics and skills that is specifically designed for graduate students. Near the beginning of each academic year there is a neuroscience graduate program retreat that is an occasion for social interaction and, through talks by program faculty, an update of ongoing research within the program.

Graduate research and training are carried out in the laboratories of the program’s faculty. These faculty lead outstanding well-funded research programs that use cutting edge technology to explore the brain. For other information on the Neuroscience Graduate Program, please see the program website: http://neuroscience.brown.edu/graduate/.

Public Health Programs

The Program in Biostatistics: The Program in Biostatistics offers coursework leading to a PhD, Sum or AM in Biostatistics. The doctoral program in biostatistics is designed to train independent researchers who will develop new quantitative methods and underlying theory and make innovative applications to substantive and demanding scientific problems in public health, medicine, biology, and the social sciences. The program emphasizes
theory, methods and applications of biostatistics that are central to modern interdisciplinary research. In addition to completing core courses in theory and methods of biostatistics, Ph.D. students are required to develop expertise in an area of application (e.g., epidemiology, economics, molecular biology, etc.).

Major areas of faculty research (http://publichealth.brown.edu/research/) include Bayesian inference, analysis of biomarkers and diagnostic tests, causal inference and missing data, time series and functional data analysis, modeling of social networks, bioinformatics, statistical genetics, longitudinal data, and multilevel modeling. Faculty collaborate actively with investigators in several areas, including cancer prevention and screening, genomics and bioinformatics, neurosciences, social science and health policy, behavioral genetics, and HIV/AIDS.

The Sum and AM programs in Biostatistics provide advanced training in theory and application of statistical methods in public health, clinical medicine, and the biological sciences. The masters degree programs are designed to provide advanced training for individuals pursuing careers as professional statisticians or data analysts in industry, government or academia; those contemplating doctoral study in biostatistics; and established researchers seeking advanced training in biostatistics. The training is provided through coursework and the completion of a thesis. The programs require one to two years to complete, and includes the option of fifth-year masters program for Brown undergraduates.

Major areas of faculty research include Bayesian inference, analysis of biomarkers and diagnostic tests, causal inference and missing data, time series and functional data analysis, modeling of social networks, bioinformatics, statistical genetics, longitudinal data, and multilevel modeling. Faculty collaborate actively with investigators in several areas, including cancer prevention and screening, genomics and bioinformatics, neurosciences, social science and health policy, behavioral genetics, and HIV/AIDS.

The Program in Epidemiology: The Graduate Program in Epidemiology offers coursework leading to a PhD in Epidemiology. The primary mission of the doctoral program in Epidemiology is to provide the training necessary to carry out independent research in the theory, methodology and application of epidemiology to important problems in public health and clinical medicine. Topics covered include: 1) disease pathology and theories of disease etiology; 2) design options to investigate the causes of health and disease in population-based research; 3) synthesis of existing literature in epidemiology; 4) methods for the design and conduct of epidemiological studies; 5) sample size estimation for epidemiologic study designs; 6) appropriate statistical analysis of data from epidemiological studies; and 7) effective communication of scientific findings. All students in the doctoral program in Epidemiology are required to demonstrate mastery of advanced epidemiologic methods, which is assessed via coursework and examinations, and to conduct and publish new epidemiologic research.

A program for the Sum in Epidemiology is being proposed and is currently under review. Please consult the program's website for updated information. The Sum program will be designed to provide advanced training in the principles and practice of epidemiology listed above. The training is provided through coursework and the completion of a thesis. Candidates for the Master of Science degree follow an integrated program of study comprising a minimum of eight semester courses and must prepare a master's thesis.

Major areas of faculty research include environmental health, cardiovascular disease, HIV/AIDS, international health, cancer, nutrition and obesity, reproductive, psychiatric, social and lifecourse epidemiology. Current research projects include several large-scale
longitudinal projects of representative community-based samples, in some cases followed over decades, to investigate the emergence of disease and disorder as well as the combined influences of environmental, nutritional, social & genetic factors on the incidence and course of these conditions. Randomized clinical trials and other clinical investigations are conducted in collaboration with leading hospitals and other treatment facilities in Rhode Island and throughout the U.S. to investigate the impact of new therapeutic technologies and to add to evidence-based treatment decisions in medicine and public health. Epidemiology faculty members also collaborate regularly with state, national and international agencies including Departments of Health, Human Services, Education and others to assist with analyses of population health and the implementation of population-based prevention efforts.

*The Program in Health Services Research:* Health services research is the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures, care processes, health technologies and personal behaviors affect access to care, the quality and cost of health care for the purpose of designing interventions at the level of policies, institutions and individuals with the goal of improving population health. The main goals of health services research are to identify the most effective ways to organize, manage, finance, and deliver high quality care; reduce medical errors; and improve patient safety.

The doctoral program in health services research at Brown University seeks to develop scientists experienced in the use of state-of-the-art experimental and non-experimental research methods for the purpose of advancing fundamental knowledge of issues central to the improvement of population health by focusing on the organizational characteristics of health care delivery system providers, and economic forces that shape consumer and provider behavior, as well as the policy environment in which these relationships exist.

*The Master of Public Health (MPH) Program:* The Master of Public Health program prepares students for careers in the public, non-profit, and private sectors. Our goal is to help our students become skilled professionals committed to improving the health of communities by translating rigorous scientific research into sound, evidence-based public health policy and practice.

The master’s degree is geared toward individuals who have had relevant experience in the community or in health care institutions or who have a demonstrated commitment to public health. Students in the MPH Program range from new college graduates planning careers in public health to seasoned physicians seeking to broaden their understanding of the field.

The program’s unusually high faculty-to-student ratio gives students a great deal of interaction with instructors who are accessible, approachable, and encouraging of student involvement in critical projects.

For additional information regarding the Graduate Programs in Biology and Medicine please visit: http://med.brown.edu/education/gradbio or http://med.brown.edu/education/other_degree

**Undergraduate Programs**

Please refer to the Biology website (http://biology.brown.edu/) for current information on Biological Sciences programs, courses, research and resources.

For a complete description of these programs leading to the bachelor’s degree, please visit the Registrar’s website: http://www.brown.edu/Administration/Registrar/concentration.html or the Biology website: http://biology.brown.edu/bug/concentrations

Note: Community Health and Neuroscience courses are listed at the end of this section. The Biology and Medicine: Community Health listing begins on page 221 and Biology and Medicine: Neuroscience listing begins on page 234.

Biology and Medicine — Biology

Courses of Instruction

Primarily for Undergraduates

0030. Principles of Nutrition
Introduces the basic principles of human nutrition, the application of these principles to the specific needs of humans, and the role of nutrition in chronic diseases. Provides an overview of the nutrients and their use by the human body. Also examines the role of nutrients in specific functions and disease states of the body. Not for biology concentration credit. Enrollment limited. Written permission required. M. M. FLYNN.

0080. Biotechnology Management
An examination of the pharmaceutical, biotechnology, and medical product industries: what they are, how they function, whence they originate, and various perspectives on why some succeed and others fail. Pathways from lab-bench to marketplace are described as are the pervasive influences of the FDA, patent office, and courts. Extensive reading; emphasis on oral presentation. Primarily intended for students planning a career in biomedical industry. Not for biology concentration credit. Students MUST register for the lecture section and the conference.

0170. Biotechnology in Medicine
Introduces undergraduates to the main technological advances currently dominating the practice of medicine. Provides an overview of the objectives, techniques, and problems related to the application of biomedical technology to the diagnosis and treatment of disease and the contemporary health care industry. Topics include: pharmaceutical development and formulation; organ replacement by prosthesis and transplantation; medical imaging; tissue engineering, therapeutic cloning, regenerative medicine; stem cells; societal, economic, and ethical issues. Students MUST register for the lecture section and a conference. This course does carry Biology concentration credit. E. HAWROT and B. ZIELINSKI.

0180. The Biology of AIDS
AIDS represents an example of the vulnerability of humans to new infectious agents. We will review some human infectious diseases including smallpox yellow fever and influenza, and then explore AIDS/HIV. First characterized in 1981, AIDS became the leading cause of death in U.S. males aged 25-44 within a decade. We will examine what factors make HIV such a potent pathogen. The course is intended for students beginning in biology. Expected: BIOL 0200, or equivalent placement. This course does carry Biology concentration credit. P. SHANK.
0190. Biology Foundations Courses
Students beginning in college-level biology are encouraged to choose a section of BIOL 0190, courses that introduce biological sciences within the framework of particular topics. BIOL 0190 courses do carry concentration credit in biology programs. In order to assure student/faculty interaction, these sections are limited in size. BIOL 0190 courses are often suitable for students entering with AP biology credit. Some of these courses are designated as First Year Seminars.

0190A. Adaptation to the Environment
Examines the diverse natural habitats on our planet and explores the biological adaptations of animals that live in them. Considers environments such as the deep sea, high altitude, the artic, the intertidal zone, and hot deserts. Explores the strong link between life processes and the physical constraints of pressure, oxygen availability, temperature, salinity, and water availability. Enrollment limited. Written permission required. D. C. JACKSON.

0190D. Biology of Basic Vertebrate Tissues
Introduces cell biology, development, physiology, and morphology by focusing on the four basic tissues (epithelium, connective tissue, muscle, and nerve) as they contribute to the vertebrate body. Emphasizes strategies, adaptive specializations, structure/function relationships, and experimental morphogenesis. Labs include microscope examination of prepared slides, and dissection of gross specimens. For first year students only. Enrollment limited. Written permission required. M. THOMPSON.

0190E. Botanical Roots of Modern Medicine
This course will explore a variety of medicinal plants found throughout the world, the diverse cultures that use them in their daily lives and the scientific underpinnings of their medicinal uses. In conjunction with readings, students will gain a hands–on approach in lab, observing, identifying and growing these plants. Enrollment limited. Written permission required. FYS F. JACKSON.

0190F. Darwinian Medicine
Explores evolutionary explanations of why we get sick, and how this can shape, or misshape, our interpretations of medicine. Draws on evolutionary genetics, population biology, molecular biology and physiology. This course will build on evolutionary biology and then focus on disease processes such as infection, aging, cancer, allergy, diabetes, and obesity. Enrollment limited. Written permission required. M. TATAR.

0190H. Plants, Food, and People
Examines plant structure, systematics, physiology, biochemistry, and genetics by focusing on crop plants, development of agriculture, and its effects on environment. Discusses biological principles of plant breeding and molecular and cellular approaches of agricultural biotechnology. Considers whether food can be produced for a world population of potentially 10 billion, while sustaining biodiversity and environmental quality. Enrollment limited. Written permission required. P. HEYWOOD.

0190O. Conservation Medicine
Conservation Medicine is an emerging, interdisciplinary field that studies the relationship between human health, wildlife disease, and environmental conditions. In this first-year seminar we will explore the links between changes to the environment, including exotic species invasions, land-use, and climate change, and the emergence of infectious diseases in humans and wildlife. We will assess the implications of
emerging infectious disease and the tools used to prevent them. We will survey contemporary issues in conservation medicine through case studies of emerging infectious diseases linked to environmental change. Enrollment limited to 20 first year students.

0190P. Development of Scientific Theories: Context and the Individual
We will examine how the pace and shape of scientific progress is affected by the social/cultural context and the "personality" of the individual. We will look into how the interplay between society and the individual affects how scientific theories arise, are presented, are debated and are accepted. The course will initially focus on Charles Darwin and his theory of Natural Selection using the biography of Adrian Desmond and James Moore, "Darwin: The Life of a Tormented Evolutionist." Enrollment limited to 20 first year students.

0190Q. Climate Change and Species Extinction
This seminar will explore the newly emerging issue of how climate change will contribute to species extinctions. Two overnight field trips will familiarize students with how climate influences the distribution of species. Readings from a textbook will consider the geographic distribution of species, species immigration, change in climate since the last ice-age, and the geography of previous species extinctions. Most readings will be directly from the scientific literature, ones that are too new to be described in textbooks, focusing particularly on future climate change and species extinctions. A group research project will be conducted, one that aims to perform original scientific research, focusing on questions we can address with data that already exists in online databases. This mini-project will take students through many of the major steps in scientific research and publication, with the goal of acquainting students with the scientific process of discovery. D. SAX.

0200. The Foundation of Living Systems
A broad overview of biological systems, emphasizing patterns and processes that form the basis of life. Explores essentials of biochemistry, molecular, and cellular biology and their relationship to the larger issues of ecology, evolution, and development. Examines current research trends in biology and their influence on culture. Appropriate for all students interested in biology. Serves as a gateway course to much of the intermediate and advanced curriculum. Placement tests are offered (contact Jody_Hall@brown.edu); AP scores of 4 or 5 are equivalent to BIOL 0200. Students will be assigned to a lab section during the second week of class. K. MILLER and J. J. STEIN.

0280. Introductory Biochemistry
Lectures and recitation sections explore the mechanisms involved in the principles of macromolecular structure and function, the organization and regulation of pathways for intermediary metabolism, and the transfer of information from genes to proteins. It is expected that students have taken CHEM 0350 or are taking it concurrently. G. JGOL and A. S. SALOMON.

0300. Endocrinology
A basic examination of endocrinology with emphasis on hormone biosynthesis, mechanism of action, physiological roles, and endocrine pathology. Topics include: mechanism of action of steroid, amine, and peptide hormones; neuroendocrinology; reproductive endocrinology; and endocrinology of metabolism and calcium homeostasis. It is expected that students have taken BIOL 0200 (or equivalent) and CHEM 0350. G. M. MESSERLIAN and D. J. MORRIS.
0310. **Introduction to Developmental Biology**
An introductory level course focusing on the scientific principles and concepts governing development of animals and plants, evolutionary comparisons of these processes, and the ethical and social implications of these events. Expected: BIOL 0200, or equivalent. A. FAUSTO-Sterling and P. Heywood.

0320. **Vertebrate Embryology**
Introduction to the developmental anatomy of vertebrate embryos, including humans, in an evolutionary context, through lecture, discussion and microscope slide study. Gametogenesis through germ layers and their organ system derivatives. Expected: BIOL 0200, or equivalent placement, such as AP score of 4 or 5. Limited to freshman and sophomores. Students MUST register for the lecture section and the lab. M. Thompson.

0380. **The Ecology and Evolution of Infectious Disease**
We will survey the diverse biology of microbes responsible for human infectious disease, develop and apply ecological and evolutionary theory to infectious microbes, and provide practical experience interpreting and synthesizing the peer-reviewed scientific literature. The discovery of infectious microbes, the role of genetic novelty, population structure and transmission mode, and the influence of clinical therapies and host immune response will be considered. Evaluation will be based on preparation, participation, weekly student presentations, brief weekly written assignments, a midterm and a final. Expected: BIOL 0200 or equivalent. Instructor permission required.

0390. **Vertebrate Evolution and Diversity**
An overview of vertebrate evolution that not only covers historical events, but also introduces various scientific concepts and modes of thought. Topics include past and present biodiversity, convergent evolution, biogeography, competition, continental drift, climatic change over time, the notion of evolution as progress, and a whole-animal approach to understanding evolutionary events. For freshmen (preferably with AP Biology) and sophomores; others by permission. C. M. Janis.

0400. **Biological Design: Structural Architecture of Organisms**
Many questions about the workings of living creatures can be answered by joining math, physics, and biology. We will identify basic physical science concepts that help biologists understand the structure and function of animals, plants, and microorganisms, and use these to study how the physical world constrains and facilitates the evolution of the extraordinary design and diversity of organisms. For first and second year students; others by permission. Recommended background: BIOL 0200, or equivalent. Instructor permission required. S. Swartz.

0410. **Invertebrate Zoology**
A survey of invertebrate animals emphasizing evolutionary patterns and ecological relationships. Functional morphology, physiology, reproduction, development, and behavior of invertebrates will be examined. Laboratory exercises and two separate day-long field trips provide firsthand experience with the animals. Expected: BIOL 0200 or equivalent. Students MUST register for the lecture section and a lab. M. D. Bertness.

0420. **Principles of Ecology**
The principles, concepts, and controversies involved in the study of the distribution and abundance of plant and animal populations and their integration into natural communities. Emphasizes interactions among organisms and the hierarchical nature of ecological processes affecting individuals, populations, and communities. Expected: BIOL 0200 (or equivalent) and MATH 0090. Lectures and weekly discussion, arranged. J. D. Witman.
0430. *The Evolution of Plant Diversity*
Examines the evolutionary history of plants from a phylogenetic perspective. Introduces the science of phylogenetics - how to infer phylogenies and how to use them to understand organismal evolution. Highlights major trends in plant evolution over the past 400 million years. Lectures survey major plant lineages, with special focus on flowering plants. Weekly labs, field trips, and assignments stress basic plant anatomy and morphology, identification, and learning the local flora. Expected: BIOL 0200 (or equivalent placement). Students MUST register for the lecture section and a lab. J. M. SCHMITT.

0440. *Plant Organism*
This course focuses on what plants do and how they do it. Introduces the biology of plants, their growth and development, structural features, and their cellular and organismal responses to key stimuli. Examines physiological, reproductive and developmental strategies throughout the plant life cycle and in relation to environmental challenges. Discusses the significance of various plant model systems for genetic research and understanding of mechanisms controlling plant growth and development. Prerequisites: BIOL 0200 (or equivalent placement). Students MUST register for the lecture section and a lab. A. DeLONG and M. A. JOHNSON.

0460. *Insect Biology*
Focuses on the characteristics that make insects unique and why more insect species have been described than all other organisms combined; the opportunity they provide to investigate diversity and adaptation within a group sharing common constraints; their abundance, small size, and short lifespans; their importance as agents of biological control, pollinators, agricultural pests, and disease vectors. Expected: BIOL 0200 or equivalent. Students MUST register for the lecture section and the lab. D. H. MORSE.

0470. *Genetics*
Genetic phenomena at the molecular, cellular, organismal, and population levels. Topics include transmission of genes and chromosomes, mutation, structure and regulation of the expression of the genetic material, elements of genetic engineering, and evolutionary genetics. One laboratory session and one discussion session per week. Students should not plan to take BIOL 0470 after 1540. Expected: BIOL 0200 (or equivalent placement). Students will be assigned to Lab sections the first week of class. M. MCKEOWN and W. G. FAIRBROTHER.

0480. *Evolutionary Biology*
A broad introduction to the patterns and processes of evolution at diverse levels of biological organization. Topics covered include natural selection, adaptation, speciation, systematics, macroevolution, mass extinction events, and human evolution. Weekly discussion sections involve debates on original research papers. Occasional problem sets involve computer exercises with population genetics and phylogeny reconstruction. Expected: BIOL 0200 (or equivalent placement). D. M. RAND.

0500. *Cell and Molecular Biology*
This course examines the structure and function of the basic unit of an organism, the cell. An experimental approach is used to examine cellular functions, ranging from gene transcription, cell division and protein secretion, to cell motility, and signal transduction. Relevance to disease, biotechnological application, and social context will be considered. Expected: BIOL 0200 (or equivalent placement).

0510. *Introductory Microbiology*
Introduces role of microbes in our understanding of biology at the cellular and molecular level. Focuses on microbial significance for infectious disease, public health, genetics, biotechnology, and biogeochemical cycles. Laboratory involves basic microbiological techniques and selection and manipulation of microbes and their genes. Expected: BIOL 0200
(or equivalent placement); CHEM 0330. Students MUST register for the lecture section and the lab. R. J. BENNETT.

0530. Principles of Immunology
Introduction to experimental and theoretical bases of cellular immunology. Focuses on concepts, landmark experiments and recent advances. Topics: innate and adaptive immunity; structure/function of immunoglobulin molecules and T-cell receptors; cellular interactions and intracellular signals regulating immune responses. Applications of concepts to medical problems, (vaccine transplantation, inflammation, autoimmunity, cancer, AIDS) are discussed. Interpretative analysis of experimental data is emphasized. Expected: BIOL 0200 (or equivalent placement). G. YAP and L. BROSSAY.

0800. Principles of Physiology
Introduction to the function and integration of animal systems with an emphasis on mammals. Includes basic concepts in cell and organ system physiology as well as fundamentals of modern trends in physiological science. Emphasizes the constraints of physical and chemical principles to animal function at both the cellular and systemic levels. Expected: BIOL 0200 (or equivalent placement). C. HAI, J. J. STEIN, and STAFF.

0850. Biological and Social Context of Disease
Uses an interdisciplinary approach to explore how culture shapes the scientific questions we ask about disease, interpretation of scientific findings, and the strategies for intervention in the disease process. Case studies of microbial infections and chronic conditions such as cancer are used to illustrate the centrality of context to understanding disease. For related science credit in Biology programs. Prerequisite: BIOL 0200 or equivalent. Enrollment limited. Written permission required. STAFF.

0860. Diet and Chronic Disease
This course addresses the relationship of food to the development and treatment of chronic diseases. Chronic diseases discussed are obesity, dyslipidemia/heart disease, diabetes mellitus, cancers and osteoporosis. Dietary recommendations for these diseases are critically assessed. Geared toward students interested in nutrition, medicine, and public health. Prerequisites: BIOL 0030, plus permission of the instructor. M. M. FLYNN.

0950, 0960. Independent Study in Science Writing
Incorporates a nontechnical science journalism component into the BioMed curriculum. A series of four to six specific assignments are recommended, based on topics derived from another biology course taken previously by the student, whose instructor has agreed to serve as a BIOL 0950 sponsor. Assignments may include, for example, investigative or analytical reviews, or feature articles on ethical or social impacts of new discoveries. The student and instructor schedule meetings to discuss topics and due dates, review rough drafts, and evaluate completed work. Not for concentration credit in the biological sciences programs. Written permission must be obtained from Dean M. Thompson prior to registering.

For Undergraduates and Graduates

1050. Biology of the Eukaryotic Cell
Examines organelles and macromolecular complexes of eukaryotic cells with respect to structural and functional roles in major cellular activities. Emphasizes experimental basis for knowledge in modern cell biology using original literature, and discusses validity of current concepts. For advanced undergraduates and beginning graduate students. Complementary to BIOL 1270 and 1540. Expected: BIOL 0200 (or equivalent placement), and either biochemistry, cell biology and/or genetics. Graduate students register for BI 2050. K. R. MILLER and S. A. GERBI.
1080. **Organ Replacement**
Organ replacement provides the foundation for contemporary substitutive medicine. Surveys the physiologic rationale and quantitative features of existing therapies (cardiac, renal, musculoskeletal), emerging technologies (regenerative medicine, tissue engineering, and stem cells). Interdisciplinary approach; suitable for students focused in biology or engineering. Expected: BIOL 0200, (or equivalent); BIOL 0170 or 0800. Students MUST register for the lecture section and a conference. STAFF.

1090. **Polymer Science for Biomaterials**
Basic principles of polymer science and its application in medicine. Topics include basic polymerization chemistry, kinetics of polymerization and depolymerization with emphasis on bioerodible polymers, characterization of polymers by physical methods, bulk and surface properties, behavior of polymers in solutions, crystallization, gelation, and liquid crystals. Hands-on experience with polymer characterization. Note: In biology programs, this course carries physical science credit. Expected: CHEM 0350. E. MATHIOWITZ.

1100. **Cell Physiology and Biophysics**
Current topics in cell physiology, with an emphasis on membrane-mediated interactions between cells and their environment. Topics may include: ion channel structure, function and regulation; intracellular regulatory molecules; mechanisms of sensory transduction; membrane receptors and second messenger systems; vesicle secretion; and cytoskeletal regulation of cell function. Lectures, discussion, and student presentations of the current literature. Expected: BIOL 0800 or NEUR 0010. J. KAUSER and A. ZIMMERMAN.

1120. **Biomaterials**
A biomaterial is defined as a material suitable for use in medical implants that come in direct contact with patients' tissues. These include polymers, metals, and ceramics, and materials obtained from biological sources or through recombinant biotechnology. Goal: to provide comprehensive coverage of biomaterial science and technology. Emphasizes the transition from replacement to repair strategies. For advanced undergraduates and graduate students. Expected: BIOL 0200 (or equivalent), plus BIOL 0800 or 0280. B. A. ZIELINSKI.

1140. **Tissue Engineering**
Tissue engineering is an interdisciplinary field that incorporates progress in cellular and molecular biology, materials science, and engineering, to advance the goal of replacing or regenerating compromised tissue function. Using an integrative approach, we will examine tissue design and development, manipulation of the tissue microenvironment, and current strategies for functional reconstruction of injured tissues. Expected: CHEM 0330 plus BIOL 0500 or 0800. D. HOFFMAN-KIM.

1160. **Principles of Exercise Physiology**
Application of the basic principles of physiology to the study of the response mechanisms of the human body during exercise. Topics include muscle and neural control, metabolism, energy sources, cardiovascular and respiratory effects, thermoregulation, and special topics (e.g., exercising at high altitude). Student presentations based on scientific articles are included. Expected: BIOL 0800. C. HAI and A. SOBIERAJ.

1180. **Comparative Animal Physiology**
Comparative approach to the function and regulation of animal systems with an emphasis on vertebrates. Topics include circulation, gas exchange, neuromuscular function, excretion, acid-base and ion regulation, and temperature regulation. Considers the unity and diversity of physiological processes in animals differing both in phylogeny and environmental adaptation. Original papers are discussed. Expected: BIOL 0800 or equivalent. D. C. JACKSON.
1190. **Synaptic Transmission and Plasticity**
Synapses are the means by which the nervous system communicates. In this seminar-style course, we will explore the molecular and physiological underpinnings of synaptic transmission. We will then examine ways in which synapses can modulate their strength during development, learning, and other adaptive processes. Expected: BIOL 0800 or NEUR 1020. J. KAUER.

1200. **Protein Biophysics and Structure**
Structural Biology is the science to determine 3-dimensional structures of biomacromolecules, e.g. proteins, RNA and DNA. These structures enable biologists to understand and explore their function. Since proteins, RNA and DNA are the primary molecules of life, structural biology enables us to understand and influence these molecular machineries which form the basis of all biological process. Expected: BIOL 0280. W. PETI.

1210. **Synthetic Biological Systems**
A multidisciplinary course that combines science and engineering providing a solid foundation in a cutting edge field of biological engineering. Synthetic biology is a mixture of biology, chemistry, engineering, genetic engineering and biophysics. It builds on recent work in systems biology which involves the modeling of biological systems, but goes further in that it involves the construction and standardization of biological parts, that fit together to form more complex systems. Expected: at least two courses in any of the key disciplines (biology, chemistry, physics, math, engineering, computer science) beyond the introductory level. Instructor permission required. G. WESSEL.

1220. **Synthetic Biological Systems in Theory and Practice**
A multidisciplinary laboratory, lecture, and discussion based course that combines several areas of science and engineering providing a foundation in the cutting edge field of synthetic biological engineering. The field of synthetic biology is centered around trying to make biology easier to engineer. It builds on recent work in systems biology which involves the modeling of biological systems, but goes further in that it involves the construction and standardization of biological parts that fit together making complex systems. This course will combine classes, guest lectures and discussion lab visits to give students the best possible tools for understanding and applying research in synthetic biology. Expected: at least two courses in any of the key disciplines (biology, chemistry, physics, math, engineering, computer science) beyond the introductory level, and permission of the instructor.

1260. **Physiological Pharmacology**
Presents drugs in the context of the diseases they treat. A group of the most commonly prescribed drugs is discussed in terms of their fundamental modes of action and clinical importance. Introduces increasingly important aspects of pharmacology such as recombinant DNA techniques and gene therapy. Expected: BIOL 0800. J. MARSHALL.

1270. **Advanced Biochemistry**
An advanced course in biochemistry, biochemical methods, and reading of the primary literature, featuring systematic coverage of the biochemistry of the central dogma, including DNA (replication, repair, recombination), RNA (regulation and mechanism of transcription, processing, turnover), and proteins structure, synthesis, modification, degradation, mechanisms of action, function). Lectures complemented by review sessions and laboratory exercises. Expected: BIOL 0280, CHEM 0350, 0360. Graduate students register for BI 2270. Students MUST register for the lecture section and a lab. A. R. BRODSKY and R. PAGE.

1290. **Cancer Biology**
Provides a conceptual understanding of molecular events underlying development of human cancer. Focused on genetic changes leading to malignant transformation of cells. Covers cell cycle control, DNA damage, mutagenesis, cancer predisposition syndromes, onco-
genic viruses, tumor immunology, metastasis, cancer chemotherapy and drug resistance. Lecture plus discussion of primary literature. Expected: Genetics and Cell Biology. A. ZHITKOVICH and STAFF.

1310. Analysis of Development
Considers mechanisms underlying development. Topics: gamete interactions, establishment of body plans, cell signaling and tissue interactions, morphogenetic pattern formation, developmental regulation of gene expression, and the evolutionary conservation of developmental processes. Primary literature will be discussed in sections. Laboratory, involves work with live embryos. Expected: BIOL 0200; plus at least one of the following: BIOL 0280, 0310, 0320, 0470, 0500, 1050. Graduate students register for BIOL 2310. Students MUST register for the lecture section and the lab. K. A. WHARTON and R. N. FREIMAN.

1410. Evolutionary Genetics
This course will focus on selected topics in molecular population genetics, molecular evolution, and comparative genomics. Classic and current primary literature at the interface of evolution and genetics will be discussed in a seminar format. The laboratory involves wet-lab exercises (allozymes, PCR-RFLP, sequencing), plus computer labs using DNA analysis packages. Students will prepare a final grant proposal on specific research interests. Expected BIOL 0470 or 0480. Students MUST register for the lecture section and the lab. D. M. RAND.

1420. Experimental Design in Ecology
An overview and discussion of the basic principles used to design lab and field experiments in ecology and environmental science. Topics include: replication and statistical power, appropriate use of factorial designs, nonparametric methods, post hoc tests, natural versus manipulative experiments, experimental artifacts and impact study design. Discussions based on primary literature and a new text. Expected: BIOL 0420. J. D. WITMAN.

1430. The Computational Theory of Molecular Evolution
This course employs intellectual traditions from computer science and biology to investigate the properties and principles of DNA sequence evolution. The roles of mutation, natural selection, population size and subdivision, and genetic recombination are explored. Lectures complemented by web-based computer exercises. Expected: either an introduction to evolution (BIOL 0200, 0480) or to computer science (CSCI 0150, 0160, 0170).

1440. Marine Biology
An examination of current topics in the ecology of marine organisms and communities. Current literature and ideas are analyzed in a seminar format (5hr/week). A class research project provides hands-on experience with designing and interpreting experimental field work. Prerequisites: BIOL 0410 and 0420. Instructor's permission required. M. D. BERTNESS.

1470. Conservation Biology
Conservation Biology is the scientific study of the phenomena that affect the maintenance, loss, and restoration of biological diversity. Topics covered include: 1) the impacts of global warming, species invasions, and habitat destruction on biodiversity, 2) strategies developed to combat these threats, and 3) a consideration of key economic and ethical tradeoffs. Special attention will be paid to current debate and controversy within this rapidly emerging field of study. Readings will include the primary literature. A term-paper will be required. Expected: BIOL 0420 or instructor permission. D. SAX.

1480. Terrestrial Biogeochemistry and the Functioning of Ecosystems
Three fundamental multidisciplinary questions will be addressed: How do ecosystems work? What limits the growth of life on Earth? How are humans altering the framework in which all life exists? Earth is basically a closed chemical system, and the reactions that sup-
port life are fueled by sunlight. But added to this chemistry and physics is the tremendous influence of life. Life created an oxygen atmosphere; the evolution of biological nitrogen fixation exponentially increased how many organisms could exist, and the soils that support human food production developed only by biologically-mediated processes. Throughout Earth’s 4.5 billion-year history changes in Earth’s basic biogeochemical processes have been fairly slow. Under our inattentive stewardship, we have almost instantaneously altered all of the major element cycles. We will focus heavily on what these changes mean for life on Earth. Instructor permission required.

1490. Human Impacts on Ecosystem Functioning
Explores our current understanding of how humans are impacting the functioning of ecosystems. Students will learn about the primary drivers of ecosystem change and how they affect the Earth’s cycles of carbon, nitrogen, and water, as well as changes in biodiversity and climate. This course will be divided into two broad thematic sections: 1. global issues followed by 2. regional issues. Students will be responsible for weekly reading and writing assignments. Enrollment limited to advanced undergraduates and graduate students. O. SALA.

1500. Plant Ecology
An in-depth look at plant ecological strategy, focusing on the anatomical and physiological adaptations of plants to particular environments. Additional topics include plant-animal interactions, historical biogeography, and community assembly processes. A comparative, phylogenetic approach is emphasized. Lectures present a broad overview of topics, and discussions focus on current outstanding problems. Lab exercises provide hands-on experience in designing experiments, measuring plant performance, and scientific writing. Expected: BIOL 0430 or BIOL 0440. Enrollment limited to 20.

1520. Innate Immunity
Innate immunity is the initial response to microbes that prevents infection of the host. It acts within minutes to hours, allowing the development of the adaptive response in vertebrates. It is the sole mechanism of defense in invertebrates such as insects. The components and mechanisms dictating this response are explored. Expected: BIOL 0530, or 1550. L. BROSSAY and R. BUNGIRO.

1540. Molecular Genetics
Covers advanced genetic and molecular methods and their use in analysis of complex biological phenomena such as development, signaling, behavior, and disease. Discusses molecular and genetic methods across an array of organisms, including bacteria, yeast, plants, nematodes, drosophila, fish, and mammals. Includes applications of genomic and gene cloning approaches. Expected: BIOL 0280 and 0470; or permission. Graduate students should register for BIOL 2540. J. D. SINGER and M. A. JOHNSON.

1550. Biology of Emerging Microbial Diseases
Emerging diseases influence the health of human populations in less developed countries and are expected to have similar effects worldwide. Rising incidence of “new” diseases underscores the need for knowledge of infection mechanisms and their outcomes. Focuses on biochemical, genetic, cellular and immunological events of emerging pathogens and host responses. Expected: BIOL 0470 or BIOL 0530. A. G. CAMPBELL and R. BUNGIRO.

1560. Virology
Emphasizes the understanding of molecular mechanisms of viral pathogenesis. Begins with a general introduction to the field of virology and then focuses on the molecular biology of specific viruses that are associated with human disease. Lectures based on current literature. Expected: BIOL 0280, 0470 or BIOL 0530. P. R. SHANK.
1600. Development of Vaccines to Infectious Diseases
Provides background on steps involved in vaccine development, from conceptualization to
development in the lab, to immunization. Considers vaccines in the context of community
health. Aimed at students considering a career related to vaccine development and/or public
health. Activities include updating vaccine website, class presentations, and a paper in the
form of a research proposal. Expected: BIOL 0530; BIOL 0470, or 0280. Instructor permis-
sion required.

1800. Animal Locomotion
How and why do animals run, jump, swim and fly? Physiology, anatomy, ecology, and evo-
lutionary history all influence, and are influenced by, the way animals move around. We
will integrate analyses from many levels of biological organization - from molecular mo-
tors, through bone-muscle systems, to biogeography - with methods and approaches from
mechanics, fluid dynamics, and robotics. Expected: BIOL 0800 and PHYS 0030.

1820. Environmental Health and Disease
Fundamental concepts relating to the adverse effects of chemical agents on human health.
Topics include dose-response relationships, absorption, distribution, metabolism, excre-
tion, mechanisms of toxicity, and the effects of selected environmental toxicants on organ
systems. Many of these concepts will be reinforced through the use of a case-study ap-
proach where a pertinent environmental issue is incorporated into the ongoing lectures. Ex-
pected: BIOL 0500 or BIOL 0800. Advanced students have priority. M. Hixon.

1850. Environmental and Genetic Toxicology
Human disease is produced by complex interactions between inherited genetic predisposi-
tion and environmental exposures. These interactions will be explored at the molecular, cel-
lar, and systemic levels. Prototype diseases will include hereditary disorders of hemoglo-
bin, hypercholesterolemia, birth defects, and cancer. Expected: Cell Biology.

1870. Techniques in Pathobiology
A methodology course featuring laboratory and lecture instruction in established and lead-
ing-edge technologies. Examples: flow cytometry (multi-parameter analysis, cell sorting,
DNA analysis, apoptosis analysis); molecular biology (PCR, in situ hybridization, southern
blotting, cytogenetics, gene cloning, bioinformatics); digital imaging (image acquisition,
processing and analysis); light microscopy (confocal, immuno-histochemistry); transmis-
sion electron microscopy (immuno/lectin/enzyme cytochemistry); scanning electron micro-
scopy (including x-ray microanalysis). Enrollment limited. Written permission re-
quired. C. L. Jackson and P. N. McMillan.

1880. Comparative Biology of the Vertebrates
The biology, structure, and evolutionary history of the vertebrates considered phylogenet-
ically, emphasizing evolution of the major body systems. Stresses an evolutionary ap-
proach to the correlation of structure and function with environment and mode of life. Labs
include dissection of several different vertebrates, comparative osteological material, and a
museum trip. Expected: BIOL 0200 (or equivalent), plus BIOL 0310, 0320, 0390, 0400, or
0800. Students MUST register for the lecture section and the lab. C. M. Janis.

1920. Topics in Social Studies of Biology
Enrollment limited. Written permission required. S/NC.

1920A. Colonialism, Imperialism and Public Health in Africa: Past and Present
This interdisciplinary course addresses the epistemological dimensions of public
health in changing imperial contexts in Africa, focusing on the following questions: What
are the consequences of imperial science, as materialized in public health
theories and practices, for the production of knowledge about peoples, their lives, and
their human possibilities? What was the role of public health in producing knowledge about race, racial difference, and disease? Enrollment limited to 20. Written permission required. An application for entry will be distributed in the first day of class. Not for concentration credit as a Biology course. L. BRAUN.

1920B. Health Inequality in Historical Perspective
This seminar course takes a historical perspective to explore the fundamental causes of health inequality in the US. We will draw on a series of case studies from the 19th century to the present to examine the socio-political and economic context of health and disease, focusing specifically on how race, class, and gender shape the experience of health, notions of disease causality, and public health responses. Topics include the health consequences of immigration, incarceration, race-based medicine, the Chicago heat wave, and Katrina. BIOL 0200 required. Previous course work in Africana Studies or Science and Technology Studies preferred. Enrollment is restricted to second and third year students and is limited to 20 students. Written permission required. An application for entry will be distributed on the first day of class. Not for concentration credit as a Biology course. L. BRAUN.

1940. Special Topics

1940W. Genetics and Evolution of Complex Traits
Many traits important for evolutionary adaptation, crop improvement, and human health are influenced by many genes as well as the environment. This seminar course will explore the genetic architecture and evolutionary dynamics of complex traits in a hands-on way by teaching analytical skills using real-world data. This course is aimed at upper level undergraduates and graduate students. Prerequisites: BIOL 0470 or BIOL 0480 or equivalents. Basic knowledge of statistics will be helpful. J. SCHMITT.

1940Y. Origins of Multicellularity and the Evolution of Germ Line
Multicellularity has arisen independently about 20 times among living organisms. We will explore the theoretical issues involved in the origin of multicellularity, including multilevel natural selection and the division of labor, and then survey these themes in all known independent origins of multicellularity. Particular attention will be paid to the segregation of reproductive potential, including its evolution within these groups. Expected background: BIOL 0200 or its equivalent (AP,IB) and any two of the following: BIOL 0470, 0480, 0410, 0430, 0320, 0310, 0440, or 1310. Instructor permission required.

1940Z. Conservation Medicine: Focus on Emerging Disease and Environmental Change
Conservation Medicine is an emerging, interdisciplinary field that studies the relationship between human health, animal health, and environmental change. We will explore the links between changes to the environment, such as climate change and species invasions, and the emergence of infectious diseases in humans and wildlife. We will come to understand Conservation Medicine through the foundations of the primary disciplines relevant to the field including Global Change Biology and Disease Ecology. We will study the causes and consequences of disease emergence, dissect case studies of contemporary wildlife and human diseases linked to environmental change, and have a series of guest lectures from experts in the field. Concepts will be taught and tested on, through lectures, discussion, in class activities, group assignments, nontraditional exams and a creative final project. Prerequisite: BIOL 0380 or PHP 2230, AND BIOL 0490 or 1470; or instructor permission.
Directed research projects supervised by individual faculty members in the Division of Biology and Medicine. Required for Sc.B. programs in Biology, Biophysics, Marine Biology, Applied Math-Biology, Biochemistry and Molecular Biology, Bioengineering, Computational Biology, and Human Biology; optional for others. Opportunities are available in both campus and hospital-based settings. Projects can serve as basis for Honors theses. Information on specific opportunities and faculty research areas are found in a research database at bms.brown.edu/bug/pages/research.html. The site also offers a student manual, proposal forms, budget request forms, and information about Honors. Individual consultations can be scheduled with Dean Thompson. Required: A completed proposal form, sponsor's and concentration advisor's approval, and written permission from Dean M. Thompson (following review of proposal) prior to registering for any section of this course.

Primarily for Graduates

2010. Quantitative Approaches to Biology
Required of, and limited to, all first-year graduate students in the molecular biology, cell biology, and biochemistry (MCB) graduate program. Seminar introducing entering MCB graduate students to MCB faculty members who might serve on their thesis advisory committees or as research rotation and/or thesis research sponsors. Each faculty member presents his or her research interests in seminar format, leading discussion based on assigned articles. S/NC. STAFF.

2030. Foundations for Advanced Studies in Experimental Biology
A double-credit graduate course on multidisciplinary experimental approaches to biological questions. Focusing on primary literature, the mechanism and regulation of basic cellular processes involving nucleic acids (synthesis, structure, maintenance and transmission) and proteins (synthesis, maturation, function) and their integration into more complex events (signaling, organelle biogenesis and inheritance, and cell cycle control) will be presented. Discussion sections complement lectures. T. SERIO, J. LANEY, and K. MOWRY

2050. Biology of the Eukaryotic Cell
(Undergraduate students should register for BIOL 1050.) K. R. MILLER and S. A. GERBI.

2060. Ultrastructure/Bioimaging
This course examines microscopy and image analysis in the life sciences. Theoretical and practical aspects of microscopy will be discussed. Students will obtain hands-on experience with electron microscopy, light microscopy, fluorescence microscopy, and confocal microscopy. Students will learn to display images in 3D. For graduate students and advanced undergraduates. R. J. CRETON.

2090. Topics in Respiratory Physiology
Advanced course in pulmonary physiology. Lecture/discussion of an aspect of the field (anatomy, ventilation, airway resistance, diffusion). Discussion and critique of primary research papers. Applications to pulmonary pathophysiology, and respiratory aspects of exercise, high altitude, and diving. Written permission required. D. C. JACKSON, J. R. KLINGER, and J. V. MEHARG.

2110. Drug and Gene Delivery
Topics in drug delivery systems including history of the field, advantages of controlled release technology, stabilization and release of proteins, fabrication methods, regulatory considerations, economic aspects, patents and intellectual property rights, and more. Prepares
students for research in industry and academia, and offers information for consultants in the field. Expected: BIOL 1090, 1120; CHEM 0350, 0360. E. MATHIOWITZ.

2130. Techniques in Molecular and Cell Science
This course provides hands-on laboratory training in state-of-the-art techniques in molecular and cellular sciences, and reinforces this training with didactic lectures that stress key principles, the quantitative approach and the most exciting applications of these technologies in the context of current research. Areas covered include cell culture, tissue engineering, DNA cloning, gene therapy, quantitative assays, microscopy and image analysis. Enrollment is limited to 12; written permission required. Premission will be granted after the first class. Students MUST register for the lecture section and a lab. J. R. MORGAN.

2140. Principles in Experimental Surgery
An introduction to the principles and practice of surgery, sterile technique, anesthesia, and laboratory animal care. Intended to provide highly supervised, hands-on experience in techniques for humane handling and surgical management of experimental animal subjects. Emphasizes surgical technique, anesthesia technique, and laboratory animal medicine. Primarily for graduate students. Limited to 5. Students MUST register for the lecture section and the lab. Prerequisite: BIOL 0800 and instructor's permission. J. S. HARPER and M. GODDARD.

2150. Scientific Communication
Focused on the effective dissemination of scientific information through distinct modes of oral and written communication. Through practical examples of activities common to the profession (writing a grant proposal, presenting research work orally, and preparing a critical review of a submitted scientific manuscript), students will develop the skills necessary to effectively communicate scientific ideas, experiments and results. Each of the activities will be dissected into key sets that will be individually developed with the aid of interactive discussions and peer review. Enrollment limited to 12 graduate students. Instructor's permission required. T. SERIO.

2170. Molecular Pharmacology and Physiology
Fundamental concepts in pharmacology and physiology from the cellular/molecular level to organ systems. Required of first-year graduate students in Molecular Pharmacology and Physiology.

2200, 2210. Current Topics in Biochemistry and Molecular Biology

2230, 2240. Artificial Organs/Biomaterials/Tissue Engineering Seminar
Required of all first- and second-year graduate students in the Artificial Organs/Biomaterials/Cellular Technology graduate program, and open to others. Concepts of drug delivery and tissue engineering, implantation biology, and cellular therapy, as well as the research projects directed by program faculty. Students present research seminars and participate in presentations by outside speakers. Includes Journal Club activities of the July-August period (I, 2230) and the March-April period (II, 2240). S/NC. D. HOFFMAN-KIM, E. MATHIOWITZ, and J. R. MORGAN.

2270. Advanced Biochemistry
(Undergraduate students should register for BIOL 1270.) A. S. BRODSKY and R. PAGE.

2280. Protein Processing and Trafficking
Explores emerging concepts on protein trafficking, intracellular sorting and post-translational processing. Other topics are vesicular transport, exocytosis and endocytosis; sorting
signals and granule membrane targeting; receptor-mediated endocytosis and lysosomal transport. Formal lectures, plus seminars presented by students on topics in the current literature. Prerequisites: Course in cell biology and/or biochemistry. For graduate students and qualified undergraduates with permission. E. A. NILNI.

2290. Current Topics in Cell Biology
Topics vary from semester to semester, with sections offered each semester.

2290A. Mechanisms of Virus Entry, Replication, and Pathogenesis
This course will focus on the interactions between viruses and host cells that contribute to invasion, manipulation of viral and cellular gene expression, and manipulation of the host's response to infection. We will address interactions between viruses infecting humans, as well as those of plants, fungi, and bacteria. Students will be evaluated on their ability to critically analyze data in published manuscripts, including presentations of primary papers, classroom discussion, and completion of a research proposal. Expected: at least two of the following: BIOL 1050, 1270, 1520, 1540, 1560. Advanced undergraduates with permission of the instructor. W. ATWOOD.

2290B. Nuclear Hormone Receptors in Growth Differentiation and Disease
Key developmental and homeostatic hormones such as steroid hormones (e.g. estrogen, testosterone, glucocorticoids), and lipophilic non-steroids (e.g. retinoic acid, thyroid hormone) act through receptors that directly bind DNA and control gene expression. This course examines the activities, structures, functions, and mechanisms of action of these nuclear hormone receptors and the consequences of alterations in protein or hormone function. Approaches span genetics, biochemistry, genomics, proteomics, and developmental biology. Advanced undergraduates with permission of the instructor.

2290C. Neuronal Signaling meets the RNA World
The concept of one gene, one protein is nowhere more violated than in protein encoding genes expressed in the nervous system. We will cover a variety of post-transcriptional processing events which serve to generate protein diversity in the nervous system including alternative splicing, trans-splicing, and RNA editing. We will also address non-coding RNAs and their roles, in particular, in regulating nervous system function. Since it is clear that nervous system complexity is not a function of gene number across large phylogenetic distances, the course will be aimed at instilling a greater understanding of how the regulation of shared "toolkit" genes results in organismal complexity. Advanced undergraduates with permission of the instructor.

2310. Analysis of Development
(Undergraduate students should register for BIOL 1310.) K. A. WHARTON and R. N. FREIMAN.

2320. Current Topics in Developmental Biology
A critical evaluation of current research trends in developmental biology conducted in seminar/discussion format. Topics vary each semester. Expected: an advanced course in cellular, molecular biology, or genetics. For graduate students and qualified undergraduates with permission.

2320A. Cell Fate and Lineage Decisions in Neural Development and Neurological Diseases
We will explore mechanisms underlying how neuronal cell fates are established during development and how the understanding of this process may provide insight into neurological disease and therapeutic intervention. Topics: Temporal identity in neuroblast and cerebral cortex cell fate specification, transcriptional control of lineage
decisions in the spinal cord, the role of morphogen concentration and timing on cell fate decisions, micro RNA control of gene regulation, epigenetics, induced pluripotent stem cells, stem cell use in therapeutic approaches to intervene in neurological diseases. Primary literature will be discussed in lectures in the format of student-led, faculty-guided discussions. Enrollment limited to 20. Instructor permission required. A. FAUSTO-Sterling.

2320D. *The Biology of Aging*

Studying the mechanisms underlying the process of aging promises to be one of the next great frontiers in biomedical science. Understanding the biology of aging is important not only for the long-term possibility of increasing life span, but for the more immediate benefits it will have on age-related diseases. As demographics of industrialized countries have changed, age-related diseases such as cancer, cardiovascular disease, stroke, osteoporosis, arthritis and Alzheimer's disease have assumed epidemic proportions. A thorough understanding of the aging process is an important pre-requisite for designing rational therapeutic interventions for the treatment of these age-related disorders. We will focus on examining the biology of aging primarily through the examination of studies of a molecular, cellular, genetic and demographic nature. Lectures and presentations are based on reading of the primary and secondary literature. Advanced undergraduates with permission of the instructor.

2320E. *Genetic Control of Cell Fate Decisions*

A cell's fate is acquired in a process whereby largely uncommitted progenitor cells are instructed down a commitment path that ultimately results in a specific cell type with distinct molecular and physiological properties. This process is critical for the establishment of all cell types and tissues and is poised to be a critical topic in cell-based therapeutic strategies. We will investigate the intrinsic and extrinsic mechanisms that manifest at the genetic level to impart cell fate decisions on progenitors. Advanced undergraduates with permission of the instructor.

2330. *Current Topics in Developmental Biology*

A critical evaluation of current research trends in developmental biology conducted in a seminar/discussion format. Topics vary yearly. Recent topics have included developmental biology of stem cells, biology of reproduction, the study of cell-cell interactions and morphogen modulations, and genetic analysis of cell signaling.

2330B. *Design the Ultimate Bio-Energy Crop*

Can we replace oil wells with corn fields? Join us for a thought experiment where we consider the limitations for using plants as energy sources and try to come up with strategies to overcome them. Developmental Biology Questions: What are the developmental pathways that control leaf shape and size? What are the developmental pathways that control CO₂ uptake? Biochemical Questions: What are biochemical limits of photosynthetic carbon fixation? Can the chemical composition of plants be modified to yield more efficient plant fuel sources? STAFF.

2430, 2440. *Topics in Ecology and Evolutionary Biology*

Current literature in ecology, behavior, and evolutionary biology is discussed in seminar format. Topics and instructors change each semester. Representative topics have included: structuring of communities, biomechanics, coevolution, quantitative genetics, life history strategies, and units of selection. Expected: courses in advanced ecology and genetics. May be repeated for credit. S/NC. C. M. JANIS, S. SWARTZ, and STAFF.
2470. Seminar in Genetics and Genomics
A critical evaluation of research in genetics and genomics in a seminar/discussion format. Specific focus will vary and will reflect areas of interest to the field, faculty and students in the genetics and genomics. Topics may include mechanisms of gene regulation, evolutionary genetics and genomics, genetic dissection of development in complex organisms, dosage compensation, genetic and genomic analysis of gene and protein regulatory networks, chromosome transmission, interactions between genetic and epigenetic mechanisms. Prerequisites: BIOL 0470 and BIOL 1540. STAFF.

2480. Current Topics in Molecular Genetics
Critical evaluation of research in genetics and genomics, and related topics in a seminar/discussion format. Topics vary each semester. Expected: Strong background in genetics, e.g. both BIOL 0470 and BIOL 1540, or equivalent. For graduate students; undergraduates with permission of the instructor.

2480B. Dissection of Genetic and Molecular Mechanisms
The transfer of traits from one individual to another is a fundamental process in biology. In this course, we will explore the diversity of molecular mechanisms underlying phenotypic inheritance through a critical evaluation of primary literature, with special emphasis on the design and implementation of novel strategies to study these processes. For graduate students and advanced undergraduates with a strong background in genetics. Expected: BIOL 0470 and BIOL 1540. Written permission required for undergraduates.

2480C. DNA Replication, Recombination and Repair
Emphasizes critical reading and discussion of the primary literature as it relates to DNA transactions such as DNA replication and recombination in prokaryotic and eukaryotic cells. Class participation and oral presentations will be required and the basis for course grade determination. Topics of discussion will cover diverse model systems and may include: Epigenetic Regulation Via Chromatin Remodeling and Modification; Mechanisms of DNA Replication, Recombination and Repair; Transcriptional Regulation; Structural Basis of Epigenetic Regulation; RNA interference and anti-viral therapeutics; Trinucleotide Repeat Expansions and Neurological Disease; and Mechanisms of Vertebrate Development. The course is open to graduate students; advanced undergraduates with permission of the instructor. Class will meet one, three hour period per week; to be arranged.

2490. Current Topics in Cell Biology

2490A. Nuclear Hormone Receptors in Growth, Differentiation and Disease
Key developmental and homeostatic hormones such as steroid hormones (e.g. estrogen, testosterone, glucocorticoids), and lipophilic non-steroids (e.g. retinoic acid, thyroid hormone) act through receptors that directly bind DNA and control gene expression. This course examines the activities, structures, functions, and mechanisms of action of these Nuclear Hormone Receptors and the consequences of alterations in protein or hormone function. Approaches span genetics, biochemistry, genomics, proteomics, and developmental biology. STAFF.

2540. Molecular Genetics
(Undergraduate students should register for BIOL 1540.) M. A. JOHNSON.

2640. Advanced Topics in Microbiology and Immunology
2640A.  **Viral Immunology**

Viral Immunology is an advanced topics course in Microbiology and Immunology which will be focused on viral immunology. Weekly meetings will cover different issues concerning defense against viral infections and pathology related to viral infection, with focus on viral-host interactions. Topics will be selected to present either important basic concepts in the context of immune responses and/or major challenges in controlling viral infections. Recent advances in understanding virus-host interactions, host responses to viruses, cytokine regulation of immune responses or cytokine-mediated pathology during viral infections will be emphasized.

2640B.  **Microbial Pathogenesis**

Examines microbial pathogens and the underlying mechanisms by which infectious organisms cause diseases. Bacterial, fungal, protozoal and viral pathogens will be studied using tools of modern biology. Also examined are the host's immune responses to infection and disease. Areas covered include mechanisms of pathogen internationalization and survival, immune responses, signal transduction and pathophysiology. Expected: BIOL 0510, 0530, or 1550.

2830.  **Topics in Pathobiology**

Based on readings from current research literature that focus on selected topics in pathobiology. Topics for discussion rotate each semester among four general areas of pathobiological research: the molecular basis of disease, carcinogenesis, environmental pathology, and immunopathology. Includes presentations by faculty members, student presentations, and general discussions of research literature. S/NC.

2840.  **Topics in Pathobiology**

S/NC.

2840B.  **Environmental Toxicology**

2840C.  **Cell Metabolism and Disease**

2840E.  **Translational Research in Pathology**

2840F.  **Pathobiological Basis of Disease: Intrinsic and Environmental Regulators**

2850.  **Introduction to Research in Pathobiology**

Introduces incoming pathobiology graduate students with research opportunities in the laboratories of program faculty. Consists of seminars with individual faculty members in the graduate program in pathobiology. Required background reading of recent papers lead to a discussion of current research in the faculty member's laboratory. Additional discussions include safety and ethical issues in research. Open only to first-year graduate students in the program in pathobiology. S/NC. D. E. BRITT.

2860.  **Molecular Mechanisms of Disease**

Examines research and modern techniques, emphasizing infectious disease and environmental exposures correlating histopathology with molecular pathogenesis: cell injury, inflammation, thrombosis and vascular disease, cancer, and toxicology. Based on BIOL 1860 lectures plus discussion section. Expected: BIOL 1290, 2050 (other 1000-level biology course with approval). Textbook plus primary lecture. Required for Pathobiology graduate students, written permission for other graduate or M.P.H. students. E. L. Bearer and K. Boekelheide.

2930.  **Special Topics**

2940.  **Special Topics**
2940A. Molecular Pharmacology and Physiology Seminar
Professional development seminar required of all students in the Molecular Pharmacology and Physiology graduate program, and open to others. Instruction in effective oral presentation skills, and current topics in molecular pharmacology and physiology, including research projects directed by program faculty, statistical methods of data analysis, techniques for assessing gene function, and an overview of research at Brown and available research funding sources. Students present and participate in research seminars or planned research. Instructor permission required for undergraduates.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit. THE STAFF.

2980. Graduate Independent Study
Independent study projects at the graduate level.

2985. Graduate Seminar

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit. THE STAFF.

2995. Thesis

For Medical Students

3000. Biology Research

3010. Clerkship in Medicine
M. J. FAGAN.

3640. Doctoring I
Double credit. I. TONG and J. TAYLOR.

3642. Integrated Medical Sciences I: Scientific Foundations of Medicine
P. GRUPPUSO.

3643. Integrated Medical Sciences I: Histology
M. THOMPSON.

3644. Integrated Medical Sciences I: Human Anatomy
Double credit. D. RITTER.

3645. Integrated Medical Sciences I: General Pathology
L. DUMENCO.

3650. Doctoring II
Double credit. I. TONG and J. TAYLOR.

3652. Integrated Medical Sciences II: Brain Sciences
Double credit. J. ROTH, N. S. POTTER, G. TUNG, J. DONAHUE, J. DONOGHUE, R. BOLLAND and S. SALLOWAY.

3653. Integrated Medical Sciences II: Microbiology/Infectious Diseases
T. SALAZAR-MATHER and J. LONKS
3654. Integrated Medical Sciences II: Endocrine Systems  
   M. LAUFGRABEN.

3660. Doctoring III  
   Double credit. J. TAYLOR.

3662. Integrated Medical Sciences III: Cardiovascular  
   D. BURTT, C. OYER and W. BOWEN

3664. Integrated Medical Sciences III: Renal  
   S. HU, C. OYER and W. BOWEN

3674. Integrated Medical Sciences III: Human Reproduction, Growth and Development  
   T. TEJADA BERGES, Z. HAREL, C. OYER and W. BOWEN

3663. Integrated Medical Sciences III: Pulmonary  
   M. JANKOWICH, B. KIMBLE, C. OYER and W. BOWEN

3670. Doctoring IV  
   Double credit. J. TAYLOR.

3672. Integrated Medical Sciences IV: Hematology  
   L. DUMENCO, E. WITTELS and W. BOWEN

3673. Integrated Medical Sciences IV: Gastroenterology  
   R. RICH, M. LEGOLVAN and W. BOWEN

3665. Integrated Medical Sciences IV: Supporting Structures  
   S. SCHWARTZ, C. EBERSON, S. DILL, C. OYER and W. BOWEN

3900. Clerkship in Surgery  
   G. D. ROYE and B. RYDER.

4500. Clerkship in Pediatrics  
   R. M. ROCKNEY and B. ALVERSON.

4900. Obstetrics and Gynecology Clerkship  
   S. HAMPTON and B. O’BRIEN.

5100. Clerkship in Psychiatry  
   R. J. BOLAND and T. GUTHRIE.

5400. Clerkship in Community Health  
   P. NOLAN, E. FELLER and M. MELLO

5800. (5800) Clerkship in Family Medicine  
   D. ANTHONY and P. GEORGE
Community Health is an interdisciplinary concentration that examines: patterns of, and exceptions for, population health and disease; health policy; cross-cultural and international aspects of health; the organizational and social structures through which health services are delivered/received; and the public health system. Courses in the concentration allow students to explore the ways in which the social, political, behavioral and biological sciences contribute to the understanding of national and international health care systems, resource allocation, and patterns of population distributions of health and disease. There are 12 course requirements for all concentrators, with 2 additional independent studies for those pursuing Honors.

The concentration also provides students with courses in basic research methods and statistics necessary for problem solving and critical thinking in the emerging emphasis on evidence-based health care and public health.

The Community Health concentration is relevant for students with career interests in public health; disease prevention and health promotion; health policy and epidemiology; clinical health care delivery; health care administration; international health, and health law.

For an overview of the standard concentration program leading to the A.B. degree, please visit [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html). For detailed information about the concentration, including required and elective courses, please visit, [http://publichealth.brown.edu/undergraduate/commhealth/](http://publichealth.brown.edu/undergraduate/commhealth/).

### Courses of Instruction

**Primarily for Undergraduates**

0030. *Health of Hispaniola*

Two developing countries, Dominican Republic and Haiti, have widely differing health outcomes despite centuries of shared experience on the Caribbean Island of Hispaniola. This course will examine the history, politics, economics, culture, international relations, demography, and geography, as well as epidemiology and health services, to demonstrate that multiple factors, both recent and long-standing, determine the present health of these populations. T. M. EMPKIE.

0310. *Health Care in the United States*

Introduction to the health care delivery system. An overview of the U.S. health care financing, delivery and regulatory system. Considers the interaction between paying for and providing and assuring the quality of health services; changes in one component of the system inevitably affect the others. Addresses the balance between employer funded health insurance, publicly funded health insurance and the consequences of not being insured. Seven discussion sections arranged during the semester. V. MOR.

0320. *Introduction to Public Health*

An introductory overview of the U.S. Public Health System with an emphasis on the core functions of public health, challenges and strategies for working with communities, and specific health issues that impact the health of the population. Presents a comprehensive overview of the environmental and behavior factors associated with health promotion and disease prevention. M. A. CLARK.
222 / Divisions, Departments, Centers, Programs, and Institutes

For Undergraduates and Graduates

1010. **Doctors and Patients—Clinical Communications in Medicine**
Communication is central to medical practice and interpersonal relationships between patients and physicians can often be powerful curative agents. This course reviews theory and research on physician-patient communication. In addition to lectures, readings, and discussions, students will have opportunities to observe physicians in clinical settings. Related topics areas include communication sciences, health psychology, health education, and medical anthropology.

1070. **The Burden of Disease in Developing Countries**
Defines and critically examines environmental, epidemiologic, demographic, biomedical, and anthropological perspectives on health and disease in developing countries. Emphasis on changes in the underlying causes of morbidity and mortality during economic development. Focuses on the biosocial ecology of diseases. Guest lecturers cover different diseases and public health perspectives. S. T. Mcgarvey.

1100. **Comparative Health Care Systems**
Focuses on principles of national health system organization and cross-national comparative analysis. Emphasizes application of comparative models to the analysis of health and health-related systems among nations at varying levels of economic development and health care reform. Addresses research questions related to population health and systems' performance. Questionnaire completion required. STAFF.

1210. **Stress and Disease**
Provides an understanding of the role of psychosocial factors in the etiology and prevention of disease: What situations are stressful for individuals? What are the psychophysiological mediators responsible for alteration in body function? What psychobiological factors determine which organ systems are affected? What are the cognitive, affective and behavioral responses to disease? Not open to first year students.

1320. **Survey Research in Health Care**
An introduction to the methodology of survey research as it is conducted by social scientists and epidemiologists. Provides an overview of all aspects of study design and instrument development as well as an introduction to statistical analysis of survey data. Students should take PHP 0320 and fulfill the department's statistics requirement prior to taking or concurrently with this course. Prerequisite: PHP 0320. S. M. Allen.

1520. **Emergency Medical Systems: An Anatomy of Critical Performance**
Problems and issues surrounding delivery of emergency medical services in U.S. Topics: cost of illness; rationing health care; living wills; malpractice and its effects; effects of alcohol and other risk behavior. Priority to community health concentrators and PLME students pursuing MPH degree. B. M. Becker.

1530. **Case Studies in Public Health: The Role of Governments, Communities and Professions**
This course provides an integrated knowledge of the public health's development, policy, practice and infrastructure and its relationship to medical care, social services and the environment. The matrix approach juxtaposes public health content (e.g., infectious disease) and public health tools (e.g., behavioral theory, policy/advocacy/epidemiology/quality improvement/program planning) using case studies. It aims to strengthen students' capacity to apply a population-based viewpoint to public health practice. Prerequisite: PHP 0320.

1540. **Alcohol Use and Misuse**
Reviews the epidemiology of alcohol use, abuse, and dependence and examines its neurobiological and behavioral underpinnings. Covers etiology including physiological, genetic, psychological and social cultural influences, and prevention, brief intervention and treat-
ment considerations. Course background in psychology, sociology, or community health is recommended. Recommended prerequisites: PHP 0320 and PSYC 0010. Restricted to juniors, seniors, and graduate students.

1680. Social and Community Medicine
A series of seminars on major current issues in public health and health care delivery.

1680D. Ethical Perspectives in Environmental Health
Introduction to ethical principles and concepts shaping emerging field of environmental ethics. Examines interfaces between policy, science, economic and social drivers attendant to ethical decision-making related to environmental issues. Environmental actions/decisions are used as case studies to identify, review and analyze ethical principles and approaches. Impact of national and international decisions are examined for their local impact. Enrollment limited to: 25.

1680H. Nutritional Problems in the Developing World
Research related to nutritional problems in the developing world including undernutrition (macronutrient and micronutrient deficiencies), the nutrition transition and emerging problems of obesity and chronic disease. A public health perspective considering nutritional issues through the lifecycle is applied. Contrasts diet and nutritional assessment at the individual and population level. Written permission required. Enrollment limited to 20.

1680I. Pathology to Power: Disability, Health and Community
Offers a comprehensive view of health and community concerns experienced by people with disabilities. Guest speakers, site visits, and hands on field research involving interactions with people with disabilities will facilitate the students gaining a multi-layered understanding of the issues faced by people with disabilities and their families.

1680M. The Epidemiology of Violence and its Consequences
Overview of the epidemiology of intentional injury within the social context. Selected topics include homicide, suicide, child abuse, intimate partner and family violence, sexual assault, elder mistreatment and officially sanctioned violence. Methodological challenges for epidemiologists, and the role of guns and substance use are examined. Intended as a junior/senior level course. Prerequisite: PHP 2120 or equivalent. Enrollment limited to 10.

1680N. Tobacco, Smoking, and the Evil Empire
Reviews the epidemiology of smoking and nicotine addiction and briefly examines its neurobiological and behavioral underpinnings. Covers prevention efforts and state-of-the-art treatment interventions with an emphasis on policy implications. Course background in psychology, sociology, or community health is recommended. Suggested prerequisites: PHP 0320 and CLPS 0010 (PSYC 0010). Restricted to juniors, seniors, and graduate students.

1680R. Obesity and Eating Disorders
Examines two distinct yet overlapping health conditions, obesity and eating disorders. These are multi-factorial conditions, and material in psychology, medicine, nutrition, and exercise science, will be covered. This course will focus on addressing these conditions through primary, secondary, and tertiary prevention efforts at the individual and environmental level.
1680S. Bioethics at the Bedside
Explores a variety of topics in biomedical ethics. Each class will begin with a vignette, short film, or speaker, followed by a short lecture. A large portion of class time will then be devoted to class discussion/debate. The course has four parts: introduction to medical ethics in which we consider what value we assign to individuals within various ethical constructs; discussion of bioethical issues at the beginning and end of life; examination of the duty of physicians; and selection of additional topics exploring ethical issues that arise from the social, economic, and cultural differences between physician and patient. Enrollment limited to 30.

1680T. Translation, Diffusion and Cultural Relevance of Health Promotion Interventions
Intended to help students become familiar with three key aspects of disease prevention/health promotion programs: (1) how findings from "basic" behavioral and social science (BSS) research are tested for effectiveness in real-life settings (translation); (2) how programs with demonstrated effectiveness, in one or more local settings, are introduced and adopted more broadly (diffusion); and (3) how cultural relevance is involved in both translation and diffusion. Translation and Diffusion will comprise the two main sections of the semester. Cultural relevance will be a theme integrated into each part of the course. Appropriate for BSSI, MPH, and advanced undergraduate students with coursework in public/community health. Open to juniors and seniors only.

1700. Current Topics in Environmental Health
This course is designed to introduce students to the field of environmental health, and demonstrate how environmental health is integrated into various aspects of our lives, both directly and indirectly. Topics to be covered include: toxic metals, vector-borne disease, food safety, water quality, radiation, pesticides, air quality, hazardous waste, risk assessment, and the role of the community in environmental health. Several topics will be presented by guest speakers so that students can learn from the expertise of professionals in the field. K. T. Kellsey.

1740. Principles of Health Behavior and Health Promotion Interventions
Examines health behavior decision-making and elements for design of health promotion interventions. Covers theories of health behavior (focusing on primary and secondary prevention), principles of intervention design, and reading of research literature. Emphasizes psychological, social, and proximate environmental influences on individuals' health-related behaviors. Restricted to juniors, seniors, and graduate students. Prerequisite: PHP 0320 or equivalent. W. Rakowski.

1910. Community Health Senior Seminar: Health and Human Rights
Violations of human rights are particularly relevant to population health. Discrimination and stigmatization, health policies, civil and international conflicts, and practices in biomedical and behavioral research contribute to population patterns of disease, injury, and disability. Principles of human rights and their application to current crises are the basis for seminar discussion. Prerequisite: Senior Community Health concentrator. M. Lurie.

1920. Social Determinants of Health
Provides an overview of social determinants of health. Examples of topics include health effects of educational attainment, social integration, neighborhood socioeconomic characteristics, racial discrimination, gender, income inequality, childhood socioeconomic circumstances, parental neglect, and job strain. Mixed teaching methods are used, including small group discussions, problem-based learning and guest lectures. Open to graduate students and advanced undergraduates.
1970. *Independent Study*
A special project may be arranged in consultation with an individual faculty sponsor.

**Primarily for Graduates**

2030. *Clinical Trials Methodology*
We will examine the modern clinical trial as a methodology for evaluating interventions related to treatment, rehabilitation, prevention and diagnosis. Topics include the history and rationale for clinical trials, ethical issues, study design, protocol development, sample size considerations, quality assurance, statistical analysis, systematic reviews and meta-analysis, and reporting of results. Extensively illustrated with examples from various fields of health care research. Recommended prerequisites: introductory epidemiology and statistics. Pre-requisites: PHP 2120, 2500 or 2510. STAFF.

2040. *Applied Research Methods*
Emphasizes the theory of sampling and survey methods and their application to public health research. Topics include: survey design and planning; principles of sampling and survey terminology; questionnaire construction; protection of human subjects; data collection (including interviewing and data coding procedures); and application, presentation, and evaluation of results. Suggested prerequisites: PHP 2120, and PHP 2500 or 2510. M. A. CLARK.

2060. *Qualitative Methods in Health Research*
Introduces qualitative approaches to data collection and analysis in health research. Methods covered include: participant observation, key-informant interviews, focus groups, innovative data collection strategies, and non-obtrusive measures. Students will use applied projects to develop skills in: qualitative data collection and management, interviewing, transcript analysis using computerized software, triangulation between qualitative and quantitative data, and report preparation for qualitative studies. Enrollment limited to 20. T. T. WETLE.

2070. *Public Health/Community Service Internship*
The course is an introduction to the history, organization, resources, concepts and issues of public health and health care. Students will be matched according to their interests in a related practical experience in a health-related organization, with the expectation that they complete a project or produce a product of public health utility. This gives students an opportunity to critically apply knowledge and skills learned in didactic sessions. Instructor's permission required. P. M. VIVIER.

2075. *MPH Analytic Internship*
The primary objective of this course is to gain hands-on experience in using data to address public health questions. Concepts from previous courses will be re-enforced as students work through the steps of addressing a public health question. Both data analysis and data interpretation will be emphasized in the context of a public health question. STATA 8.0 will be used to analyze data. Prerequisites: PHP 2120 and PHP 2500 or 2510.

2080. *Ethics and Public Health*
Uses case study strategies to: identify key ethical principles, values, legal authorities and regulation relevant to public health practice and research; evaluate public health research designs in terms of ethical and legal principles; conduct ethical analyses of public health interventions by identifying potential ethical and legal concerns and conflicts; and employ strategies for working effectively with special populations, including the design of culturally appropriate interventions. Open to graduate students only.
2090. *Scientific Writing in Public Health*
Addresses methodologic and operational issues associated with developing research studies in epidemiology (including clinical trials). Students prepare protocols for research studies in human populations with attention to ethical guidelines and regulations. Students critique completed proposals, are exposed to existing systems for submission and review of funding applications, as well as controversial issues such as conflict of interest. S/NC. STAFF.

2120. *Introduction to Methods in Epidemiologic Research*
Epidemiology quantifies patterns and determinants of human population health, with a goal of reducing the burden of disease, injury, and disability. An intensive first course in epidemiologic methods, students learn core principles of study design and data analysis through critiques of published epidemiologic studies as well as hands on practice through weekly exercises and assignments.

2130. *Human Biology for Epidemiology*
This course provides basic principles of human biology and its applications to Epidemiology. Examples of biology topics include the cardiovascular system, endocrine system, immune system, nervous system, genetics, cancer, cardiovascular disease, HIV/AIDS, and depression. Examples of applied topics include strengths and weaknesses of using biomarkers, accuracy and precision of biological measures, quality assurance and quality control methods for using biomarkers for epidemiologic research. Mixed teaching methods are used, including small group discussions, problem-based learning and guest lectures. Prerequisite: PHP 2120 or instructor permission. Open to graduate students.

2180. *Critical Epidemiology*
This advanced graduate seminar is a critical history of epidemiologic concepts and methods, emphasizing 19th century to the present. Students build on teachings from PHP 2120 to understand and apply theoretical challenges of disease definitions and causal thinking. Weekly reading and writing assignments strengthen skills in awareness of belief systems and construction of facts within specific ideologic frameworks. Prerequisite: PHP 2120.

2200. *Intermediate Methods in Epidemiologic Research*
Reinforces the concepts and methods taught in PHP 2120, with in-depth instruction in study design, confounding, model construction, measurement error, estimation, effect modification, and causal inference. Prerequisites: PHP 2120 and 2510. Co-requisite: PHP 2511. Open to graduate students only. K. L. LAPANE.

2210. *Epidemiology of Chronic Disease*
A survey of central issues in selected health conditions that have major disabling consequences. The focus is on epidemiologic and biologic features of these conditions and their social and biologic determinants such as smoking, poverty, occupational exposures, nutrition, and heredity. Methodological areas include classification, screening, lead time bias, time trends, etc. Seminar format. Students present reviews of selected topics. Open to graduate and advanced undergraduate students.

2220. *Special Topics Series: Epidemiology Substantive Courses*
The epidemiology of specific diseases or conditions-for example, reproductive epidemiology, infectious disease and cancer-either individually or in combination. Prerequisites for all sections: PHP 2120.

2220A. *Epidemiology of Violence and Its Consequences*
Overview of the epidemiology of intentional injury within the social context. Selected topics include homicide, suicide, child abuse, intimate partner and family violence, sexual assault, elder mistreatment and officially sanctioned violence. Methodological challenges for epidemiologists, and the role of guns and substance use are examined.
Prerequisite: PHP 2120 or knowledge of elementary epidemiologic methods. Enrollment limited to 10.

2220B. Nutritional Epidemiology
Americans as a population are fat and will be much sicker and costlier in the future because of this state. Obesity has truly reached epidemic status in the United States with over two thirds of Americans meeting the criteria for either overweight or obesity. This course will describe the weight status of the US population, as well as food, activity and other behaviors that are responsible for this health crisis and will explore the available data sources for weight and associated behaviors in the US. Additionally, policies, interventions and other strategies to improve the state of this problem will be explored. Supplemental assignments and possibly lectures directed towards doctoral students will provide additional coverage of methodological challenges and research procedures on these topics and the opportunity for limited individual study.

2220C. Perinatal Epidemiology
Provides an overview of topics related to reproduction, maternal and fetal outcomes of pregnancy, and longer term consequences of adverse pregnancy outcomes. Methodological issues unique to reproductive and perinatal epidemiology are discussed, as well as general epidemiologic methods as applied to topics in reproductive and perinatal epidemiology. Students are expected to actively participate in class discussions, lead discussions related to selected topics by providing an overview of the biology, descriptive epidemiology, and known risk factors of the topic, along with a detailed critique of recently published articles on the topic. Open to graduate students only.

2220E. Topics in Environmental and Occupational Epidemiology
Introduces students to the subject matter of environmental and occupational epidemiology, focusing on the major environmental threats to health and provides the methodologic tools to evaluate and extend the evidence linking those exposures to disease through studies of populations. Key themes that are pertinent to the full spectrum of issues involve the challenge of assessing exposure to potential toxicants both in the workplace and community, isolating the effects of environmental agents from associated socioeconomic and lifestyle contributors to disease, and the application of epidemiologic evidence to environmental and occupational health policy. Open graduate students only. Prerequisite: PHP2120 or equivalent.

2220G. Methodological and Practical Issues in Global Health Research
Develops critical thinking and writing about global health research among graduate students interested in population health. Reading and writing assignments are on key conceptual, methodological and practical issues. It is interdisciplinary in nature but will reflect public health and epidemiologic perspectives on measures of population health, health disparities, interactions of effects on health, and implementation research. It is suitable for graduate students in the public health sciences, social sciences, pathobiology and public policy. Prior training in epidemiologic methods and global health, or their equivalents, are expected. Recommended prerequisite: PHP 2120. Open to graduate students only.

2220H. Methodological Issues in the Epidemiology, Treatment and Prevention of HIV
Uses HIV as an example to introduce students to a variety of methodological issues in global chronic and infectious disease research. While we will study both the treatment
and prevention of HIV in great detail, emphasizing the current state of knowledge and reading, digesting and critiquing the most recent literature, this course aims to use HIV as a cutting-edge example as a means to better understand the variety and complexity of methodological issues in global infectious disease epidemiology today. Enrollment limited to 30 graduate students. Prerequisite: PHP 2120 or equivalent.

2230. Epidemiology of Infectious Disease
From Black Death to Typhoid Mary to the more recent H1N1 pandemic, infectious disease epidemics have been recorded throughout written history. The top 5 infectious diseases cause more than 14 million deaths per year globally, accounting for roughly 25% of all deaths. This course will introduce students to the field of infectious disease epidemiology. Topics will include a history of infectious diseases, epidemiology and control of infectious diseases, analytic methods, study design, outbreak investigations, and statistical modeling. Prerequisite: PHP 2120. Instructor permission required. Enrollment limited to 15 graduate students.

2300. Research Methods in Behavioral Science
This course provides students with fundamental principles of behavioral and social research methodology for understanding the determinants of public health problems, and for executing and testing public health interventions. We will focus on experimental methods, observational studies, and qualitative approaches. We will develop skills in understanding and interpreting data—both quantitative and qualitative. Throughout the course we will emphasize ethical, cultural, and professional issues for designing public health interventions. Prior coursework in research methodology and quantitative methods is recommended but not required. Open to graduate students and advanced undergraduates.

2310. Physical Activity and Public Health
This course examines physical activity and health with an emphasis on the development of behavioral interventions to increase physical activity. Students gain knowledge of the impact of physical activity on health outcomes as well as differences in physical activity among subpopulations. They are introduced to behavioral theories, intervention design approaches, measurement issues, and methods that are relevant to physical activity. Through seminar discussions, a group project, and presentations, students engage with the material and gain skills in the development and evaluation of behavioral interventions. Students with an interest in behavioral interventions and physical activity will benefit from taking the course. Prerequisite: PHP 2360 or PHP 2320 or PHP 1740 or comparable experience.

2320. Environmental and Policy Influences on the Obesity Epidemic
This course examines environmental influences on the obesity epidemic with an emphasis on the impact of the built environment and policy on physical activity. Through seminar discussions, literature reviews, policy briefs, and presentations, students will engage with the material and gain skills in the development of policy and environmental change strategies to impact physical inactivity and poor diet. Students with an interest in environmental change and policy to prevent obesity and increase physical activity will benefit from taking this course. Prerequisite: PHP 1740 or PHP 2310 or PHP 2360 or PHP 2920B, or permission of the instructor.

2330. Behavioral and Social Approaches to HIV Prevention
This course examines concepts, approaches, and empirical findings from behavioral and social research aiming to prevent HIV transmission. Students will become familiar with behavioral theories, social epidemiological principles, intervention design and measurement issues, and debates within the field of HIV prevention. A particular focus of this course is on the state of empirical research and the linkages between science and HIV prevention practice/policy. Students will conduct weekly readings, engage actively in seminar discussions, and participate in small-group presentations and research activities. Prerequisite:
PHP 1740 or PHP 2120, or by instructor permission with comparable experience. Prior coursework in public health research methodology is recommended. Open to graduate students and advanced undergraduates.

2340. Behavioral and Social Science Theory for Health Promotion
This course will help students become familiar with behavioral and social science theories commonly used for planning disease prevention/health promotion interventions. In addition to review of specific theories, topics to be discussed include: how theories are developed and tested; challenges and potential pitfalls in using theory for intervention planning; and creation of causal diagrams based on concepts from theories. Undergraduates need permission of instructor; priority will be for Community Health concentrators.

2350. Decision Analysis Public Health Policy and Practice
Introduces methods and applications of decision analysis, cost-effectiveness analysis, and benefit-cost analysis in public health policy and practice, including health care technology assessment, medical decision making, and health resource allocation. Examines technical features of these methods, problems associated with implementing them, and advantages and pitfalls in their application in setting public health policy. Prerequisites: PHP 2510 and PHP 2120 or equivalent.

2360. Designing, and Evaluating Public Health Interventions
Aims to develop skills in designing, implementing and evaluating public health interventions. Levels of intervention include the individual; families or small groups; organizations such as schools, worksites, health care settings; communities; social marketing and health communications; policy and environmental changes. Will identify personal and environmental factors that affect public health and discuss needs assessment, formative research, cultural sensitivity, behavior change theories, intervention mapping, implementing interventions, ethical considerations, process and impact/outcome evaluation and dissemination. Students will critique intervention studies and gain experience in developing a hypothetical behavior change intervention. Graduate students and advanced undergraduate only.

2370. Etiology of Substance Use Disorders
This course will help students become familiar with behavioral, genetic, neurobiological, and cultural factors related to the onset and course of substance use disorders. In addition to review of specific theories, empirical evidence supporting models will be covered as will the integration of evidence across models. Priority will be given to postdoctoral fellows.

Reviews the development of the health care delivery, financing and regulatory control systems in the U.S. and reviews the literature on the relationship between health system structure and the services used and health outcomes that populations experience. A case-study approach is used to understand the inter-relationship between financing, delivery and regulatory components of the health system and their implication for public health by drawing on epidemiological, economic, political and sociological principals. Prerequisites: Graduate standing or PHP 0310 or PHP 0070 (not available to freshmen or sophomores). Instructor permission required. V. MOR.

2410. Topics in Health Services Research
Individual sections provide in-depth coverage of methodological issues relating to health service research, including outcome research, analysis of administrative data, advanced principles of multi-stage sampling, and associated analysis. Prerequisites: PHP 2120, 2130, and 2170.
2420. **Evaluating Public Health Programs and Policies**

Students will learn an overview of evaluation methodologies using both primary data collection and administrative data. Evaluation methods will be taught in the context of published studies and guest speakers' work covering a broad range of public health interest areas. Students will develop a proposal to evaluate a public health program that is ongoing or in the planning stage at the Rhode Island Department of Health or other public health-related human service agency. The proposed evaluation will be designed to balance scientific rigor with cost efficiency and viability. S. M. ALLEN.

2430. **Analysis of Population Based Datasets**

Epidemiologic, health services, and social research often conducts "secondary analysis" of existing population-based datasets. Benefits include their representative sampling frames allowing generalizability to larger populations, timeliness, and lower cost. In addition, computer technology makes it possible to link some databases providing richer sources of information. There are several technical and methodological concerns when conducting "secondary analysis." Students will download, link, and analyze several data sets to understand the advantages of these data for health policy analysis as well as understand and apply different analytic methods. Familiarity with statistical analysis software is required. Prerequisites: (PHP 2120 & PHP 2510) or (PHP 2500) or (MPH analytic internship) or (PHP 2501 & PHP 2502).

2440. **Pharmacoepidemiology**

This course provides an in-depth approach to methodologic issues encountered in pharmacoepidemiology and pharmacology principles pertinent to the design of pharmacoepidemiologic studies. A review of the drug development and approval process is provided, but the focus is on the use of observational pharmacoepidemiologic designs to: 1) document adverse reactions associated w/ drug use; 2) provide context for understanding risk management; 3) identify new uses for medications currently on the market; 4) evaluate the effectiveness of medications in populations excluded from clinical trials; and 5) inform public policy. Emphasis is on the identification of factors that influence the quality of pharmacoepidemiologic research, as well as studies designes and techniques to minimize such factors.

2450. **Measuring and Improving the Quality of Health Care**

The quality of health care in the United States is in urgent need of improvement. This course will focus on the science of measuring and improving the quality of health care. Topics will include quality assessment, patient safety, medical errors, public reporting, financial incentives, organizational change, and health care disparities. Students will engage in a team-based quality improvement project. Pre-requisites: PHP 2120 or instructor's permission. Limited to Grad students only.

2460. **Research Methods in Clinical, Translational and Health Services Research**

Takes an applied approach to understanding research methods used in health research. Students will explore concepts, gain knowledge and develop skills in the following areas: 1. Developing and refining research questions; 2. Designing research projects and appropriately implementing research methodologies; 3. Understanding the strengths and weaknesses of different study designs in addressing specific research questions, including an understanding of threats to validity; 4. Identifying Data Sources, including primary and secondary sources; 5. Understanding research ethics, including IRB processes and HIPPA regulations. Students must be accepted to the Clinical and Translational Research Summer Institute to enroll.

2470. **Topics in Clinical, Translational and Health Services Research**

Through a combination of mini-courses and seminars, students will explore concepts, gain knowledge and develop skills in a variety of public health areas. To receive a half credit for this course, students will be required to successfully complete 70 units. Units must be pre-
determined by the course instructor and the unit instructor. Units are generally based on the number of in-person contact hours and the number of outside of class/homework hours required for a mini-course or seminar. Students must receive special permission from the instructor or be accepted to the Clinical and Translational Research Summer Institute to enroll.

2500. Introduction to Biostatistics
The first in a two-course series designed for students who seek to develop skills in biostatistical reasoning and data analysis. Offers an introduction to basic concepts and methods of statistics as applied to diverse problems in the health sciences. Methods for exploring and presenting data; direct and indirect standardization; probability; hypothesis testing; interval estimation; inference for means and proportions; simple linear regression, etc. Statistical computing is fully integrated into the course.

2501. Introduction to Multivariate Regression
The first in a series of two-half semester courses on regression methods, designed for students who seek to develop biostatistical reasoning and data analysis skills. This course provides an introduction to multiple linear and logistic regression models as applied to diverse problems in the health sciences. PHP 2500 or equivalent is a prerequisite. Half credit.

2502. Regression Analysis Discrete and Event Time Data
The second course in the sequence on Introductory Biostatistics methods. This course will focus on regression methods (multiple linear regress, ANOVA, ANCOVA) and their natural extensions such as Logistic and Poisson regression in applications to diverse problems in the health sciences. Additionally, this course will cover regression methods for time to event data such as Cox regression for survival data. PHP 2500 or equivalent is a prerequisite. Half credit.

2510. Principles of Biostatistics and Data Analysis
Intensive first course in biostatistical methodology, focusing on problems arising in public health, life sciences, and biomedical disciplines. Summarizing and representing data; basic probability; fundamentals of inference; hypothesis testing; likelihood methods. Inference for means and proportions; linear regression and analysis of variance; basics of experimental design; nonparametrics; logistic regression. Prerequisites: MATH 0100 or equivalent. Open to advanced undergraduates with permission. THE STAFF.

2511. Applied Regression Analysis
Applied multivariate statistics, presenting a unified treatment of modern regression models for discrete and continuous data. Topics include multiple linear and nonlinear regression for continuous response data, analysis of variance and covariance, logistic regression, Poisson regression, and Cox regression. Primarily for graduate students and advanced undergraduates. Prerequisites: PHP 2510 or equivalent and working knowledge of matrix algebra. THE STAFF.

2520. Statistical Inference I
First of two courses that provide a comprehensive introduction to the theory of modern statistical inference. PHP 2520 presents a survey of fundamental ideas and methods, including sufficiency, likelihood based inference, hypothesis testing, asymptotic theory, and Bayesian inference. Measure theory not required. Prerequisites: MATH 0120, MATH 1610, and either APMA 1650-1660 or PHP 2130-2160. THE STAFF.

2530. Bayesian Statistical Methods
Surveys the state of the art in Bayesian methods and their applications. Discussion of the fundamentals followed by more advanced topics including hierarchical models, Markov Chain Monte Carlo, and other methods for sampling from the posterior distribution, robustness, and sensitivity analysis, and approaches to model selection and diagnostics. Features
non-trivial applications of Bayesian methods from diverse scientific fields, with emphasis on biomedical research. Prerequisites: APMA 1650 and 1660, PHP 2510 and 2511, or equivalent. THE STAFF.

2540. Advanced Methods for Multivariate Analysis
Survey of modern statistical methods for analysis of multivariate and high-dimensional data. Topics include inference for multivariate normally distributed data, methods for data reduction, classification and clustering, multiple comparisons for high-dimensional data, analysis of multidimensional contingency tables, and functional data analysis. Applications to diverse areas of scientific research, such as genomics, biomarker evaluation, and neuroscience will be featured. Prerequisites: APMA 1650-1660 or PHP 2520, MATH 0520.

2580. Statistical Inference II
This sequence of two courses provides a comprehensive introduction to the theory of modern inference. PHP 2580 covers such topics as non-parametric statistics, quasi-likelihood, resampling techniques, statistical learning, and methods for high-dimensional Bioinformatics data. Prerequisites: PHP 2520 or equivalent. THE STAFF.

2600. Modern Methods for Categorical Data Analysis
Investigates theory and methods for drawing inference from discrete categorical data, including contingency tables, measures and tests of association, sampling distributions, goodness-of-fit, and both large- and small-sample inference. Other topics include modeling binary, ordinal, and multinomial data; repeated measures; and matched pair study designs. Prerequisites: PHP 2510, 2511, and familiarity with statistical inference at APMA 1650-1660 level.

2601. Linear and Generalized Linear Models
Generalized linear models provide a unifying framework for regression. Important examples include linear regression, log-linear models, and logistic regression. GLMs for continuous, binary, ordinal, nominal, and count data. Topics include model parameterization, parametric and semiparametric estimation, and model diagnostics. Methods for incomplete data are introduced. Computing with modern software is emphasized. Prerequisites: APMA 1670, PHP 2511. THE STAFF.

2602. Analysis of Lifetime Data
Comprehensive overview of methods for inference from censored event time data, with emphasis on nonparametric and semiparametric approaches. Topics include nonparametric hazard estimation, semiparametric proportional hazards models, frailty models, multiple event processes, with application to biomedical and public health data. Computational approaches using statistical software are emphasized. Recommended: Intermediate-level courses in biostatistics: PHP 2510, 2511 or equivalent. THE STAFF.

2603. Analysis of Longitudinal Data
Comprehensive coverage of methods for drawing inference from longitudinal observations. Theoretical and practical aspects of modeling, with emphasis on regression methods. Topics include: multilevel and marginal models; estimation methods; study design; handling dropout and nonresponse; methods for observational data (e.g., time-dependent confounding, endogeneity, selection bias). SAS and S-Plus software are used. Prerequisite: Statistical inference (APMA 1650-1660 at minimum), regression (PHP 2511), working knowledge of matrix algebra (e.g., MATH 0520). J. HOGAN.

2604. Statistical Methods for Spatial Data
An overview of statistical methodology for analyzing spatially-referenced data, including social network data. Statistical inference methods of modeling, estimation, testing and prediction will be covered. Classical and Bayesian hierarchical approaches to inference will be introduced. Lectures and assignments will blend relevant theory and applications, with em-
phasis on applications from public health and the social sciences. Prerequisites: APMA 1650-1660 or PHP 2510-2511, MATH 0520, some experience with scientific computing.

2610. Causal Inference and Missing Data
Systematic overview of modern statistical methods for handling incomplete data and for drawing causal inferences from "broken experiments" and observational studies. Topics include modeling approaches, propensity score adjustment, instrumental variables, inverse weighting methods and sensitivity analysis. Case studies used throughout to illustrate ideas and concepts. Prerequisites: PHP 2511; MATH 1610, familiarity with object-oriented programming (e.g. R, S-Plus, Matlab). THE STAFF.

2620. Statistical Methods in Bioinformatics, I
Introduction to statistical concepts and methods used in selected areas of bioinformatics. Organized in three modules, covering statistical methodology for: (a) analysis of microarray data, with emphasis on application in gene expression experiments, (b) proteomics studies, (c) analysis of biological sequences. Brief review and succinct discussion of biological subject matter will be provided for each area. Available software will be introduced. Intro level statistics (PHP 2500/01/02 or PHP 2510/11) recommended. Other students should contact instructor. Intro to software R and Bioconductor tools provided in lab. Z. J. WU.

2690. Advanced Topics in Biostatistics
Seminars and topics course on advanced methods or applications of biostatistics, or new and innovative research. Pre-requisites: Typically intended for advanced PhD students in biostatistics, public health, and fields where advanced methods are directly applicable. Prerequisites will typically include PHP 2510 and 2511 at minimum.

2720. Health Policy and Advocacy
Students will design and implement the initial stages of their own health advocacy campaign, selecting a public health issue of their choice. Students will learn how to write advocacy materials including opinion editorials, briefing materials for legislators, grants for funding to support advocacy projects, and techniques for coalition building.

2920. Special Topics in Community Health

2950. Doctoral Seminar in Public Health
The purpose of this seminar is to facilitate discussions of current scientific literature in epidemiology, biostatistics, health services, and public health in general. The main goal is to expose students to current methodological issues and controversies in epidemiology, biostatistics, health services, and public health, in an effort to integrate knowledge across disciplines. This seminar is by instructor permission only and is only open to graduate students in Epidemiology, Biostatistics and Health Services Research.

2980. Graduate Independent Study and Thesis Research

2985. MPH Independent Study for Thesis Preparation and Research
This optional half credit course may be taken up to two times during preparation for the MPH degree. It provides MPH students with self-directed thesis research and preparation time under the guidance of a thesis advisor. Prior to taking this course the student and advisor must reach agreement as to what constitutes satisfactory completion of the course (e.g., completion of a satisfactory literature review, attainment of specific thesis benchmarks, or completion of the thesis).

2990. Thesis Preparation
No course credit.
Biology and Medicine — Neuroscience

Neuroscience encompasses those fields of knowledge important to an understanding of the function of the nervous system, particularly the brain. It brings together neurobiology (anatomy, physiology, biochemistry, molecular biology, genetics) with elements of psychology and cognitive science, as well as mathematical and physical principles involved in modeling neural systems.

The Department of Neuroscience offers an undergraduate concentration leading to the Sc.B. degree and a graduate program leading to the Ph.D. degree. In addition to the courses offered by the department, these programs include courses taught in several allied departments. The Department of Neuroscience has modern facilities for conducting research in a broad range of areas from molecular mechanisms to animal behavior and undergraduate students are encouraged to pursue research projects.

For a complete description of the Neuroscience concentration program leading to the Sc.B. degree, please see the department’s website: http://neuroscience.brown.edu/ or visit http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Program

The graduate program in neuroscience is designed to educate and train scientists who will become leaders in the field and contribute to society through research and teaching. Each student takes a series of courses tailored to his or her background and goals, chosen in consultation with faculty advisors. Each student must also pass a comprehensive examination, propose and defend a thesis topic, complete a substantial body of original research, and write and defend a doctoral dissertation. The core of the training involves close interaction with faculty to develop expertise in biological, behavioral, and theoretical aspects of neuroscience. Interdisciplinary work is encouraged and may be undertaken in the Departments of Neuroscience, Cell and Molecular Biology, Pharmacology, Ecology and Evolutionary Biology, Physiology, Psychology, Cognitive and Linguistic Sciences, Physics, Computer Science, Engineering, and Applied Mathematics.

In addition to formal course work and research, a number of activities and events enhance graduate training. There are numerous seminar series, including the Neuroscience Colloquium Series, in which speakers from U.S. and international universities and research institutes present their latest research findings. Throughout the academic year, journal clubs meet weekly to discuss the most recent research literature. Recent journal clubs have focused on molecular neurobiology, cellular neurophysiology, computational neuroscience, synaptic plasticity and development, learning and memory, motor control, and visual physiology and perception, and skills. There is an annual workshop on scientific ethics and skills that is specifically designed for graduate students. Near the beginning of each academic year there is a neuroscience graduate program retreat that is an occasion for social interaction and, through talks by program faculty, an update of ongoing research within the program.

Graduate research and training are carried out in the laboratories of the program’s faculty. These faculty lead outstanding well-funded research programs that use cutting edge technology to explore the brain. For further information on the Neuroscience Graduate Program, please see the program website: http://neuroscience.brown.edu/graduate/.
Courses of Instruction

Primarily for Undergraduates

0010. *The Brain: An Introduction to Neuroscience*
Introduction to the mammalian nervous system with emphasis on the structure and function of the human brain. Topics include the function of nerve cells, sensory systems, control of movement and speech, learning and memory, emotion, and diseases of the brain. Instructors: John Stein and Michael Paradiso. No prerequisites, but knowledge of biology and chemistry at the high school level is assumed.

0650. *Biology of Hearing*
Examines the sensory and perceptual system for hearing: the external, middle, and inner ears; the active processes of the cochlea; sound transduction and neural coding; neural information processing by the auditory system; and the nature of auditory perception and its biological substrate. Prerequisite: an introductory course in Neuroscience, Cognitive Science, Physics, Engineering or Psychology.

For Undergraduates and Graduates

1020. *Principles of Neurobiology*
A lecture course covering fundamental concepts of cellular and molecular neurobiology. Topics include structure of ion channels, synaptic transmission, synaptic development, molecular mechanisms of synaptic plasticity, learning and memory and neurological diseases. Prerequisite: NEUR 0010. Strongly recommended: BIOL 0200 or equivalent.

1030. *Neural Systems*
This lecture course examines key principles that underlie the function of neural systems ranging in complexity from peripheral receptors to central mechanisms of behavioral control. Prerequisite: NEUR 0010 or the equivalent.

1040. *Developmental Neurobiology*
Explores the fundamental mechanisms underlying neural development. Topics include patterning of the nervous system, birth and death of neurons, axon guidance, and the formation, maintenance, and plasticity of synaptic connections. Emphasizes the cellular, molecular, and genetic basis of these events and how these basic processes interact with experience to shape the brain. Illustrations are drawn from systems ranging from worms to humans. Requirements: NEUR 1020 and BIOL 0200, or written permission.

1600. *Experimental Neurobiology*
Intensive laboratory experience in neuroscience appropriate for students with basic background in Neurobiology. Learn and employ the classical neurophysiological techniques of extracellular recording, intracellular recording and receptive field mapping using a variety of animal species. Experiments will include recording of sensory signals in the cockroach leg; frog sciatic nerve and sciatic nerve/muscle preparation; intracellular recording of neurons in Aplysia; receptive field mapping in frog skin; and visual field mapping in the frog tectum. Labs are supplemented by informal lectures. Prerequisites: NEUR 0010, 1020, and PHYS 0030; or equivalent. Instructor permission required; enrollment limited to 18. S/NC.

1650. *Structure of the Nervous System*
Combined lecture and laboratory course on the anatomy of the central nervous system. Lectures survey the circuitry of the major neural systems for sensation, movement, cognition, and emotion. Laboratory exercises (Mon. 10:30-12:30) include brain
dissections, microscopy of neural tissue, and discussion of clinical cases. Prerequisites: NEUR 0010, 1020, and 1030. Written permission required.

1660. Cognitive Neuroscience
Lecture course. Emphasizes the systems approach to neuroscience and examines several neural systems that mediate perception, action, higher visual and motor processing, learning, memory, attention, emotion, consciousness and sleep. The course focuses on experiments involving behavioral electrophysiology and discusses mechanisms mediating neural activity that mediates cognition. Prerequisites: NEUR 0010 and NEUR 1030, or instructor permission.

1670. Neuropharmacology and Synaptic Transmission
Synaptic transmission will be studied from a biochemical and pharmacological point of view. We will explore the factors regulating neurotransmitter synthesis, storage, release, receptor interaction, and termination of action. Proposed mechanisms of psychoactive drugs and biochemical theories of psychiatric disorders will be examined. Prerequisites: NEUR 0010 and BIOL 0200 or the equivalent.

1680. Computational Neuroscience
A lecture and computing lab course providing an introduction to quantitative analysis of neural activity and encoding, as well as modeling of neurons and neural systems. Emphasizes Matlab-based computer simulation. Prerequisites: NEUR 0010, 1020 or 1030; APMA 0410 or 1650, or equivalent. Instructor permission required.

1740. The Diseased Brain: Mechanisms of Neurological and Psychiatric Disorders
The goals of this course are to illustrate what basic science can teach us about neurological disorders and how these pathologies illuminate the functioning of the normal nervous system. Consideration will be given to monoallelic diseases (e.g. Fragile X Syndrome, Duchenne Muscular Dystrophy and Tuberous Sclerosis) as well as genetically complex disorders, such as Autism, Schizophrenia and Alzheimer's Disease. Emphasis will be on the cellular and molecular basis of these disorders and how insights at these levels might lead to the development of therapies. Prerequisites: NEUR 1020. NEUR 1040, and BIOL 0470 suggested.

1930, 1940. Topics in Neuroscience
Seminars on selected topics in neuroscience designed to examine recent research, with an emphasis on critical reading of original research reports. Topics vary from year to year. Preference given to senior neuroscience concentrators. Prerequisites: NEUR 1020, 1030.

1930A. Cognitive Neuroscience: Motor Learning
1930B. From Neurophysiology to Perception
1930C. Topics in Molecular Mechanisms of Synaptic Development
1930D. Cells and Circuits of the Nervous System
1930E. Great Controversies in Neurobiology

1930, 1940. Topics in Neuroscience
Seminars on selected topics in neuroscience designed to examine recent research, with an emphasis on critical reading of original research reports. Topics vary from year to year. Preference given to senior neuroscience concentrators. Prerequisites: NEUR 1020, 1030.

1940A. Cognitive Neuroscience
1940B. Neuroethology
1940C. Topics in Visual Physiology
1940D. *Cerebral Localization*

1970. **Independent Study**
Laboratory-oriented research in neuroscience, supervised by staff members. A student, under the guidance of a neuroscience faculty member, proposes a topic for research, develops the procedures for its investigation, and writes a report of the results of his or her study. Independent study may replace only one required course in the neuroscience concentration. Prerequisites include NEUR 0010, 1020, and 1030. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Permission must be obtained from the Neuroscience Department.

Primarily for Graduates

2010, 2020. **Graduate Proseminar in Neuroscience**
A study of selected topics in experimental and theoretical neuroscience. Presented by neuroscience faculty, students, and outside speakers. A required course for all students in the neuroscience graduate program.

2030. **Advanced Molecular and Cellular Neurobiology**
Focuses on molecular and cellular approaches used to study the CNS at the level of single molecules, individual cells and single synapses by concentrating on fundamental mechanisms of CNS information transfer, integration, and storage. Topics include biophysics of single channels, neural transmission and synaptic function. Enrollment limited to graduate students.

2040. **Advanced Molecular and Cellular Neurobiology II**
This course continues the investigation of molecular and cellular approaches used to study the CNS from the level of individual genes to the control of behavior. Topics include patterning of the nervous system, generation of neuronal diversity, axonal guidance, synapse formation, the control of behavior by specific neural circuits and neurodegenerative diseases. Enrollment is limited to graduate students.

2050. **Advanced Systems Neuroscience**
Focuses on systems approaches to study nervous system function. Lectures and discussions focus on neurophysiology, neuroimaging and lesion analysis in mammals, including humans. Computational approaches will become integrated into the material. Topics include the major sensory, regulatory, and motor systems. Enrollment limited to graduate students.

2060. **Advanced Cognitive Neuroscience**
Focuses on cognitive approaches to study nervous system function. Lectures and discussions focus on neurophysiology, neuroimaging and lesion analysis in mammals, including humans. Computational approaches will become integrated into the material. Topics include the major cognitive systems, including perception, decisions, learning and memory, emotion and reward, language, and higher cortical function. Enrollment limited to graduate students.

2110. **Seminar in Higher Cortical Function**
An advanced seminar emphasizing neurophysiological, computational, and psychophysical studies of forebrain mechanisms involved in higher cortical function. Involves reading and discussion as well as written and oral critiques of primary literature. Topics such as neural representations, coding mechanisms, and cognition are discussed. Offered in alternate years.
2120. *Topics in Visual Physiology*
Selected topics in visual physiology are examined through a close and critical reading of original research articles. Emphasizes the anatomical and physiological bases of visual function. Primarily for graduate students with a strong background in neuroscience and a working knowledge of the anatomy and physiology of the mammalian visual system. Offered in alternate years.

2150. *Cells and Circuits of the Nervous System*
Selected topics on the biology of neurons and neuronal networks emphasizing original research literature about the membrane physiology, transmitter function, synaptic plasticity, and neural interactions of different vertebrate central nervous systems. Primarily for graduate students with a background in basic neurobiology, or undergraduates with permission. Offered alternate years.

2160. *Neurochemistry and Behavior*
Examines behavior from a neurochemical perspective via readings and discussions based on original research articles. Intended primarily for graduate students with a strong background in neurochemistry and neuropharmacology and advanced undergraduates with an appropriate background. Offered alternate years. Instructor permission required. S/NC.

2930. *Advanced Topics in Neuroscience*
   - 2930C. Historical Foundations of Neuroscience
   - 2930E. Bench to Bedside: Unraveling Diseases of the Nervous System
   - 2930F. Disease, Mechanism, Therapy: Harnessing Basic Biology for Therapeutic Development

2940. *Advanced Topics in Neuroscience*
   - 2940A. Advanced Molecular Neurobiology
   - 2940G. Historical Foundations of the Neurosciences II
   - 2940H. Ethics and Skills Workshop
   - 2940I. Neural Correlates of Consciousness

2970 *Preliminary Examination Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. *Graduate Independent Study*
2990. *Thesis Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

*Institute for Brain and Neural Systems*

Members of the Institute for Brain and Neural Systems include faculty from Brown University as well as various other Universities and Institutes in the United States and abroad.
Members of the Institute conduct research in brain function and neural systems that draws on biology, psychology, mathematics, engineering, physics, linguistics, and computer science. Their overall goal is a deeper understanding of the basic processes by which the central nervous system learns and organizes itself and acquires the capacity for mental acts. The Institute is especially interested in the interaction between theoretical ideas and experimental results. Current areas of research include theories of cortical plasticity, cellular and molecular mechanisms underlying learning and memory storage, the analysis and application of artificial neural networks and signal processing.

Leon N Cooper, Thomas J. Watson Sr. Professor of Science, is the director of the Institute.

For additional information please visit the Institute’s website at: http://www.physics.brown.edu/research/detail.asp?id=2

Brain Science

Brown’s Brain Science Program (BSP) was formed to tackle one of the greatest mysteries of man: How do our brains work? The Graduate Program of the BSP is designed to provide interdisciplinary training across cognitive, neural, and computational sciences. It emphasizes collaborative theoretical and experimental studies of the brain, from the molecular to the behavioral and cognitive levels. It unites researchers who study the fundamental mechanisms of nervous system function and those who seek to create devices with brain-like functions that can assist people. The faculty is also committed to translating fundamental knowledge into practical applications to the diagnosis and treatment of the devastating effects of disease and trauma of the nervous system. Brown is a leader in brain-related research and offers exceptional training and course work for those interested in pursuing careers in brain science.

The Graduate Program accepts applications from students with American and non-American citizenship and considers the merits of the applicants equally. The general GRE test is required of all applicants. Admission to the BSP in either of the two tracks (see below) is highly competitive. Each applicant is encouraged to identify and contact specific BSP faculty members whose research he/she finds particularly interesting.

Program Structure and Requirements for the Doctor of Philosophy

The BSP offers two alternative tracks. In the first and most commonly used track, a student applies to the graduate program of one of the core BSP departments (Applied Mathematics, Cognitive and Linguistic Sciences, Computer Science, Engineering, Neuroscience, Physics, Psychology), and includes a statement indicating that he/she is interested in interdisciplinary brain studies. Once a student has been accepted into a home department’s program, he/she will be nominated for membership in the BSP. The BSP Advisory and Training Committee will then review the nomination. If accepted, the student will be eligible for a BSP fellowship, which will partially support the interdisciplinary work carried out in the home department. The training committee may adapt the Ph.D requirements of the home department to better serve the needs of a student engaged in interdisciplinary research.

The second track, or direct BSP track, makes it possible for a student who wants to earn a Ph.D. in Brain Science to apply directly to the BSP. Such an application will be considered only if the student convincingly argues that his/her background and interests are
such that none of the core departments mentioned above would provide a suitable home. A student who was originally accepted in the first track may also elect to apply to the direct track after his/her first or second year of studies. The direct BSP track is designed to ensure that the student will acquire a set of complementary skills necessary to pursue interdisciplinary studies of the brain. Course work as well as research are therefore required to straddle in a significant way the two major components of the BSP: life sciences (cognitive science/neuroscience/psychology) and physical sciences (applied mathematics/computer science/engineering/physics); this is referred to below as complementarity. The specific requirements for the direct BSP track are as follows.

Core Courses. Eight course courses, approved by the BSP Training Committee, are required. These include:

1. A set of first- and second-year graduate courses that introduce cognitive science, neuroscience and mathematical/computational tools, without assuming an extensive background;
2. Courses in cellular, molecular, and systems neuroscience;
3. One laboratory course in neuroscience or cognitive and linguistic sciences;
4. One advanced course in the Physical Sciences.

Interdisciplinary Courses. Each year, BSP faculty and postdoctoral fellows teach interdisciplinary seminars that traverse departmental boundaries. At least one interdisciplinary seminar course is required in addition to the eight core courses.

Comprehensive Examination: Students must demonstrate competency in one of the participating fields (applied mathematics, neuroscience, cognitive and linguistic sciences, computer science, or physics) by passing, before the end of the second year of the program, a comprehensive examination. Additionally, they must demonstrate secondary competency in another of these areas, as specified by the BSP training committee, either through course work or by a qualifying examination. The primary area may be in either life sciences or the physical sciences; the secondary area must be in the complementary field.

Doctoral Thesis: All students are required to carry out interdisciplinary research in the brain sciences. Students are strongly encouraged to rotate through different laboratories to gain breadth of research experience. Each student has an individual Training Committee, which helps him/her select the rotations. A formal Research Supervisor and a Thesis Committee must be identified before the end of the second year of the program. The composition of the Thesis Committee must satisfy the principle of complementarity (see above). The student is required to present a written dissertation proposal to his/her Thesis Committee before the end of the sixth semester. Before the end of six years, the student will present a written thesis to the Thesis Committee and the program directors, and the thesis will be defended after giving a public lecture on the research. The examiners will include the Thesis and Training Committee members and at least one expert from outside the university.

Teaching: It is the responsibility of the student’s faculty advisor or thesis advisor to arrange for a minimum of two semesters of teaching experience in one or more of the departments that compose the program.

Requirement for the Master of Science

For an Sc.M. degree, students must complete eight courses, satisfying the principle of complementarity, as agreed upon by the Training Committee. A written thesis with an
interdisciplinary topic in brain science must be completed and meet the approval of the Training Committee.

**Brown Technology Partnerships**

Brown Technology Partnerships (BTP), under the direction of the Vice President for Research, acts as Brown’s vehicle for technology transfer. BTP focuses on actively communicating with faculty about technology transfer opportunities and policies and provides service to faculty to help with potential commercialization. The office works to forge alliances with the corporate, venture, public, and government communities needed for successful commercialization. BTP connects its efforts to relationship-building activities in the University, such as Advancement, Public Affairs and Government Relations and explores with our affiliated hospitals the potential for significant collaborations in technology transfer and related activities, both to effectively develop and to avoid duplication of our effort and costs. Brown Technology Partnerships also helps implement the University’s policies on intellectual property.

Brown Technology Partnerships is available to assist any organization wishing to undertake cooperative research programs or to license existing technology. Organizations may contact BTP directly at (401) 863-2780.

For additional information please visit [http://www.research.brown.edu/btp/](http://www.research.brown.edu/btp/).

**Chemistry**

Professors Baird, Cane, Curci, Diebold, Doll, Palmore, Stratt, Sun, Sweigart, Wang, L. S., Weber, Williard, Zimmt (Chair); Associate Professors Basu, Rose-Petruck, Seto, Suggs; Assistant Professors Bazemore-Walker, Bernkoetter, Delaney, Kim, Sello; Lecturers Hess, Russo-Rodriguez, Eang, L.Q.

**Undergraduate Programs**

For a complete description of the following standard concentration programs leading to the bachelor’s degree, please visit: [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

- Biochemistry and Molecular Biology
- Chemical Physics
- Chemistry
- Geology-Chemistry

**Graduate Programs**

The graduate program in chemistry is intended for students of exceptional ability and interest who wish to study for the degree of Ph.D. Admission to graduate study is usually limited to candidates for the doctor’s degree, although the department also offers the degrees of A.M. and Sc.M. The doctoral thesis, based on original research, may be written in the field of biochemistry, inorganic, organic, or physical chemistry, or combinations of these fields. The research program is the most important, as well as the most stimulating, part of graduate study and is initiated in the first year. Formal instruction stresses fundamental principles and developments; it may include courses in mathematics, physics,
and biology, as dictated by the student’s interests and preparation. In addition, regular and informal seminars are conducted by the students and the faculty in which research and other topics of current interest are discussed. Departmental colloquia are held throughout the year for outstanding chemists from universities and industry to present and discuss their work.

The chemical laboratories in the research building provide generous laboratory space for each student. Among other facilities, they house an excellent machine shop staffed with skilled instrument makers, and an electronics shop supervised by an expert electronics technician. The laboratories are well equipped with modern instruments which are supervised by specialists in chemical instrumentation. The facilities of the Center for Advanced Materials Research are also available to research workers in the Department of Chemistry.

Admission to graduate study in chemistry is normally accompanied by the award of a teaching assistantship. In addition to their research and other studies, assistants typically devote two afternoons per week to the supervision of undergraduate laboratories and also participate in other aspects of undergraduate evaluation and instruction. Research fellowships are seldom awarded for the first year, but are available for the later work of qualified doctoral candidates. These fellowships provide for full-time research and study. Summer research fellowships or other forms of support are provided to graduate students in good standing.

Research in experimental physical and inorganic chemistry is conducted in a number of fields. These include (1) quantum mechanical interference phenomena; (2) production of sound waves through the absorption of light; (3) chemical reaction dynamics of isolated molecules probed by picosecond time resolved photoelectron spectroscopy and femtosecond time resolved electron diffraction; (4) dynamics of photo-induced charge transfer reactions; (5) picosecond optically detected photoacoustic calorimetry; (6) structure and conformational changes in organic and bioorganic polymers; (7) synthesis of inorganic glasses for use in fiber optic communication systems; (8) Raman and infrared spectroscopic study of thin films of charge-transfer complexes for use in optical switching; (9) bioorganic polymers; (10) bioinorganic polymers; (11) electron spin resonance spectroscopy and electrochemistry of inorganic systems; (12) deuterium isotope effects in inorganic materials; (13) catalysis in supercritical media; (14) design of metalloenzyme models; (15) C-H bond and small molecule activation; (16) development of redox switches for activation of remote centers; (17) synthesis and reactions of multimetallic molecules; (18) synthesis and reactions of models for hydrodesulfurization (HDS) and hydrodenitrogenation (HDN).

The department’s research also includes a considerable emphasis on theoretical physical chemistry. There is research ongoing concerning both the equilibrium and dynamical aspects of molecular behavior in condensed phases (such as on solid surfaces and in liquids) and in clusters. There is also a continuing effort at developing new computational and analytical approaches to handling the problems faced by modern theoretical chemistry.

Research in organic chemistry includes fundamental and applied studies of mechanisms and stereochemistry of organic reactions and on the synthesis, reactions, and bioorganic role of several classes of compounds. Areas of particular emphasis include (1) synthesis of natural products; (2) biosynthesis of natural products; (3) synthetic methods; (4) organometallic reactions; (5) biochemical reaction mechanisms; and (6) photoinduced electron transfer and photochemistry.

Research in biochemistry emphasizes the mechanism of enzyme reactions, studies of the relationship between DNA sequence and conformation, and the structure and function
of biological molecule, membranes and cells. Current research includes (1) investigations of secondary metabolic processes at the enzyme level and the study of terpenoid cyclases; (2) the preparation and analysis of oligonucleotides of defined sequence and determination of their conformational and biochemical properties; (3) the development of methods to insert non-natural amino acids into proteins; (4) in vivo and in vitro NMR of biological tissues, organs and organisms.

Requirements for the A.M. degree. The general course requirements of the Graduate School must be met.

Requirements for the Sc.M. degree. The general requirements of the Graduate School must be met. A master’s thesis is required.

Requirements for the Ph.D. The general requirements of the Graduate School must be met. Candidates must pass the cumulative examinations, present a research proposal, write a dissertation and present it in proper form to the Graduate School, and defend the dissertation. One year of teaching experience is required for the Ph.D. degree. Research under the supervision of a faculty member is also required. The exact nature of the required research program will be worked out with the student’s faculty advisor.

More information can be found at the Department website: http://www.chem.brown.edu.

The Potter Prize in Chemistry
A fund was established in 1942 under the will of William R. Potter. The income is awarded annually to the graduate student in chemistry who submits a doctoral thesis of outstanding merit.

William T. King Prize
In 1983 an award was established in the name of William T. King as a memorial to him. The prize is for outstanding teaching by a graduate chemistry student. Awards for two semesters of excellent teaching are presented to two outstanding graduate students annually.

Courses of Instruction
Primarily for Undergraduates

0080. First Year Seminars

0080A. Energy
An introductory study of the scientific foundation of energy, fundamental physical, chemical, and thermodynamic aspects of common (fossil, nuclear) as well as novel (fuel cells, solar, wind, etc.) energy sources. Concentrates on scientific principles, but includes discussion on resources and reserves, environmental impact, current usage, and future needs. For students of all disciplines who are interested in obtaining an understanding of scientific principles of energy. Enrollment limited to 20 first year students.

0080B. Molecular Structures in Chemistry and Biology
This course will consist of a survey of historical developments and concepts of three dimensional structures of molecules. The course will conclude with a survey of the
current state of the art of structure determination and 3D structure motifs for small molecules, nanomaterials and biological macromolecules. This freshman only seminar will be strictly limited to a maximum of 20 students.

0080C. Drug Discoveries in the Pharmaceutical Industry
A Freshman seminar that provides a survey of past and current approaches that enable the discovery and development of therapeutic agents. Topics ranging from target validation to the development of therapeutics (small molecules, biologics, and stem cells) will be discussed. Enrollment limited to 20 first-year students. FYS

0080D. Chemical Ecology: Pheromones, Poisons, and Chemical Messages
Plants and animals use chemicals to send and receive information about mating, identify potential hosts, defend themselves against enemies and pathogens and establish social networks. We will focus on the chemistry and biochemistry of these signals, with some examples of the behavioral and ecological consequences of chemical signaling. Enrollment limited to 20 first-year students. FYS

0100. Introductory Chemistry
Explores stoichiometry, atomic and molecular structure, chemical bonding, solutions, gases, chemical reactions, equilibria, thermochemistry. Three hours of lecture, no laboratory section. S/NC.

0330. Equilibrium, Rate, and Structure
Explores the electronic structure of atoms and molecules, thermodynamics, solution equilibrium, electrochemistry, chemical kinetics, and reaction mechanisms. Three hours of lecture and five hours of prelaboratory and laboratory per week. Recommended background: Advanced placement high school chemistry (or equivalently, at least two years of high school chemistry), or IBC Chemistry or CHEM 0100.

0350. Organic Chemistry
Sequel to CHEM 0330. Investigates the constitution and properties of the different classes of organic compounds, with considerable attention to reaction mechanisms. The laboratory work involves an introduction to microscale preparative and analytical techniques of organic chemistry and the preparation of representative organic compounds. Three hours of lecture and five hours of prelaboratory and laboratory. Prerequisite: CHEM 0330.

0360. Organic Chemistry
Sequel to CHEM 0350. Investigates the constitution and properties of organic compounds at a fundamental level with an introduction to physical organic, bioorganic, and synthetic organic chemistry. Laboratory work is concerned with the identification and characterization of organic compounds, including modern instrumental methods. Three hours of lecture and five hours of prelaboratory and laboratory. Prerequisite: CHEM 0350.

0400. Biophysical and Bioinorganic Chemistry
Examines aspects of physical and inorganic chemistry relevant to biochemistry: thermodynamics of hydrophobic and hydrophilic interactions, electrically charged membranes, coordination chemistry, active and passive transport, enzyme kinetics and mechanisms, metal-based drugs, and physical methods. Three hours of lecture and five hours of laboratory. Prerequisite: CHEM 0360 and MATH 0100 or 0170. Prerequisite or corequisite: PHYS 0040 or 0060.

0500. Inorganic Chemistry
Examines the chemistry of main group and transition metal elements with treatment of covalent bonding and molecular structure along with the methods of studying inorganic compounds and reactions. Three hours of lecture and five hours of prelaboratory and laboratory attendance. Prerequisite: CHEM 0360.
0970, 0980. Undergraduate Research
Prerequisite: permission of the staff. Permission should be requested before the end of the preceding semester.

For Undergraduates and Graduates

1060. Advanced Inorganic Chemistry
Covers the physical and chemical properties of transition metal compounds as well as current research topics in inorganic chemistry. Laboratory is designed for the practice of modern inorganic chemistry through the synthesis and spectroscopic characterization of air-sensitive transition metal compounds. Prerequisite: CHEM 0500.

1140. Physical Chemistry: Quantum Chemistry
An introduction to the quantum theory of chemical systems. Elements of quantum mechanics; electronic structure of atoms and molecules; study of molecular structure and behavior by spectroscopy; chemical bonding are explored. Recommended background: CHEM 0330, MATH 0180 or equivalent, PHYS 0040 or 0060 or equivalent. Recommended but not required: MATH 0520 or equivalent.

1150. Physical Chemistry: Thermodynamics and Statistical Mechanics
Examines the question: Where does chemical equilibrium come from? Focuses on macroscopic perspectives on chemical systems and the molecular origins of macroscopic behavior along with elements of statistical mechanics, the laws of thermodynamics, and the relationships between the two. Prerequisite: CHEM 1140 or written permission of the instructor.

1160. Physical Chemistry Laboratory
An introduction to modern instrumentation and experimental techniques as applied to physical chemistry. Experiments will emphasize application of the ideas of spectroscopy, kinetics, statistical mechanics, and thermodynamics to systems of chemical and biochemical interest. Required course for concentrators in chemistry. One to two afternoons of laboratory per week. Prerequisites: CHEM 1140 or permission of the instructor.

1170. Environmental Chemistry
A laboratory course using analytical methods to help in the study and description of several realistic environmental problems. Illustrates scientific methodology and measurement techniques as they apply to these important problems. A problem-solving course employing a kind of environmental chemical detective work. Two laboratory sessions per week. Prerequisites: MA 0100 or the equivalent, or permission of the instructor. Enrollment limited to 8. Written permission required.

1220. Computational Tools in Biochemistry and Chemical Biology
Introduction to computational tools used to analyze protein sequences and structures, DNA sequence analysis, RNA structure, biochemical pathways and the analysis of microarray data. Extensive use of programs such as AMBER, BLAST, PSIBLAST and a discussion of their limitations.

1230. Chemical Biology
This course covers topics at the interface of chemistry and biology and, specifically, the use of chemical tools to probe biological systems. Using examples from the recent literature, we will discuss using the central methods of chemistry, namely the ability to design and synthesize compounds with a particular set of properties, to analyze biological problems. Specific topics include molecular recognition of DNA, artificial enzymes, small molecule sensors, and in vivo imaging of proteins, nucleic acids, and cell-surface carbohydrates. Prerequisites: CHEM 0350, CHEM 0360, and BIOL 0280 OR BIOL 1270.
1240. **Biochemistry**
Examines the chemical, mechanistic, and structural basis for enzymatic catalysis. Uses examples from the recent literature to examine how the experimental and conceptual tools of chemical synthesis, isotopic labeling, stereochemistry, enzymology, kinetics, and protein structure can be brought to bear to unravel the chemical and physical principles underlying the enormous catalytic acceleration and exquisite structural specificity of enzyme-catalyzed reactions. Prerequisites: Strong background in organic chemistry (CHEM 0350-0360, A or B performance preferable) plus at least one semester of Biochemistry (BIOL 0280, BIOL 1270). Enrollment limited to: 25 students, written permission required.

1450. **Advanced Organic Chemistry**
Lectures cover topics of current interest in organic reaction mechanisms, synthesis, and structure determination. Laboratory emphasizes spectroscopic and separation techniques and modern synthetic methods. Prerequisite: CHEM 0360.

1560. **Topics in Advanced Chemistry**
Lecture units on various topics of interest in chemistry. Topics will be announced. One course credit may be earned by successful completion of two lecture units in one semester or over two semesters. Evaluation is based primarily on literature research papers in the areas of the units completed. May be repeated once for credit. Written permission required.

1560A. **Molecular Modeling**
1560B. **Techniques in Inorganic Chemistry**
1560C. **Advanced Spectroscopy**
1560D. **Chemistry and Biology of Naturally Occurring Antibiotics**
1560E. **Biological Mass Spectrometry**
1560F. **Organic Structure Analysis**
1560G. **Nuclear Magnetic Resonance**
1560H. **Glycobiology**
1560I. **DNA Damage and Repair**
1560J. **Topics in Bioinorganic Chemistry**

1620. **Chemical Physics**
Topics in the chemical physics of molecules and solids, including structure, bonding, and radiative transitions. Prerequisites: CHEM 1140 or equivalent and written permission.

1620A. **Photoacoustics**
1620B. **Spectroscopy**
1620C. **Topics in Modern Physical Chemistry**

1700. **Nanoscale Materials: Synthesis and Applications**
An introduction to the chemical principles in the synthesis and self-assembly and physical properties in nano–optics, nano–electronics, nano–magnetism and nano–catalysis of nano–particles, nano–rods, nano–tubes, nano–wires and porous nano–structures. It will further illustrate how these nano–materials and their assemblies can be used in information storage, catalysis and biomedicine.

Primarily for Graduates

2010. **Advanced Thermodynamics**
Fundamental principles of macroscopic equilibrium thermodynamics. The three laws of thermodynamics, the thermodynamic potentials, temperature scales, heat engines and re-
frigerators, entropy, kinetic theory, and transport phenomena. Applications to solids, fluids, and magnetic systems; Gibbs relations, first and second order phase traditions, thermal radiation, gas expansions.

2020. **Statistical Mechanics**
Introduction to modern equilibrium statistical mechanics, including the classical and quantum descriptions of ideal gases, the molecular basis of thermodynamics, the concepts of ensembles and fluctuations, and the implications of quantum mechanical indistinguishability. Applications include chemical and phase equilibria, the transition-state theory of chemical reaction rates, and the theory of liquids.

2210. **Chemical Crystallography**
Introduces the principles of crystallography (plane groups, point groups, space groups, Bravais lattice, crystal classes), crystallographic methods (single-crystal, powder XRD, macromolecular), strategies for data collection, methods for data reduction, and structure interpretation; reviews modern crystal structure databases (CSD, ICSD) and search engines; reviews the historical development of crystallography and the scope, potential and application of X-ray analysis.

2310. **Advanced Inorganic Chemistry**
Comprehensive survey of topics in synthetic and mechanistic inorganic chemistry.

2320. **Physical Inorganic Chemistry**
The bonding and structures of inorganic compounds, including transition metal containing compounds and organometallics, and their spectroscopic properties are covered along with the group theoretical, quantum chemical, and physical methods employed. Prerequisites: CHEM 0500 and 1140 or equivalents or written permission. Recommended for seniors and first-year graduate students.

2410. **Physical Organic Chemistry**
Detailed examination of organic reaction mechanisms, reactive intermediates, and the methods employed for their characterization (e.g., kinetics, free energy relationships, isotope effects, molecular orbital theory, spectroscopy, and product distributions). Topics may include concerted, free radical, elimination, and photochemical reactions, and the chemistry of radicals, carbocations, carbanions, and carbenes. Prerequisites: CHEM 0500, CHEM 1140.

2420. **Organic Reactions**
Study of organic reactions and reaction mechanisms. Discussion and analysis of organic transformations. Topics can include arrow pushing strategies and synthetic methods.

2430. **Synthetic Organic Chemistry**
Methods, strategies, and mechanisms. Topics may include the chemistry of anions, cations, and radicals, concerted reactions, conformational analysis, and stereochemistry.

2770, 2780. **Quantum Mechanics**
Semester I: Time independent quantum mechanics and its application to atomic and molecular problems. Discussions of modern theories of electronic structure, chemical bonding, and molecular spectroscopy. Prerequisite: CHEM 1140 or equivalent.

2810, 2820. **Departmental Seminars**
No course credit. THE STAFF.

2870, 2880. **Departmental Colloquia**
No course credit. THE STAFF.
2920. Special Topics in Chemistry
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

   2920A. Chemistry and Physics of Amorphous Materials
   2920B. Organic Spectroscopic Methods
   2920C. Topics in Modern Spectroscopy

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. Research

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Classics

Professors Alcock, Bodel (Chair), Cherry, Fitzgerald, Gill, Reed; Professors Emeritus Boedeker, Boegehold, Donovan, Fornara, Holloway, Konstan, Putnam, Raaflaub, Wyatt; Associate Professors DeBrohun, Haynes Pucci, Scafuro; Assistant Professors Hanink, Mignone, Papaioannou; Senior Lecturer Amanatidou, Nieto Hernandez, Scharf.

The department provides both specialized training for those who wish to enter graduate school in preparation for a career in scholarship, and a broad liberal education for those with more general interests. Courses are offered from beginning to advanced levels in Ancient Greek, Latin, and Sanskrit language and literature, and also in Modern Greek. Each semester the department offers a number of courses that require no knowledge of the ancient languages, in such areas as classical literature, mythology, ancient history, philosophy, and religion.

The Department of Classics offers graduate work in Greek and Latin languages, literatures, linguistics, history, and philosophy, all leading to the degrees of A.M. and Ph.D. in Classics. The department also offers graduate work in Sanskrit leading to a Ph.D. in Classics and Sanskrit, and with the Department of History, sponsors a joint Ph.D. program in Ancient History. The director of graduate studies is Pura Nieto. The Program Directors of the Ph.D. programs in Sanskrit and Ancient History are, respectively, James Fitzgerald and John Bodel. The work of the department is carried on in formal courses, seminars, and guided research, with considerable flexibility in the case of students' special interests and programs. Emphasis is placed on overall command of the languages, literatures, and histories. Students are encouraged to select their courses from a reasonably wide area of interest, and to take account of appropriate study in related departments and programs, such as the Joukowsky Institute for Archaeology and the Ancient World, Comparative Literature, Egyptology and Ancient Western Asian Studies, History, Philosophy, Political Science, and Religious Studies.
Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit the department website at: http://www.brown.edu/academics/classics/ or http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

Master of Arts in Classics. For admission to candidacy students must present satisfactory evidence of completion of a substantial number of courses in Greek and Latin in their undergraduate program. The graduate program will consist of a minimum of eight courses including at least two seminars in Greek or Latin or Classics, and completion of a thesis which shall be an original investigation of some literary, historical, archaeological or linguistic topic. Competence must be demonstrated in French or German.

Doctor of Philosophy in Classics. The discipline of Classics entails a breadth -- and depth -- of focus that is nearly unparalleled. In proceeding to the doctoral degree, each student has the opportunity to enrich his or her knowledge of many aspects of Greek and Latin literature, history, and culture, as well as related fields (e.g., Sanskrit, archaeology, epigraphy). The major steps through which one attains this knowledge, however, vary from program to program. The following outlines the requirements for progressing through the Ph.D. courses at Brown University. Statements in quotes are excerpted from the departmental handbook for graduate study.

1. **Course Work**: "The student must acquire a minimum of 18 regular course credits in Classics, including at least 6 graduate seminars with departmental faculty. At least one seminar in Latin and one in Greek is required." The content of the course work is determined to some degree (see section B, 'Area Requirements'), but a wide variety of course offerings ensures that latitude is available for tailoring study to personal academic interests. Normally, four courses are taken in each semester in the first year, and then declining amounts in later semesters as the student is additionally managing teaching duties, etc.

2. **Area Requirements**:  
   a. **Prose Composition in Greek and Latin**: "Students should demonstrate competence in prose composition in at least one of the two ancient languages by the end of the first year and in the other by the end of the second year." This may be done in two ways: one is by an examination, which may be a "'take-home project'... executed over the course of a semester, with the assistance of lexica and other aids." The requirement is more often fulfilled, however, by passing courses in Prose Composition for each of the languages  
   b. **Archaeology**: This requirement may be satisfied "(a) by completing an advanced archaeology course in the Joukowsky Institute for Archaeology and the Ancient World or an epigraphy course in the Classics Dept.; (b) by examination; (c) by participation in the summer or regular program of the American School of Classical Studies at Athens, or in the summer program in Italian archaeology at the American Academy in Rome, or by work at other institutions after consultation with the Graduate Advisor."  
   c. **Greek or Roman History**: The requirement may be "satisfied by successfully completing a one-year course in Greek or Roman History, or by examination (i.e., the two final exams for the year-long course or an equivalent)."

3. **Exams in Ancient and Modern Languages**: 
a. **Translation Exam in Greek and Latin:** "These consist of three hours of Greek, and three hours of Latin translation in separate exams. Each examination includes six passages, three of prose, three of poetry, at least half of which will come from works on the Reading List,... The examinations are given three times yearly, in September, in the first weeks of December, and in the first weeks of May,... (it is expected) that most students will be able to pass both of these exams by the conclusion of their third year."

b. **Modern Languages:** A reading knowledge of German, and of either French or Italian, should be attained as early as possible. "Students should be prepared to prove competence in at least one of these languages upon entering the program; competence in the other must be proved no later than the fourth semester... by passing an exam administered by a faculty member or by receiving an honors grade in German 0120 (‘German for Reading’) and in similar courses in French and Italian when they are offered,... Exams ordinarily last an hour."

4. **Teaching Requirement:** "It is an integral part of the graduate training and the professional preparation in Classics to gain teaching experience. Two semesters of teaching are required of all graduate students." Teaching opportunities within the department vary; often, assignments progress from TA (teaching assistant) duties of working with a professor, grading and facilitating discussion sections to TF (teaching fellow) positions where the graduate student teaches a semester-long language course (usually introductory or second-year level) on their own.

5. **Preliminary Examinations:**

a. **Special Authors:** "Consists of two written examinations (three hours each), one on a Greek author or topic and the other on a Latin author or topic; at least one exam must focus on an author. (These exams may be taken) only after the Translational Exams and the other Prerequisites 1-4 above) have been passed. Preparation for these three-hour exams should not extend for more than a year and is undertaken in regular consultation with a faculty member selected by the..."

b. **Oral Examination:** "The student is expected to have read in the original language the materials on the departmental Reading List and to be familiar with the history of Greek and Roman literature as it is presented in the standard works on the subject. The oral examination consists of two halves, each of 90 minutes duration,... (consisting) of three segments each -- archaic, classical and post-classical Greek literature; and Latin literature of the Republic, Augustan period, and Empire... Students should aim at passing this examination no later than the end of the fourth year. The examination committee consists of three faculty members -- a Greek and a Latin examiner and a chair/timekeeper -- selected by the student in consultation with the Graduate Adviser. This committee also serves to approve the dissertation topic.

6. **The Dissertation:** Upon passing the oral preliminary examination, the candidate proceeds to dissertation work in consultation with an adviser and two additional readers. "The dissertation shall be a substantial and original investigation of some literary, historical, philosophical, linguistic or archaeological topic... A formal defense of the thesis is required by the university, and candidates will (save in unusual circumstances) defend their work before members of the Department of Classics.”

*Doctor of Philosophy in Classics and Sanskrit.* Candidates in Classics and Sanskrit must complete the Ph.D. requirements for Classics and also present four 1000-level courses in Sanskrit; a minimum of seven seminars, two of which shall be in Sanskrit; and a
dissertation topic requiring significant use of material in Sanskrit as well as Greek or Greek and Latin; preliminary written and oral examinations; the dissertation.

**Doctor of Philosophy in Sanskrit.** The Sanskrit track program in the Classics Department at Brown is focused entirely upon the Sanskrit language and its literatures, but its fundamental philosophy and approach to scholarship is the same as that of the program in Greek and Roman classics. Texts are examined and interpreted within their broad cultural and historical context on the basis of a rigorous preparation in the study of the Sanskrit language. While providing a broad basis for the study of Sanskrit in all phases of its development, the special strengths of the Sanskrit track program at Brown lie in the expertise of its current staff, Professor James Fitzgerald and Senior Lecturer Peter Scharf. James Fitzgerald’s principal field of expertise is Sanskrit Epic literature, especially the *Mahabharata*, and the religious, philosophical, and narrative literature proximate to the Sanskrit epics (Sanskrit *puranas*, *dharmasastra*, *Upanisads*, and early classical philosophical literature). Peter Scharf is an expert in the Paninian school of Sanskrit grammar and, more generally, in the linguistic and philosophical study of Sanskrit language, and also paleography. Students are required to gain both a general proficiency in the reading of Vedic, epic, and classical Sanskrit and then develop special expertise in the Sanskrit proper to their chosen area of research (which will be some selected subset of ancient religious literature, epic and Puranic texts, *sastra* literature, *darsana* literature, or *kavya*). Students must demonstrate their mastery of the language by way of a General Sanskrit Reading Exam and a Special Sanskrit Reading Exam focused upon their chosen area of expertise.

1. **Course Work:** The student must acquire a minimum of 18 graduate credits during the three years of coursework. These courses will include Sanskrit 1020 (Religious Literature), 1080 (*Mahabharata*), 1100 (Vedic Sanskrit), 1400 (Panini), 1600 (*belles lettres, kavya*), and 1800 (Classical Philosophy, *darsanas*), which courses will provide them first hand experience with major texts of each of those areas of Sanskrit literature and introduce them to the fundamental secondary scholarship in each of those areas. Students will also take the basic proseminar (Sanskrit 2000) and at least three research seminars. The balance of coursework will consist of courses relevant to a student’s research interests that are offered in other departments and programs at Brown (e.g., Religious Studies, Comparative Literature, Classics courses in Latin or Greek Literature, History, English Literature, Ancient Studies, Historical Linguistics, Art History, etc.) and individualized reading courses in a student’s special area of Sanskrit. Normally, four courses are taken each semester in the first year, and then declining numbers in later semesters as the student is additionally managing teaching and service duties. Students entering the program will take a diagnostic placement test in Sanskrit at the outset of their graduate career at Brown. Some students may be required to take Sanskrit 0300 and 0400 during their first year, if the diagnostic test indicates that to be advisable. These courses are not eligible for graduate credit.

2. **Language Study and Language Exams:**
   a. **Modern Languages:** Having passed the reading exam in French or German at the beginning of the first year of study, the student should demonstrate adequate reading competence in the other of those two languages no later than the end of his or her third semester of residence. This demonstration may be accomplished by passing an exam administered by a faculty member or by receiving an honors grade in German 0120 (‘German for Reading’) or in a similar course in French, if offered. Students in Sanskrit will benefit from studying Hindi at some stage of their graduate career and are encouraged to do so, if possible;
Hindi is an important scholarly language for some fields of research and will allow the scholar to make better contact with traditional Indian scholars when conducting research in India. If the study of other South Asian languages is necessary or advisable for a student's program, it may be possible to arrange for coursework or examination in conjunction with other institutions, summer institutes, etc.

b. Sanskrit Exams: Students must pass the General Sanskrit Reading Exam no later than May of their third year of residence in the program. They must pass their Special Sanskrit Reading Exam no later than December in their seventh semester of residence. Each exam is a four-hour exam consisting of two two-hour segments. In each exam, one segment will require the student to translate a set of passages at sight and another segment will require the translation of a set of passages with the consultation of a dictionary allowed. These exams will be administered twice a year as needed, once in December and again in May. Students should take the general exam every semester of residence until they pass it and they should work out a program of work for their special exam with the Professor of Sanskrit at the conclusion of their first year of residence.

3. Qualifying Exams: These consist of two four-hour written examinations, one in the student’s major field and another in a secondary field. The focus, scope, and reading lists for these examinations will be worked out on an individual basis, in view of the research agendas of each student. The major field exam should be passed no later than the end of the sixth semester of residence and should serve as a platform for the formulation of the dissertation prospectus. The student should pass the secondary field exam no later than the eighth semester of residence.

4. Ph.D. Candidacy and Dissertation: A dissertation prospectus should be developed with the advisor during the seventh semester of residence, at the latest. Once the student’s advisor deems the prospectus ready, it will be publicly presented to the faculty of the Department of Classics and other interested faculty, no later than the eighth semester of residence.

Once the prospectus has been approved, the candidate proceeds to dissertation work in consultation with his or her advisor and two additional readers, one of which will ordinarily be a Sanskritist from another institution. The dissertation shall be a substantial and original investigation of a significant scholarly question or problem. A formal defense of the thesis is required by the university, and candidates will (save in unusual circumstances) defend their work before members of the Department of Classics and other interested faculty.

5. Teaching and Service: It is an integral part of graduate training and professional preparation in Classics to gain teaching experience. Two semesters of teaching are therefore required of all graduate students. Teaching opportunities within the department vary; often, assignments progress from TA (teaching assistant) duties of working with a professor, grading and facilitating discussion sections, to TF (teaching fellow; a higher stipend obtains) positions where the graduate student teaches a semester-long language course (usually introductory or second-year level) on his or her own.

Joint Classics-History Ph.D. Program in Ancient History. The Ph.D. program in ancient history at Brown is an interdisciplinary program established jointly by the departments of Classics and History to train ancient historians to meet the needs and goals outlined in the following paragraphs.
Background and Goals. A great legacy of the Greco-Roman period is the extraordinarily rich supply of important literary texts ("the classics"). Consequently, from its modern beginning in the 19th Century, the historical study of antiquity has been dominated by philology. From nearly that same beginning, however, a few scholars have approached the study of ancient history through methodologies of the social sciences (e.g., Max Weber) or ancillary fields such as archaeology, epigraphy, and numismatics (e.g., Theodore Mommsen, Michael Rostovtzeff). Inevitably, historians schooled in one area have tended to emphasize that approach over the others, producing a natural bias that still divides the discipline. Ancient historians trained in classics departments are often perceived as too philological and unfamiliar with methodologies used in history and other social sciences. Those trained in history departments, on the other hand, are often suspected of being deficient in the classical languages and thus unable to appreciate the nuances of ancient textual sources and culture. Whatever the foundations of such judgments, they discourage desirable syntheses and keep young ancient historians from fully exploiting available career opportunities. After two centuries, therefore, it seems appropriate to combine the three approaches of philology, historical methodologies, and ancillary disciplines into a single program of training in ancient history.

A graduate program that embraces these goals must be capable of helping its students achieve a high level of competence in the ancient languages and philology; it must enable them to acquire expertise in the historiographical methodologies used in the fields of history and the related social sciences (e.g. demography, statistics, GIS); it must familiarize them with the ancillary disciplines of ancient history (epigraphy, numismatics, archaeology, and papyrology); and it must introduce them to other fields that contribute toward a fully comprehensive historical view of antiquity (e.g. religious studies, Egyptology, anthropology, art history). Most of all, such a program must emphasize the intellectual challenge and excitement of moving among various fields, of interdisciplinary interaction and collaboration, and of developing the larger and broader conceptions that can be fostered through comparative history. Students trained as historians and classicists may be expected to be attractive to both types of departments and thus to have broader prospects for a productive career in either.

Definition. At present, “ancient history” comprises primarily Greek and Roman history. The program will be expanded (for example, to include the history of the ancient Near East, of the late antique and early medieval period in the west [ca. 300-800 CE], or of the Byzantine empire) as sufficient resources (especially faculty positions) become available. Students interested in the comparative history of the ancient world can pursue coursework and guided research through the Program in Early Cultures.

Supervision. The program is operated and supervised by a Director (currently Professor John Bodel, Classics and History) in consultation with an Executive Committee comprised of the other Brown faculty in Ancient History, currently Professor Kenneth Sacks (History), and Assistant Professor Lisa Mignone (Classics).

Contributing Faculty. Tenured faculty contributing to the program, in addition to the ancient historians mentioned previously, are drawn from the departments of Classics: Adele Scafuro (Greek law and epigraphy), Susan Alcock and John Cherry (Greek and Roman archaeology); History: Amy Remensnyder (European Middle Ages); Egyptology and Ancient West Asian Studies: James Allen (Egyptology) and John Steele (Exact Sciences, Mesopotamia); Religious Studies: Michael Satlow
Untenured Participating Faculty. In Classics: Stratis Papaioannou (Byzantine history and literature); in the Joukowsky Institute of Archaeology and the Ancient World: Michelle Berenfeld (Roman art and archaeology); in Art History: Rebecca Molholt (ancient art); in Religious Studies: Nancy Khalek (early Islam).

Admission. Candidates are admitted into the program by either the Classics or the History Department. The admitting department assumes financial responsibility for all candidates it admits to the program. Applicants may apply directly to either department and should make clear that they are applying to the joint Ph.D. program in ancient history.

Criteria for Admission. Candidates are admitted according to the criteria valid in the department to which they apply and in competition with all other applicants to these departments. At the very least, they have to meet the following criteria: advanced level in Latin or Greek; at least intermediate level in the other ancient language; reading knowledge in one of four modern foreign languages (German, French, Italian, and Spanish) that are most important for research in ancient history. Applicants to the program will be screened according to these criteria by the program’s faculty before the departments make their decision. Students are strongly encouraged to attain these levels before applying (if necessary, for example, by attending a post-baccalaureate program).

Duration and Funding. The program is designed to take six to seven years (about a year longer than other Ph.D. programs in the sponsoring departments). This duration is justified by the program’s enhanced scope (as described in the introductory paragraph). Students are funded by the sponsoring programs and, when available, through fellowships designated for advanced students in the program.

Course Work. Students will take courses that are tailored to their specific needs. Apart from courses in the ancient languages and histories, they will take at least one graduate seminar each semester (until the preliminary exam is passed), including at least one history research seminar outside of ancient history and one classics seminar on a nonhistorical author or topic. In addition, they will take, at appropriate times, in the Department of History, the graduate colloquium on historical methodologies and (if available) a course on theory and/or philosophy of history, and, in the Department of Classics, the proseminar on methodologies and ancillary disciplines.

Mandatory AM. Students in the program will need to pass the requirements for a mandatory AM, usually no later than the beginning of the fifth semester. These requirements include: (a) sight reading exams in Greek and Latin; (b) reading knowledge of two modern languages other than English (one of which must be German); (c) a written exam in one historical field (Greek or Roman); (d) at least one research paper on a historical topic. Students who do not pass these requirements by the beginning of their seventh semester but have successfully completed 14 courses will receive a terminal AM.

Additional Requirements. Students in the program are expected to demonstrate, through successful completion of an appropriate course or a written exam, competence in (a) one ancillary field (normally epigraphy or archaeology; exceptionally numismatics, papyrology, or art history), (b) one Greek historical author or area of historiography, (c) one Roman historical author or area of historiography.

Minor Fields. Written and oral exams will be taken in two minor fields: Greco-Roman literature and a historical field outside of Greco-Roman history.
**Reading List.** The reading list, focusing on historical authors, is designed to give students guidance as to which authors and works they should read in the original languages. The list will also comprise standard works of secondary literature with which students should be familiar by the time they take their preliminary exam.

**Preliminary Exam.** Students are expected to take the preliminary exam by the beginning of their ninth semester, at the latest. This exam will consist of an oral examination in two major fields (one hour each): Greek history (from the archaic to the end of the Hellenistic period) and Roman history (from the beginning to Justinian). There will be one examiner in each field and one presider; the other members of the Ancient History faculty are invited to attend.

**Ph.D. Thesis.** After passing the preliminary exam, students will choose a dissertation topic in ancient history. The dissertation committee will consist of three faculty who are best able to advise the student on the chosen topic; at least two of these must be among the program’s contributing faculty. When completed, the dissertation will be defended in an event that is open to all faculty in the sponsoring departments and to students in the program.

**Related Activities.** Graduate facilities at Brown are particularly rich in the fields of Greek and Latin literature, philosophy, history, epigraphy, and archaeology. Students may take related courses offered in Art, Comparative Literature, Egyptology and Ancient Western Asian Studies, History, the Joukowsky Institute for Archaeology and the Ancient World, Judaic Studies, Linguistics, Philosophy, and Religious Studies.

Brown University is a supporting institution of the American School of Classical Studies at Athens, the American Academy in Rome, and the Intercollegiate center for Classical Studies (see ). Periods of study at one of these institutions are regularly undertaken by graduate students in the department.

See also Joukowsky Institute for Archaeology and the Ancient World (see page 179).

**Courses of Instruction**

**Classics**

**Primarily for Undergraduates**

0010. *The Greeks*
For centuries Western civilizations have seen the Greeks as their intellectual and spiritual ancestors. The ‘Greek miracle’ is explored by reviewing its major achievements and discoveries: poetry (heroic epic, tragedy, political comedy), philosophy, historical research, political analysis and institutions, science. All texts read in English.

0020. *The Romans*
The development of literary culture at Rome, from the beginnings to the end of the Empire, with an emphasis on the major genres, authors, and works of Roman literature. Intended for all students, regardless of year or background, who desire an introduction to the major facts of Roman literary culture. All texts are read in English. L. MIGNONE.

0150. *Ancient Philosophy*
Ancient Greek views about the prospects and limits of reason in the human being’s search for a good and valuable life. What the best life is; how, and how far, reason can provide for its realization; what social/political conditions it requires; how vulnerable it is (and should be) to uncontrolled happenings. Authors include Euripides, Thucydides, Plato, Aristotle, Epicurus, Lucretius, Augustine, and Dante.
Indian Civilization through Its Literature
An examination of various historical, geographical, social, scientific, and literary aspects of Indian civilization through the reading of translations of original works of Indian culture such as the short story collection *Bhatkathloksamgraha*. Each topic that comes up in the story is explored in greater depth in supplementary material.

Topics in Classical Literature and Civilization
May be repeated for credit.

Religion and Magic in Ancient Greece
Examines the sacred or supernatural realm that pervaded ancient Greek culture, considering both public and private practices. Topics include belief in the gods; aspects of polytheism; sacrifice; pollution; athletic and civic festivals; oracles; mystery cults; death and afterlife; hero cults; religion and gender; curses, spells, and charms; ancient atheism and agnosticism. D. Boekeker.

The Worlds of Late Antiquity
A survey of Western culture in all its variety — social, political, economic, literary — in those centuries when the Roman Empire supposedly fell, leaving in its wake the so-called Dark Ages. Emphasizes the dialectic of continuity and change that leads from Imperial Rome to the vast Empire of Charlemagne. J. Pucci.

Greek Tragedy
An investigation of many of the surviving plays of the Greek tragedians Aeschylus, Sophocles, and Euripides. Considers the diverse aspects of ancient drama: the context, both religious and sociopolitical; issues of theatrical production, the poetic texture of the plays; and the influence of classical drama on later drama and western thought. Additional readings may include Aristophanes’ *Frogs* and *Thesmophoriazusae* and selections from Aristotle’s *Poetics*, the earliest criticism of Greek tragedy. J. B. Debrohun.

The World of Byzantium
Explores the literary, artistic, and musical culture of Byzantium in its sociopolitical context, 4th-15th century CE. Topics include: between antiquity and modernity; a multi-culture; Byzantium through Western eyes; performance in court and church; life at home and school; insiders and outsiders; practices of gender; Holy men; friends, lovers, letters; Iconoclasm, Byzantine aesthetics; autobiography and fiction; after Byzantium in Eastern Mediterranean. E. Papaioannou.

Ancient Utopias/Imaginary Places
Explores the ancient Greco-Roman utopian tradition in its two branches: literary depictions of mythological or fantastic utopian visions, including representations of societies remote in time (“Golden Age”) or place (Homer’s Phaeacia); and literature that criticizes contemporary society or describes an idealized “possible” society (Plato’s *Republic*, Aristophanes’ *Ekklesiazusae*). Also considers the postclassical utopian (and dystopian) traditions. J. B. Debrohun.

Religious and Philosophical Thought in Ancient India
The historical development of the main themes of ancient Indian religious and philosophical thought. Part I: The rise of monism in tension with polytheism, the efficacy of Vedic words and Vedic rites, and early Brahminic cosmology and psychology. Part II: The rise of the non-Brahminic traditions (Jainas, Ajivikas, and Buddhists) challenging Vedic revelation and everything based upon it (mainly the rites and authority of brahmans). Part III: The ensuing ‘conversations’ among the competing traditions, conversations that developed new world-views and new methods for effecting human well-being in the cosmos. J. Fitzgerald.
0820. Epics of India
An introduction to Indian epic literature with reading and analysis of one or more of India's grand and powerful epics, such as the Mahabharata, the Ramayana, the Cilappadikaram, and others. J. Fitzgerald.

0830. Classics of Indian Literature
This course will introduce, in English translations, the belles lettres of India, primarily of ancient and 'medieval' India, primarily of works originally in Sanskrit. We will read selections of the best poetry, drama, and narrative literature of Indian civilization—Kalidasa's play Sakuntala, his epic poem The Birth of the Divine Prince, or his poem The Cloud Messenger; and, or, the plays of Bhasa, the prose of Dandin's Adventures of the Ten Princes or Bana's classic novel Kndambari; or selections from the Great Story (Brhatkatha) or The Ocean of the Streams of Story (Kathasaritsagara), etc., etc., etc. We may also sample some classical Tamil poetry (see A. K. Ramanujan's The Interior Landscape) or contemporary "classics" such as Banerjee's Bengali novel Panther Panchali.

0840. Classical Philosophy of India
An introduction to the classical traditions of philosophy in India. After presenting a general overview of this discourse and its basic Brahminic, Buddhist, and Jain branches, the course will examine selected traditions and themes from both the several schools concerned entirely with gaining ultimate beatitude (the Highest Good) (the schools known as Samkhya, Yoga, Theravada Buddhism, Mahayana Buddhism, Jainism, and Vedanta) and the schools that concentrate on issues of logic, metaphysics, and language and hermeneutics (Nyaya, Vaisesika, and Purva Mimamsa, respectively).

0900. Greek Mythology
Reviews major myths along with some lesser known variations, in order to understand how ancient Greeks imagined their relation to the divine world, to nature, and to other human beings. Considers connections between myth and cult or ritual, and also to the psychological, social, historical, and aesthetic aspects of classical myths. Examines adaptations of classical myths in later societies and comparative materials from other cultures.
D. Konstan.

0990. Concepts of the Self in Classical Indian Literature
Examination of the great Indian epic Mahabharata and related mythology to introduce the context for the most ancient speculations of the Rgveda and the subtle teacher-student dialogues about the self contained in the Bhagavadgita and Upanishads. We will also examine the more systematic Indian philosophical texts and note their resonance in ancient and modern European conceptions of self.
P. M. Scharf.

For Undergraduates and Graduates

1120. Comparative Themes and Topics
1210, 1220. The History of Greece from Archaic Times to the Death of Alexander
A detailed examination of the history of the Greeks—political, economic, and social—from Homer’s time to the establishment of the Hellenistic monarchies by the successors of Alexander the Great. The ancient sources are closely and critically studied (in translation).

1260. The Roman Reception of Greek Literature
Reading a number of shorter poems and excerpts in both Greek and Latin, paying particular attention to how Roman writers respond to Greek examples. Readings include Catullus and Sappho, Horace and Pindar, Virgil and Theocritus, and others, with a view to the interactions of meter, genre, and language.
K. Haynes.
1300. *Ancient Greek Political Theory and Practice*
A consideration of how, in the course of 300 years or so, a notion of democracy came into being, how the notion became a form of government, and how the government worked, especially in its most developed form. Readings from Homer, Herodotus, Thucydides, Xenophon, and Aristotle in English translation. Traces the changes from kings, to aristocracy, to tyrants, to democracy. No prerequisites. Freshmen and sophomores by permission of the instructor.

1310. *Roman History I: The Rise and Fall of an Imperial Republic*
The social and political history of Rome from its origins to 14 CE. Focuses on social conflicts of the early Republic; the conquest of the Mediterranean and its repercussions; the breakdown of the Republic and the establishment of monarchy. Special attention given to the role of women and slaves, and to law and historiography. Readings emphasize ancient sources in translation.

1320. *Roman History II: The Roman Empire and Its Impact*
The social and political history of the Roman Empire (14–565 CE). Focuses on expansion, administration, and Romanization of the empire; crisis of the 3rd century; militarization of society and monarchy; the struggle between paganism and Christianity; the end of the Empire in the West. Special attention given to the role of women, slaves, law, and historiography. Ancient sources in translation. J. P. Bodel.

1350. *Comparative Grammar of Greek and Latin I*
An introduction to the histories of the Greek and Latin languages within the frame of their Indo-European antecedents. Addresses the sound systems of the two languages and applies our knowledge of them to a consideration of the semantics (etymology) of words in the languages. For those who know Greek and Latin well, though no specific prerequisites can be listed. Students of classics and linguistics are the main audiences addressed.

1400. *Love, Sexuality and Friendship*
Could lovers be friends in ancient Greece and Rome, or were the two categories mutually exclusive? How did pederastic relations, based on a difference in age and role, enter into the construction of erotic identities in the classical world? Through a reading of primary texts in translation, as well as pertinent studies of gender and the emotions, we investigate the nature of affectionate relations in antiquity. Enrollment limited. Written permission required.

1410. *Roman Religion*
Explores the religions of Rome, from the animism of king Numa to the triumph of Christianity. Topics include: concepts of religion and the sacred; sacred law; ritual space and the function of ritual; festivals; divination; magistrates and priests; the imperial cult; death and the afterlife; mystery cults; astrology and magic. J. P. Bodel.

1750. *Undergraduate Seminar*

1770. *Ancient Law, Society and Jurisprudence*
Brief survey of ancient (e.g., Mesopotamia, Israel) and modern legal systems (USA, to common and civil law systems). Major focus: Athenian and Roman law. Topics: sources of law, its evolution, (e.g., feuding societies); procedural law (e.g., how to bring cases); legal reasoning; rhetoric; substantive law (e.g., regarding marriage, religion, homicide). Different approaches are used: historical, comparativist, anthropological, case-law study. A. Scafuro.

1970. *Special Topics*
Enrollment limited.

1990. *Conference: Especially for Honors Students*
Primarily for Graduates

2000. Proseminar in Classics
Introduction to standard research methods and tools in major subdisciplines of classical philology and ancient history. Required of entering graduate students. Survey of various subdisciplines in order to become familiar with field and scholarly principles. S/NC.

2010. Problems in Old World Archaeology
2070. Graduate Seminar
2080. Graduate Seminar
2110. Graduate Seminar
2930. Special Topics in Classics
2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit. THE STAFF.

2980. Reading and Research
2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit. THE STAFF.

Greek

Primarily for Undergraduates

0100. Essentials of the Greek Language
A two-semester approach to ancient Greek with special emphasis on developing facility in rapid reading of Greek literature. Selections from Attic Greek authors. No previous knowledge of Greek is required.

0110. Introduction to Ancient Greek
Intensive, one-semester introduction to Greek. No previous knowledge of Greek is required. Double credit.

0200. Essentials of the Greek Language
See Essentials of the Greek Language (GREK 0100) for course description.

0300. Introduction to Greek Literature
An introduction to Greek literature through intensive reading. Prerequisite: GREK 0200, GREK 0110, or the equivalent. We will work on grammar skills while reading extensively in the Histories of Herodotus, who is not only the “father of history” but also a great (and delightful) artist in prose.

0310. Grammar Review and Composition
Half credit.

0400. Introduction to Greek Literature
Prerequisite: GREK 0300 (or the equivalent). Review of grammar of the Attic dialect through rapid reading of texts by Lysias, Plato, or Xenophon. Emphasis on syntax and style.

For Undergraduates and Graduates

1050. Greek Drama
1060. Herodotus
1080. *Attic Orators*
C. W. FORNARA.

1010. *Introduction to Greek Drama*
Both for students who have recently finished GREK 0300 and 0400 and for those who have little or no experience of translating Greek drama. Begins with a brief review of Attic grammar with readings in Plato. The turns to Greek drama with students reading a play of one of the dramatists and focusing on philological analysis and meters.

1110. *Selections from Greek Authors*

1140. *Introduction to Greek Linguistics*
Examines changes that took place in Greek from the time of its separation from its parent language (Proto-Indo-European) to the dialects of Classical times (5th-4th c.B.C.). This course is also an introduction to the methodology of historical linguistics, concentrating on phonology. Proficiency in ancient Greek is required. P. NIETO HERNANDEZ.

1150. *Greek Prose Composition*
Survey of Greek grammar and an opportunity to reflect on problems of translation. Main goals: to improve the students’ command of prose syntax (both in reading and writing), and to develop a keen sensitivity towards issues of translation. A variety of texts written in Attic prose are read and analyzed in class. Students are expected to write two to three compositions a week in good Attic prose. Advanced knowledge of ancient Greek is a prerequisite for this course. P. NIETO HERNANDEZ.

1260. *Plato and Aristotle*

1810. *Early Greek Literature*
Surveys early Greek literature. Works studied include the *Iliad, Odyssey*, the Hesiodic poems, and archaic lyric and elegiac poetry. Emphasis on literary interpretation, the interpretive problems inherent in the study of archaic poetry, and the poetics of oral poetry. Extensive readings in the original.

1820. *Fifth Century Survey*
We begin with Pindar and read poetry and prose literature composed throughout the fifth century, with attention to the historical development of the literature, the styles in which it is written, and the intellectual ideas that drive it.

1910. *Special Topics*

1930. *Special Topics: Greek Literature and Civilization*

1990. *Conference Honors Students*
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

**Primarily for Graduates**

2000. *Graduate Seminar*

2020. *Graduate Seminar*

2050. *Graduate Seminar*

2070. *Graduate Seminar*

2100. *Graduate Seminar*

2110. *Graduate Seminar*

2120. *Graduate Seminar*

2920. *Reading and Research*
2970. Preliminary Exam Preparation  
No course credit. THE STAFF.

2980. Reading and Research

2990. Thesis Preparation  
No course credit. THE STAFF.

Latin

Primarily for Undergraduates

0100. Essentials of the Latin Language  
An intensive two-semester approach to Latin with special emphasis on developing facility in the rapid reading of Latin literature. No previous knowledge of Latin is required.

0110. Introduction to Latin  
Intensive, one-semester introduction to Latin. No previous knowledge of Latin is required. Double credit.

0200. Essentials of the Latin Language  
Second course in an intensive two-semester approach to Latin. Special emphasis on developing facility in the rapid reading of Latin literature. No previous knowledge of Latin is required.

0300. Introduction to Latin Literature  
An introduction to Latin literature through intensive reading of major authors in prose and poetry with careful attention to grammar and style. Prerequisite: LATN 0100, 0200 or 0110 (or equivalent).

0310. Grammar Review and Composition  
Half-credit course with attention to student's individual needs.

0400. Introduction to Latin Literature  
See Introduction to Latin Literature (LATN 0300) for course description.

0510. Readings in Latin Literature  
For those who wish to work at a slower pace or who cannot devote a full course to language study. The topics vary from year to year. Half credit.

For Undergraduates and Graduates

1010. Latin Lyric: Catullus and Horace  
Introduction to Latin lyric poetry through the poems of Catullus and Horace. Emphasis placed on careful reading of the poems, which will be considered individually, as parts of a collection, and as representatives of the poetry we call lyric. Also explored will be secondary scholarship on ancient lyric through reading and discussion of a number of journal articles and/or book chapters (to be assigned). J. B. DEBROHUN.

1020. Cicero

1040. Virgil

1060. Roman Historical Writing

1110. Selections from Latin Authors

1120. Selections from Later Latin Authors
1150. *Latin Prose Composition*
Reviews the basic tenets of Latin syntax, composition, and style, to shore up your composition skills with English to Latin translations exercises from Bradley's Arnold, and to study the stylistic traits of 7 Roman authors: Cato, Caesar, Cicero, Sallust, Livy, Seneca, and Tacitus. The course will proceed chronologically according to author. Apart from the course books, you will all be asked to buy a course pack on Latin prose style. Nota bene: This course is offered with an "extra" track: you may choose to spend an extra hour of class time each week for the same amount of class credit. In the extra hour, we will additionally translate select passages from English into Latin in the literary style of the 7 authors. Class time will be spent on (a) translation exercises and review; (b) identifying the stylistic and syntactic characteristics of the 7 authors under study, and, for those who choose the "extra" option (c) review and comparison of stylistic translations for each week. J. B. DEBROHUN.

1250. *Law and Literature*

1810. *Survey of Republican Literature*
M. C. PUTNAM.

1820. *Survey of Roman Literature from Horace to Suetonius*
J. P. BODEL.

1910. *Special Topics*

1930. *Advanced Readings in Latin Authors*

1970. *Special Topics*

1990. *Conference: Especially for Honors Students*

Primarily for Graduates

2010. *Graduate Seminar*

2020. *Graduate Seminar*

2030. *Graduate Seminar*

2040. *Graduate Seminar*

2080. *Graduate Seminar*

2090. *Graduate Seminar*

2110. *Seminar: Roman Satire*

2120. *Graduate Seminar*

2970. *Preliminary Exam Preparation*
No course credit. THE STAFF.

2980. *Reading and Research*

2990. *Thesis Preparation*
No course credit. THE STAFF.

Modern Greek

Primarily for Undergraduates

0100, 0200. *Introduction to Modern Greek*
Designed for students with little or no prior knowledge of Modern Greek. The aim is to develop the students’ ability to speak, understand, write and read Modern Greek, using a va-
riety of themes ranging from talking about one’s self and getting by in a Greek speaking environment, to expressing ideas and opinions on various topics. E. AMANATIDOU.

0300, 0400. Intermediate Modern Greek
Continuation of MGRK 0100 and 0200, but may also be taken by anyone with an adequate language and vocabulary awareness. The course focuses on further development of the four language skills and provides students with the opportunity to familiarize themselves with, and expand their knowledge of, aspects of Greek culture and society. E. AMANATIDOU.

0500. Advanced Modern Greek
Places emphasis on the improvement of oral/aural skills via presentations, debates and conversation based on readings of literary and journalistic prose. The relationship between Greek poetry and music will be explored through a survey of mainly post-war poetry that has been put to music. Writing activities will include creative writing, critical commentaries and translation from and into Greek. E. AMANATIDOU.

0600. Advanced Modern Greek
Advanced level course for students who wish to improve their language skills, especially reading and writing. A central feature of the course will be reading and responding to material taken from literary texts and journalistic prose, dealing with contemporary issues such as education, employment, etc. E. AMANATIDOU.

For Undergraduates and Graduates

1910. Special Topics in Modern Greek

Sanskrit

Primarily for Undergraduates

0100, 0200. Elementary Sanskrit
After examining the relation of this ancient Indo-European language to our own language and studying its sounds, script, and phonological processes, the remainder of the first semester and half of the second surveys the intricate and highly organized structure of the grammar. The second semester closes with reading a selection from the Indian epic, The Mahabharata. P. M. SCHARF.

0300. Sanskrit Epic Narrative
Consolidates and extends the knowledge of Sanskrit grammar introduced in first year Sanskrit, acquaints students first-hand with basic themes of ancient Indian culture, and cultivates the reading and interpretive skills necessary to read epic and closely related Sanskrit narrative with comprehension and increasing fluency. Prerequisite: SANS 0200. J. FITZGERALD.

0400. Classical Sanskrit Story Literature
Introduces students to the more challenging Sanskrit of classical story literature. It also continues to extend the knowledge of Sanskrit grammar introduced in first year Sanskrit and developed in SANS 0300, as well as present basic Indian cultural themes. Prerequisite: SANS 0300. J. FITZGERALD.

For Undergraduates and Graduates

1020. Early Sanskrit Philosophy and Religion
Reading in Sanskrit of selections from the Upanisads, Bhagavad Gita, Dharmasastras, etc. Prerequisite: SANS 0200. J. FITZGERALD.
1080. The Critical Episodes of the Mahabharata
A guided tour of the structure of the Mahabharata, "The Great Epic of India," through the reading in Sanskrit of selected critical passages. J. FITZGERALD.

1100. Vedic Sanskrit
Introduction to reading the Rg Veda and later Vedic literature, with particular attention to the grammar of Vedic Sanskrit. J. FITZGERALD.

1400. The Sanskrit Grammatical Tradition
Introduction to the Sanskrit tradition of vyakarana (grammatical derivation and analysis) through reading Panini's Astadhyayi; and commentaries upon it. J. FITZGERALD.

1600. Sanskrit Belles Lettres
Introduction to kavya (classical Sanskrit belles lettres) — poetry, drama, and prose narrative — through the reading of authors of the Classical Period as well as works on aesthetics and commentaries upon them. J. FITZGERALD.

1800. Classical Schools of Indian Philosophy
Introduction to the classical Brahminic darsanas (comprehensive, rationalized systems of philosophy and, or, theology dealing with Hermeneutics and Philosophy of Language, Logic, Metaphysics, and Ultimate Beatitude) and to corresponding Buddhist and Jain traditions through reading, in Sanskrit, of selected works. J. FITZGERALD.

1910. Advanced Sanskrit
In-depth study of major poetic, dramatic, epic, philosophical, religious, grammatical, medical, or astronomical texts. Topics depend on the interest of students. May be repeated for credit.

1990. Conference: Especially for Honors Students

Cognitive, Linguistic, and Psychological Sciences

Professors J. Anderson, S. Blumstein, R. Burwell, M. Carskadon (Adjunct), R. Church, C. Garcia Coll (Secondary), B. Hayden (Adjunct), W. Heindel (Chair), P. Jacobson, J. Krueger, P. Lieberman, B. Malle, J. Morgan, A. Simmons, S. Sloman, K. T. Spoehr (Assoc. Chair), W. Warren; Associate Professors R. Colwill, F. Domini, D. Sobel, L. Welch, J. Wright; Assistant Professors D. Amso, D. Badre, F. Cushman, M. Frank, L. Kertz, T. Serre, J. Song; and members of associated departments.

We are delighted to announce the formation of the Department of Cognitive, Linguistic & Psychological Sciences (CLPS) as of July 2010. CLPS is dedicated to the multidisciplinary study of mind, brain, behavior, and language, and was formed through the merger of the Department of Cognitive and Linguistic Sciences and the Department of Psychology. Both departments have had a long and distinguished history at Brown: the Department of Psychology was created in 1892, and the Department of Cognitive and Linguistic Sciences was created in 1986 by merging the Department of Linguistics with the faculty participating in the Center for Cognitive Science. The two departments have typically taken complementary approaches to common scientific questions. State-of-the-art research on these problems requires spanning several levels of analysis using a range of approaches and methodologies, and the integration of the departments aims to create an environment in which this intellectual synthesis will flourish.

The focus of CLPS is on the study of mind, brain, behavior, and language, including such mental abilities as perception, categorization, thinking, reasoning, problem-solving,
learning, memory, attention, action, emotion, personality, speech, language processing, linguistic structure, and communication. Faculty within the department pursue the functional organization of these capacities, the representational and computational components that underlie them, their neural bases in the brain, their evolution and development across the lifespan, and how they shape individual and social behavior in the world. To this end, a diverse set of methodologies is utilized including psychophysical and behavioral experiments, formal analysis, computational modeling, neuroimaging, and neuropsychological and neurophysiological studies, in humans and other species. Our undergraduate concentrations in Psychology, Cognitive Science, Cognitive Neuroscience, and Linguistics are designed to educate our students broadly within the area of mind, brain, behavior, and language, and to provide a platform for students interested in pursuing advanced degrees in these areas for productive careers as teachers, scholars, and scientists. Through our lecture, laboratory, and seminar courses, academic advising, Honors Program, and other undergraduate research opportunities, we encourage our students to think critically, to pursue scholarly topics freely, and to achieve scholarly excellence. We expect that these pursuits will prepare students for a lifetime of learning. Our graduate programs in Psychology, Cognitive Science, and Linguistics are organized into broad areas of research that represent several of the major sub-disciplines within the study of mind, brain, behavior, and language: Cognitive and Behavioral Neuroscience; Development; Perception and Action; Language and Linguistics; Social and Personality Psychology; and Cognition. Through seminars, scholarly projects, research, teaching experience, career development programs, and faculty mentoring, our graduate students are expected to develop the skills, expertise, and perspectives to pursue careers in teaching and research.

Undergraduate Programs

Undergraduate concentrations are offered in these disciplines:
- Cognitive Neuroscience (Sc.B.)
- Cognitive Science (A.B., Sc.B.)
- Linguistics (A.B.)
- Psychology (A.B., Sc.B.)

For a complete description of the following standard concentration programs leading to the bachelor’s degree, please visit:
http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

Department of Cognitive, Linguistic, and Psychological Sciences is a unique interdisciplinary department that offers Ph.D. programs in three fields: Cognitive Science, Linguistics, and Psychology. Graduate students are admitted to the Department as a whole and select a specific Ph.D. program by the end of their first year. Given the interdisciplinary collaborations among faculty in the department, graduate students are able to carry out coursework and research in many areas and from many methodological perspectives. Students are encouraged to bring together faculty from the different programs in their first-year project committee to be exposed to multiple approaches and traditions.

The department currently conducts research in the following areas:
- Animal Learning, Cognition & Behavior
- Behavioral and Cognitive Neuroscience
- Cognition and Memory
• Perception, Action, and Sensory Processes
• Social Psychology
• Psycholinguistics and Neurolinguistics
• Theoretical Linguistics
• Computational Modeling of Mind, Brain, and Behavior

For more detailed information about ongoing research projects and faculty interests, please visit the CLPS Department webpage at http://www.brown.edu/Departments/CLPS

Students are expected to complete the Ph.D. program in 5 years, and they receive full financial support for these 5 years. Support comes in the form of university fellowships, research assistantships, and teaching assistantships.

Although the requirements differ somewhat between programs, there are core requirements common to all three programs:

• First-year project
• Core content and methodological courses
• 4 semesters of teaching assistance
• Preliminary exam or Major Paper
• Dissertation proposal
• Dissertation

In addition to acquiring subject-matter knowledge and research skills through a mixture of course work and research experience, graduate students also develop job-related skills and receive training in the legal and ethical responsibilities as professionals.

CLPS does not admit students for only a Master's degree, but students admitted to a Ph.D. program may receive an A.M. or Sc.M. degree en route to their Ph.D.

Admission to the CLPS programs is highly selective. Fewer than 10% of applicants are invited for interviews, and about half of the interviewees receive offers of admission.

The application deadline for all three CLPS programs is December 15. Please consult the Brown Graduate School webpage for further information about the department and the programs at http://www.brown.edu/gradschool/academics-research/phd-programs/cognitive-linguistic-and-psychological-sciences and follow application instructions at http://www.brown.edu/gradschool/apply.

Courses of Instruction

Primarily for Undergraduates

0010. Elementary Psychology: An Introduction to Mind and Behavior
A survey covering the roles of inherited and environmental determinants of human behavior. Topics include sensation, perception, learning, memory, motivation, emotion, neural processes, language, social development, personality assessment, obedience, interpersonal attraction, and the diagnosis, origins, and treatment of mental illness. Laboratory sections illustrate methodologies used to study these issues. Topic selection varies with instructor.

0020. Approaches to the Mind: Introduction to Cognitive Science
Cognitive science is the study of the mind from an interdisciplinary perspective. It focuses on such questions as how do we process information to recognize objects and faces, to know that a cup is not a bowl, to remember and learn, and to speak and understand? How can studying the brain inform us about the mind? This course will examine the above questions and discuss major themes in cognitive science including nature-nurture, categories and representations, and the nature of computations.
0030. *Introduction to Linguistic Theory*
The ability to speak and understand a language involves having mastered (quite unconsciously) an intricate and highly structured rule-governed system. Linguists seek to model that rule system. This course introduces the principles underlying phonology (the principles which govern how sounds are put together), syntax (the rule system governing sentence structure), and semantics (the system which relates sentences to meanings).

0040. *Mind and Brain: Introduction to Cognitive Neuroscience*
This course provides an introduction to the neuroscientific study of cognition. Topics surveyed in the course include the neural bases of perception, attention, memory, language, executive function, emotion, social cognition, and decision making. In covering these topics, the course will draw on evidence from brain imaging (fMRI, EEG, MEG), transcranial magnetic stimulation, electrophysiology, and neuropsychology. The course will also consider how knowledge about the brain constrains our understanding of the mind.

0050. *First Year Seminar*

0050A. *Computing as Done in Brains and Computers*
Brains and computers compute in different ways. We will discuss the software and hardware of brains and computers and with introduction to the way brains are organized, the way computers are organized, and why they are good at such different things. We will talk about our current research, the Ersatz Brain Project, an attempt to design a first-class second-class brain. Enrollment limited to 15 first year students. S/NC.

0050B. *The Two Visual Systems: Visual Perception and Control of Action*
In a series of theoretical articles, Melvyn Goodale and his collaborators have proposed that separate, but interacting visual systems have evolved for the perception of objects on the one hand and the control of actions directed at those objects on the other hand. This seminar will cover the basic literature addressing this problem with studies involving human and animal studies. Enrollment limited to 20 first year students. S/NC.

0050C. *Intentionality and Theories of the Mind*
The purpose of this seminar is to familiarize students with the topic of "theory of mind"; how we understand each other's mental states. In particular, we will focus on how human beings understand other's intentions and beliefs and come to act volitionally. Readings will span developmental, cognitive, social, and cross-cultural psychology as well as neuroscience and philosophy. Emphasis in assignments will be on evaluating and constructing scientific investigations. Enrollment limited to 20 first year students. S/NC.

0050D. *Reading Science/Understanding Science*
How is science presented in the modern media? How does this shape the way we think about and understand scientific ideas and the scientific process? Focusing on the brain sciences, we will critically read several award-winning scientific works written for non-specialized audiences, including books by Dawkins, Gould, Pinker, and Sapolsky. We will also consider critiques of these works, as well as related shorter articles intended for wider audiences (e.g., from Scientific American). Finally we will examine several examples of "bad neurojournalism" in an attempt to understand what makes good and bad science reporting. No prerequisites; enrollment limited to 20 first year students. S/NC.
0050E. Animal Minds
In this freshman seminar, students will learn about the variety of scientific ways to study musical cognition, emotion, ability, and function. Students will read about music cognition experiments, debunk the poor ones, design hypothetical experiments, and write about them. The underlying themes in music cognition resonate with broad issues pervading cognitive science and psychology. Enrollment limited. Written permission required. S/NC

0050F. Olfaction and Human Behavior
In this first year seminar we will explore how our sense of smell is involved in a variety of psychological processes, including: emotion, learning, memory, language and social behavior. Topics such as olfaction in health, technology and marketing will also be critically examined. Students will acquire the basics of olfactory physiology and perception-cognition through course reading, projects and discussions. Enrollment limited to 20 first year students. S/NC

0100. Learning and Conditioning
Presents classical and contemporary approaches to the study of the prediction and control of behavior. Emphasizes theories and data derived from studies of Pavlovian conditioning and instrumental learning with nonhuman animals, but also considers implications for human behavior (e.g., drug-dependent behaviors, eating disorders, behavior modification and psychopathologies). No prerequisites.

0110. Mechanisms of Animal Behavior
An examination of physiological and evolutionary mechanisms underlying species-specific behavior in both vertebrate and invertebrate animals. Topics include: evolution and mechanisms of sensory systems, modes of locomotion, orientation and navigation, communication, and cognitive capacities of animals.

0120. Introduction to Sleep
Uses sleep as the focal point for describing complex behavioral phenomena. How is sleep measured and defined? How does sleep differ across species? What accounts for the timing of sleep? How does sleep change with age? What are the behavioral, physiological, and cognitive concomitants of different states of sleep? How can dreaming be understood? What can go wrong with sleep?

0200. Human Cognition
Introduction to theoretical issues, empirical findings and controversies in human cognition. Basic issues in cognition - including memory, categorization, reasoning, decision making and problem solving will be examined. Emphasis will be on experimental methods and formal theories.

0210. Human Thinking and Problem-Solving
An inter-disciplinary introduction to adult human thinking and reasoning. Covers logical thinking, computational models, reasoning and the scientific method, creativity, intelligence, visual thinking, problem solving in a group setting, and methods of teaching “thinking skills.” Students will learn about research findings on these topics and will practice techniques for improving their own techniques. First year students only. Enrollment limited. Written permission required.

0220. Making Decisions
Life is full of decisions. Some decisions are made rationally, others could be improved. This course considers the psychology of human decision-making, the analysis of optimal decision-making, and implications for individual action and social policy. Topics include:
chance and preference (e.g., how do consumers weigh attributes when making purchases?); the value of information (e.g., when should physicians order expensive diagnostic tests?); risky choice (e.g., is it rational to play the lottery?).

0400. *Brain Damage and the Mind*
Brain damage in human subjects can produce dramatic and highly selective impairments in cognitive functioning. This course provides an overview of the major neuropsychological disorders of perception, language, memory, thought, and action. Emphasizes the development of human information processing models for understanding the cognitive deficits observed in brain-damaged patients and the implications of neuropsychological findings for models of normal cognition.

0410. *Principles of Behavioral Neuroscience*
A lecture course that covers the bodily systems that underlie motivated behavior. Topics include the autonomic nervous system, drugs and behavior, hormones and behavior, reproductive physiology/behavior, homeostasis, biological rhythms, emotions and stress, the neurobiology of mental disorders, and biological perspectives on learning and memory. Does not cover synaptic transmission or sensory processing and perception. Prerequisite: BN 1 or the equivalent.

0500. *Perception and Mind*
How do the mind and the brain take physical energy such as light or sound and convert it into our perception of the world? This course examines the behavioral and biological bases of human and animal perceptual systems, including vision, audition, smell, taste, and touch. Particular emphasis is placed on high-level perception and how it relates to other cognitive systems.

0510. *Perception, Illusion, and the Visual Arts*
Visual art can be viewed as an exploration of perceptual questions. This course considers the representation of space and time in painting and film from the viewpoint of the science of visual perception. Topics include Renaissance linear perspective, picture perception across cultures, color, form, shape, abstraction, how film editing constructs events, and why Godzilla looks phony. Slide lectures and visual exercises.

0530. *Making Visual Illusions*
Visual illusions are vivid examples of the mistakes our visual systems make. This interdisciplinary course is designed for art and science students with interests in visual perception to explore how and why visual processing sometimes fails. Course work will include hands-on laboratory experiments and art construction exercises. Topics will include color, brightness, and geometric illusions. Enrollment limited to 15.

0600. *Child Development*
Children's behavior and development from infancy through adolescence. Major topics include learning, perception, parent-child attachment, language, intelligence, motivation, emotional development, and peer relations. Major developmental theories, including psychoanalytic, ethological, social learning, and cognitive, are considered as organizers of these phenomena and as a source of testable hypotheses.

0610. *Children's Thinking: The Nature of Cognitive Development*
An examination of children's thinking and cognitive development from infancy to middle childhood. Considers a range of topics including memory, reasoning, categorization, perception, and children's understanding of concepts such as space, time, number, mind, and biology. Major theories of cognitive development are described and evaluated in light of the available psychological data.
0700. Social Psychology
Examines the theories, findings, and methods of social psychology. Topics include: social cognition (person perception, attitudes), social influence (cultural sources of attitudes, conformity), and social relations (aggression, altruism, prejudice). Students become better informed consumers of empirical research and acquire a new framework for interpreting social behavior. Applications to historic and current events.

0701. Personality
A survey of the major perspectives (psychoanalytic, behavioral, humanistic, etc.) within theories of personality. Particular emphasis is placed on the integration of research and theory.

0800. Language and the Mind
Explores fundamental issues in psycholinguistics: what is the nature of language; what are its biological underpinnings; how does the mind process speech, recognize words, parse sentences, comprehend discourse; what do effects of brain injuries on language reveal about the organization of language in the mind? Syntheses of results from multiple modes of analysis—linguistics psychological, computational, and neurophysiological—are emphasized.

0810. The Biology and Evolution of Language
Human language is made possible by specialized anatomy and brains that can regulate speech production, complex syntax, and acquiring and using thousands of words. This course examines Darwin’s theory of evolution and the archaeological and fossil records of human evolution; studies of chimpanzee communication, culture, and language which provide insights on human evolution; the physiology of human speech; and recent studies of the brain bases of human language and thought.

0900. Quantitative Methods in Psychology
A survey of statistical methods used in the behavioral sciences. Topics include graphical data description, probability theory, confidence intervals, principles of hypothesis testing, analysis of variance, correlation, and regression, and techniques for categorical data. Emphasizes application of statistical methods to empirical data.

For Undergraduates and Graduates

1080. Topics in Cognitive, Linguistic, and Psychological Sciences

1080A. Intentionality
The purpose of this seminar course is to familiarize students with the topic of "theory of mind" - how we understand other's mental states. In particular, we will focus on how children develop an understanding of others intentions and beliefs. While the majority of the reading will be in developmental psychology, cognitive, social, clinical and comparative literatures will also be examined.

1080C. Evolution of the Brain Bases of Creativity

1090. Research Methods in Psychology
This advanced laboratory course will cover research design issues geared for students interested in the Psychology Honors Research program but is open to others. Methods covered will include observation, experimentation, interview, questionnaire, rate scales, content analysis, and case study. Students will design and conduct research projects, give oral presentations, and prepare written reports. Prerequisites: CLPS 0010 (PSYC 0010) and CLPS 0900 (PSYC/COGS 0090). Enrollment limited to 25.
1092. Psychological Theory  
An examination of types of explanations used in psychology, with an emphasis on quantitative models of perception, learning, and motivation. Students implement models on a computer and compare theoretical predictions to observed facts. No previous experience with computers assumed; students will learn to implement and develop theories based upon spreadsheets.

1100. Animal Cognition  
A seminar focusing on the experimental analysis of animal mental processes such as perception, attention, learning, memory, and decision-making. Some specific topics include navigation, visual search, working memory, time perception and memory, song learning in birds, and concept formation. Prerequisite: advanced lab.

1110. Behavior Modification  
Examines basic principles of learning theory as applied to the development and change of human behavior. Topics include: experimental design in clinical research, addictive behavior, fear and anxiety reduction, cognitive behavior modification, self management, child behavior modification, and clinical therapy. Prerequisites: CLPS 0701 (PSYC 0300) or CLPS 1700 (PSYC 1330). Enrollment limited to 50.

1120. Physiological Psychology  
Research articles focusing on the neural regulation of behavior are discussed, with an emphasis on experimentation in animal models. Topics vary from year to year but may include the neural and molecular mechanisms regulating social behaviors, the mechanisms and site of action of drugs of abuse, development of neural systems, sensory information processing and genetic analysis of behavior. Prerequisites: CLPS 0410 (PSYC 0750) or NEUR 0010. Enrollment limited to 25.

1130. Psychology of Timing  
Topics include temporal perception, memory, and preferences; cognitive, biological, and quantitative theories of timing; biological rhythms; pharmacological influences on time perception and timed performance; altered timing in abnormal states; and timing in sports and music. Enrollment limited to 20.

1140. Psychophysiology of Sleep and Dreams  
Overview of sleep, biological timing, dreaming, and sleep disorders. Topics include physiology of NREM and REM sleep, circadian rhythms, determinants and measurement of daytime sleepiness, development and phylogeny, dreaming, and sleep functions. Biological bases and behavioral concomitants of sleep disorders are assessed. Prerequisites: CLPS 0010 (PSYC 0010) and NEUR 0010, or CLPS 0110 (PSYC 0500), or other background in NREM science or physiology. Students who have taken CLPS 0120 (PSYC 0550) should not take this course. Not open to Freshmen or Sophomores.

1180. Topics in Comparative Psychology  
1180A. Canine Behavior  
Topics include canine perception, cognition, vocalization and social behavior. The behavior of wolves and other wild canids is also explored to facilitate our understanding of the domestic dog. This is an advanced seminar for concentrators in Psychology. It is also intended for anyone interested in animal behavior, especially Biology and Neuroscience concentrators. Prerequisites: CLPS 0050E (PSYC 0190A), CLPS 1191 (PSYC 1450), or BIOL 0450. Not open to first year students.
1180B. Biology of Communication
The study of animal communication systems from mechanistic, developmental, ecological, and evolutionary perspectives. The uses of auditory, chemical, and visual cues for mediating intraspecific communication in both vertebrate and invertebrate animals. Recommended prerequisites: CLPS 0110 (PSYC 0500), CLPS 1192 (PSYC 1200), BIOL 0450, or equivalent.

1190. Techniques in Physiological Psychology
Laboratory course in behavioral neuroscience for advanced students of psychology or neuroscience. The goal is to gain "hands on" research experience with a variety of behavioral assays used to assess the effects of genetic mutations on behavior. Over the course of the semester, students will examine the behavioral phenotype of three mouse models of human disease and prepare a manuscript suitable for publication in a scientific journal. Prerequisites: CLPS 0410 (PSYC 0750) or NEUR 0010, and CLPS 0900 (PSYC/COGS 0090).

1191. Animal Behavior Laboratory
This course is designed for students with a serious interest in animal behavior research. Topics include methods in lab and field research, conservation issues, enrichment programs for captive species and conditioning procedures for managing zoo and shelter animals. Course meets at Roger Williams Park Zoo, Providence. Prerequisites: CLPS 0050E (PSYC 0190A), CLPS 0110 (PSYC 0500), or BIOL 0450. Enrollment limited to 12; not open to first year students.

1192. Experimental Analysis of Animal Behavior and Cognition
A laboratory course on the prediction, control, and explanation of the behavior of animals in simple environments. Prerequisite: CLPS 0900 (PSYC/COGS 0090).

1193. Laboratory in Genes and Behavior
Laboratory course in behavioral neuroscience for advanced students of psychology or neuroscience. The goal is to gain "hands on" research experience with a variety of behavioral assays used to assess the effects of genetic mutations on behavior. Over the course of the semester, students will examine the behavioral phenotype of a mouse model of human disease. A group of transgenic mice will be compared with a group of wild type control mice on three batteries of behavioral tasks designed to test cognitive, affective, and sensorimotor behavior. Recent classes have tested mice models of Fragile X Mental Retardation, Duchenne's Muscular Dystrophy, and Alzheimer's Disease. Over the course of the semester, each student will complete statistical analysis of the data and prepare a manuscript suitable for publication in a scientific journal. Prerequisites: CLPS 0410 (PSYC 0750) or NEUR 0010, and CLPS 0900 (PSYC/COGS 0090), or instructor permission. Enrollment limited to 21; not open to first year students.

1194. Sleep and Chronobiology Research
Part of a summer immersion in behavioral science research in human sleep and chronobiology. Instruction in human sleep and circadian rhythms, research techniques in basic physiology, laboratory skills, ethics of research, and basic CPR. Research seminars explore other techniques and career paths. Recommended prerequisite: CLPS 0010 (PSYC 0010) is preferred; NEUR 0010 is also acceptable. Enrollment limited to 15.

1200. Thinking
An investigation of conceptual structure, judgment, and inferential processes. The focus is on the relation between empirical evidence, theories, and models of cognitive process and structure. Prerequisite: CLPS 0200 (COGS 0420).
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisite(s)</th>
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<tbody>
<tr>
<td>1210</td>
<td>Human Memory and Learning</td>
<td>How does human memory work and why are some things easier to learn and remember than others? This course covers experimental and behavioral studies of human memory including long- and short-term memory for text, pictures, spatial information, and autobiographical events. Emphasis on real-world situations, including education, in which memory and learning play a role. Prerequisite: CLPS 0200 (COGS 0420).</td>
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<tr>
<td>1211</td>
<td>Human and Machine Learning</td>
<td>How is human memory like a search engine? Is human knowledge like the internet? What can artificial intelligence and machine learning tell us about the mind? This seminar explores parallels between human cognition and contemporary research in computer science, emphasizing common problems. In addition to the above, topics include simplicity, randomness, coincidences, and causality.</td>
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<tr>
<td>1220</td>
<td>Concepts and Categories</td>
<td>Our knowledge of the world is organized into concepts and categories. What is the basis of this organization? What information is used to make category judgments? How do children acquire concepts and categories? How are our concepts related to the language we speak? This course will examine these questions from an interdisciplinary perspective, combining relevant work in cognitive and developmental psychology, philosophy, linguistics, and computational modeling. Recommended prerequisite: CLPS 0200 (COGS 0420).</td>
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<td>1230</td>
<td>Decision Making</td>
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<td>1240</td>
<td>Reasoning and Problem Solving</td>
<td>How do people reason about informal events in everyday life and more formal subject domains? What are the fallacies that people endorse and how can they be averted? What are some strategies for developing critical reasoning skills? A presentation of theories of human reasoning and problem solving and their applications to educational practice. Prerequisite: CLPS 0200.</td>
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<tr>
<td>1241</td>
<td>Causal Reasoning</td>
<td>A review of research on how people make moral judgments. We will discuss and attempt to integrate diverse perspectives and research on cognition, action, and emotion from cognitive science, cognitive neuroscience, and philosophy.</td>
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<td>1280</td>
<td>Topics in Cognition</td>
<td>1280A. Moral Reasoning</td>
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<tr>
<td>1290</td>
<td>Laboratory in Cognitive Processes</td>
<td>Presents the experimental way of thinking by pursuing several topics in an interactive computer-based laboratory. Students run experiments as a class and, by the end of the course, run their own experiment. Focus is on experimental design, procedure, analysis, and reporting. Topics include attention, visual imagery, memory, and reasoning. Prerequisite: CLPS 0900 (COGS/PSYC 0090), and either CLPS 0200 (COGS 0420) or CLPS 0500 (COGS 0440); or permission of the instructor.</td>
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<tr>
<td>1291</td>
<td>Computational Cognitive Science</td>
<td>A detailed introduction to computational modeling of cognition, summarizing traditional approaches and providing experience with state-of-the-art methods. Covers pattern recognition approaches, shallow and hierarchical networks including Bayesian probabilistic models, and illustrates how they have been applied in several key areas in</td>
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cognitive science, including visual perception and attention, object and face recognition, learning and memory as well as decision-making and reasoning. Focuses on modeling simple laboratory tasks from cognitive psychology. Connections to contemporary research in computer science will be emphasized highlighting how computational models may motivate the development of new hypothesis for experiment design in cognitive psychology.

1310. Introduction to Phonological Theory
Examines some of the classic and current issues regarding sound structure in the world's languages and introduces the theoretical tools needed to solve them. After a brief introduction to articulatory phonetics and phonemic analysis, it focuses on phonological analysis of different languages, discussing segmental phonology, syllable structure, autosegmental representations, stress systems, and prosodic word structure. Implications for language learning and language change are discussed. Prerequisite: CLPS 0030 (COGS 0410).

1320. The Production, Perception, and Analysis of Speech
An introduction to the basis of the acoustic analysis of speech, the anatomy and physiology of speech production, and the perception of speech. Discussion and demonstration of quantitative computer-implemented methods for speech analysis. Linguistic and cognitive theories are discussed in relation to the probable neural mechanisms and anatomy that make human speech possible. Lectures, discussion, and laboratory demonstrations.

1330. Introduction to Syntax
An in-depth investigation of natural language syntax, an intricate yet highly organized human cognitive system. Focuses primarily on the syntax of English as a means of illustrating the structured nature of a grammatical system, but the broader question at issue is the nature of the rule system in natural language syntax. Prerequisite: CLPS 0030 (COGS 0410).

1340. Introduction to Semantics
An introduction to a variety of issues in linguistic semantics and in the related philosophical literature. Topics include: the nature of semantic representations; the relationship between meaning and the world; truth-conditional and "logical" semantics; word-meaning; the interaction of semantics and pragmatics; presupposition; the interaction of semantics with syntax.

1341. Lexical Semantics
The representation of word meaning and generalizations about the way in which meanings are packaged into words. Topics include: "fuzzy" meanings, natural kind terms, how word meanings are decomposed, Special emphasis on how temporal properties are encoded, on the status of "thematic relations," and on how the fine-grained structure of word meanings impacts on the syntax. Recommended prerequisite: CLPS 0030 (COGS 0410).

1342. Formal Semantics
Model-theoretic approaches to the study of the semantics of natural languages. Develops the tools necessary for an understanding of "classical" formal semantics (the lambda calculus, intensional logic; Montague's treatment of quantification, etc.); then applies these tools to the analysis of natural language semantics; and finally turns to recent developments in formal semantic theory. Prerequisite: some familiarity with syntax or semantics or basic set theory and logic.
1350. Introduction to Mathematical Linguistics
Introduction to basic concepts and goals of mathematical linguistics with emphasis on implications for theories of natural languages. Investigates the properties of regular, context-free, and context-sensitive languages; categorical grammar and combinators and the properties of natural language in light of the results on formal grammars. Recommended prerequisite: CLPS 0030 and/or a background in basic theory and logic; familiarity with syntax is recommended.

1381. Topics in Phonetics and Phonology: Intonational Phonology
This course is an in-depth study of intonation—the manipulation of pitch and length to signify sentence-level meaning—in English as well as in other languages. This course will have two components, which will overlap considerably. In the laboratory skills component, you will learn how to collect, transcribe, measure, and analyze intonational data in Praat (a program for acoustic analysis), while in the theoretical component, you will read about and test the claims of various theories of intonation. With these skills, you will conduct independent research over the course of the semester. The course will also cover the interface between intonation and syntax/semantics, including the realization of focus in prosody.

1383. Topics in Syntax and Semantics

1385. Topics in Language Acquisition: Language Acquisition and Cognitive Development
What is the relationship between how we think and how we speak? This course explores the concurrent development of children's linguistic and cognitive abilities. Topics include the relationship between word meanings and concepts, the structure of the mental lexicon, pragmatic development, and the Whorfian hypothesis (whether speakers of different languages think differently). Students will read and discuss empirical and theoretical articles, and complete a set of writing assignments and problem sets. Prerequisite: CLPS 0610 or equivalent, or permission of the instructor. Appropriate for students interested in developmental/cognitive psychology, linguistics, and applied fields such as speech-language pathology.

1387. Topics in Neurolinguistics

1389. Topics in Language Processing

1400. The Neural Bases of Cognition
Research using animal models has informed and guided many of the recent advances in our understanding of the brain mechanisms underlying cognition. This seminar course will address topics related to animal models of human cognition. Students learn about how different aspects of the neural bases of cognition are modeled in animals by reviewing the primary research literature. The course is divided into three sections, each addressing one animal model in one cognitive domain. Selected papers will emphasize learning, memory, and attention, but may also address other aspects of cognition, for example decision-making, or cognitive impairment associated with neuropathology or aging. Prerequisite: CLPS 0040, CLPS 0400, or NEUR 0010; and CLPS 1190, CLPS 1191, CLPS 1192, or NEUR 1600; or instructor permission. Enrollment limited to 20. Not open to first year students.

1470. Mechanisms of Motivated Decision Making
How do we make decisions? This course considers the factors and mechanisms involved in motivated decision making, as informed by cognitive, neuroscientific, and computational modeling approaches. Readings will span a range of populations (e.g., healthy adults, adults with acquired brain damage, monkeys) and methods (e.g., behavioral, genetic,
pharmaceutical and neuroimaging studies, electrophysiological recordings). Computational models will be prominently featured as a means for formalizing decision making theories across multiple levels of analysis, some focusing on high-level cognitive computations and others on neural mechanisms. Prerequisite: CLPS 0010, 0040, 1291, 1400, 1491, 1492, or NEUR 0010. Enrollment limited to 20. Not open to first year students.

1480. Topics in Cognitive Neuroscience

1480A. Cognitive Neuroscience of Emotion
Topics discussed in this course include: visual attention, awareness, emotional perception, and emotional memory. Classes will be structured around the discussion of current papers in the literature. Active participation in class is required, including the presentation of papers from the literature. Enrollment limited to 20.

1480B. Cognitive Aging and Dementia
This seminar examines the cognitive changes associated with normal aging and age-related dementia (e.g., Alzheimer's Disease). Topics covered will include changes in the neurocognitive systems mediating memory, perception, and attention. The course is primarily intended as an advanced seminar for junior and senior concentrators in Psychology, but is also intended for other students interested in aging and the neuropsychology of cognition. Recommended prerequisites: An introductory course in cognitive neuroscience (CLPS 0040, CLPS 0400) or permission of the instructor. Preference will be given to senior concentrators in Psychology and related areas. Enrollment limited to 20.

1480C. Cognitive Control Functions of the Prefrontal Cortex

1480D. Cognitive Neuropsychiatry
Will provide a broad survey of the field of cognitive neuropsychiatry. The approach taken is based upon the knowledge of brain-behavior-cognition relationship and allows explaining psychiatric phenomena in terms of deficits in normal cognitive mechanisms, as well as drawing conclusions about normal cognitive functioning based on patterns of impaired and intact cognition observed in clinical populations. Topics surveyed include delusions, hallucinations, social-emotional symptoms of schizophrenia, thought and language disorders, conversion disorder, obsessive-compulsive disorder, bipolar disorder, major depression, Parkinson's and Alzheimer's Disease. Prerequisite: CLPS 0040 or 0400, or instructor permission. Enrollment limited to 25 juniors, seniors and graduate students concentrating in Cognitive, Linguistic and Psychological Sciences.

1490. Functional Magnetic Resonance Imaging: Theory and Practice
This course will train students in the practice and use of functional magnetic resonance imaging (fMRI) as a cognitive neuroscience methodology. Topics covered include MRI physics, the physiological basis of the BOLD signal, experimental design, data collection, statistical analysis, and inference. A practical component of the course includes the opportunity to collect and analyze fMRI data at the Brown MRF. Prerequisites: CLPS 0040 (COGS 0720), CLPS 0400 (PSYC 0470), or NEUR 0010; and CLPS 0900 (PSYC/COGS 0090), or instructor permission. Enrollment limited to 20.

1491. Neural Modeling Laboratory
Numerical simulations of cognitively oriented nervous system models. Discussion of parallel, distributed, associative models: construction, simulation, implications, and use. Prerequisites: MATH 0090, 0100, or equivalent; knowledge of a computer language; some background in neuroscience or cognitive science is helpful.
1492. Laboratory in Computational Cognitive Neuroscience
We explore neural network models that bridge the gap between biology and cognition. Begins with basic biological and computational properties of individual neurons and networks of neurons. Examines specialized functions of various brain systems (e.g., parietal cortex, frontal cortex, hippocampus, ganglia) and their involvement in various phenomena, including perception, attention, memory, language and higher-level cognition. Includes a lab component in which students get hands on experience with graphical neural network software, allowing deeper appreciation for how these systems work. Prerequisites: CLPS 0020 or CLPS 0200; and CLPS 0410 or NEUR 0010.

1500. Ecological Approach to Perception and Action
The ecological approach treats perceiving and acting as activities of agent-environment system rather than an isolated "mind," and offers an alternative to the prevailing computational/representational view. Topics include inferential and direct perception, perception of the 3D environment, visual control of action, dynamics of motor coordination, and self-organization of behavior. Lecture and discussion. Prerequisite (any one of the following): CLPS 0010 (PSYC 0010), CLPS 0020 (COGS 0010), CLPS 0500 (COGS/PSYC 0440), or CLPS 0510 (COGS 0110).

1510. Human Sensory Processing
A combination of lecture and laboratory introducing modern empirical methods of studying human perception. Uses the perception of sounds as examples. Lectures develop the theoretical bases for understanding hearing while laboratories demonstrate particular auditory phenomena. Throughout, stresses the relationship of overt sensory phenomena to their underlying neural bases. Recommended prerequisite: CLPS 0010 (PSYC 0010) or NEUR 0010. Students seeking permission must sign up in the psychology department office (Hunter 273).

1520. Computational Vision
A detailed introduction to computational models of biological and machine vision summarizing traditional approaches and providing experience with state-of-the-art methods. Topics include low-level vision (color, motion, depth and texture), segmentation, face, object and scene recognition. Connections to contemporary research in computer vision and computational neuroscience will be emphasized highlighting how computational models may motivate the development of new hypothesis for experiment design in cognitive psychology.

1530. 3D Shape Perception
Our ability to move in the environment, recognize and grasp objects, depends enormously on the capacity that the brain has in organizing the visual stimulation in the perceived 3D layout. 3D objects in the world project on the human retina flat images. How does the brain re-transform these flat images into a 3D representation?

1540. Human Factors
The application of knowledge of human characteristics to the design of equipment, facilities, and environments for human use. Research on attention, perception, learning, and decision making will be applied to problems in various areas including: aviation, highway safety, industrial safety, consumer products, human-computer interaction, and aging. Enrollment limited to 25.

1550. The Psychology of Aversion
Explores what is aversive to us and why. In particular, the ways in which sensory perception (e.g., smell, taste, vision), cognition, culture, personal experience and neurobiology mediate our avoidance responses will be analyzed. The purpose of avoidance
from an evolutionary perspective and how the emotion of disgust is uniquely human will be a theme throughout the course. Topics will range from neuropsychological disorders to our social behavior and morality. Additionally, why we are attracted to stimuli that "should" inspire avoidance (e.g., horror movies, roller coaster rides) will be examined. Students will acquire a broad knowledge of the psychology of aversion through course readings, discussions, projects and active participation. In addition to presentations and discussion, class time activities may include completing questionnaires, watching videos and assessing various sensory stimuli. Prerequisite: CLPS 0010, CLPS 0020, or NEUR 0010. Enrollment limited to 20 students. Not open to first year students.

1580. Topics in Perception

1580A. Visually-Guided Action and Cognitive Processes
One of the main purposes of encoding visual information is to perform visually-guided actions to directly interact with the external world. This seminar will shed light on the behavioral and underlying neural mechanisms involved in integrating perception and cognitive processes, and converting them into action. We will also explore how visuo-motor behavior can provide a useful tool to study a wide range of conscious and unconscious cognitive processes including the current locus of attention, the nature of language representation, spatial representation of number, and high-level decision-making. Prerequisite: CLPS 0010, CLPS 0020, or NEUR 0010.

1590. Visualizing Vision
This course provides hands-on experience in studying vision using computer graphics combined with visual psychophysics. Students will gain a better understanding of how images are formed, how one employs properties of image formation in the experimental study of vision, and how the perception of complex images function in biological systems. Labs will rely on matlab and several computer graphics packages (e.g; Lightwave). Enrollment limited to 20.

1610. Cognitive Development
How do infant and preschoolers learn about the world? We will examine children's understanding of the physical world, psychological kinds, biological entities, number, objects, and space. Students are expected to read and comment on both empirical and theoretical primary source articles, to participate in weekly discussions, and complete a set of writing assignments. Prerequisites: CLPS 0600 (PSYC0810), CLPS 0610 (COGS0630), or EDUC0800.

1611. Cognitive Development in Infancy
The acquisition of knowledge during the first year of life. Special attention to the infant's emerging concepts of space, objects, intermodal sensory connections, and speech as well as to such issues as the role of innate knowledge and the nature of the infant's concepts and categories.

1620. Developmental Cognitive Neuroscience
This course will examine fundamental topics in cognitive development from the point of view of the developing brain. Topics of interest will include developing abilities in perception, attention, action, object concepts, memory, learning, planning, language, and social cognition. Typical and atypical brain development will be considered. Prerequisite: One of CLPS 0600, CLPS 0610, EDUC 0800, or permission of the instructor.
1621. The Developing Brain
Analysis of brain developing focusing on neural substrates of psychological processes. Prerequisites: CLPS 0010 (PSYC 0010) or NEUR 0010. Not open to first year students or sophomores. Instructor permission required.

1630. Perceptual Development
The acquisition of knowledge during the first year of life. Special attention to the infant's emerging concepts of space, objects, intermodal sensory connections, and speech as well as to such issues as the role of innate knowledge and the nature of the infant's concepts and categories.

1640. Relationships and Human Development
Explores formation and maintenance of relationships across childhood and early adulthood, as well as their importance for the development of social-emotional competence. Topics include: early caregiver-child relationships, peer relationships emerging in the school years, relationships with significant adults outside the family, family relationships and functioning, and marital relationships. Also considers approaches to intervention, particularly with respect to peer relationships. Instructor permission required. Enrollment limited to 20 senior or graduate-level Psychology concentrators.

1650. Child Language Acquisition
All normally developing children acquire language, yet there is little agreement about how this takes place. This class explores the course of language acquisition from birth to babbling and first words to the use of complex syntax, discussing philosophical, theoretical, and methodological approaches to the problem. Includes practical experience analyzing child language data. Prerequisite: CLPS 0030 (COGS 0410) or CLPS 0800 (COGS 0450), or permission of the instructor.

1680. Topics in Developmental Psychology

1690. Laboratory in Developmental Psychology
Conceptual and methodological foundations of research design and analysis in developmental psychology, with particular reference to techniques commonly used in studying cognitive development. We will cover general principles of experimental design, measurement and assessment, and strategies of data analysis. Practical and ethical issues involved in conceiving, designing, executing, interpreting, and presenting research will be considered. Recommended prerequisites: CLPS 0610 (COGS 0630), and CLPS 0900 (COGS/PSYC 0090) or equivalent. Enrollment limited to 15.

1700. Abnormal Psychology
The study of anxiety, stress, and neurotic disorders, psychosomatic disorders, deviant social behavior, affective disorders, and schizophrenia. Considers theories of etiology (causes) and methods of therapeutic treatment, case studies, experimental research, and clinical research.

1710. Political Psychology
This seminar explores topics at the intersection of psychology and political science. Topics include political attitudes, perceptions and behaviors. The psychology of ordinary individuals, political leaders, and groups will be studied in contexts where their interests do and do not coincide. As conflicts among these agents are particularly interesting, this course will stress psychological aspects of wars, oppression, and terrorism. Enrollment limited to 20.
1720. Human Resilience
This course explores answers to the question of what enables some individuals to escape the worst psychological consequences of extreme personal disruption caused by a range of human-made and natural disasters. It examines personal accounts, pertinent psychological research, theoretical discussions, and the creative works of catastrophe survivors. Prerequisites: CLPS 0010 (PSYC 0010), CLPS 0701 (PSYC 0300), or instructor permission. Enrollment limited to 20.

1730. Psychology in Business and Economics
The goal of this course is to explore emerging themes at the intersection of psychological science, business, and behavioral economics. Psychologists are primarily interested in detecting limits to human rationality, whereas economics tends to proceed within the rational-actor model. In business, questions arise of how theoretical models and empirical findings related to the practice of managerial decision-making. Investigations of power and the psychological impact of money are relatively recent additions to the suite of research topics. New methodologies, such as neuro-imaging have led to advances not represented in the traditional framework of organizational psychology. Enrollment limited to 20 junior and senior Psychology concentrators.

1780. Topics in Social/Personality Psychology

1790. Personality and Clinical Assessment
Examines methods used in the study of child and adult personality, including microanalysis of social interactions, observer report, self report, test data, and life outcome data. Standardized personality assessment instruments will be examined in the context of their reliability, predictive and construct validity. Students will design research projects using these methods, collect and analyze data, give oral presentations, and prepare a written report of their research. Prerequisites: CLPS 0701 (PSYC 0300), and CLPS 0900 (PSYC/COGS 0090) or equivalent. Enrollment limited to 27.

1791. Laboratory in Social Cognition
Examines principles of experimental design and analysis in the context of classic and contemporary research in social cognition. Students replicate and extend several studies on topics such as person perception, social stereotyping, or judgment and decision making. Students will participate in the design of these studies, gather their own data, analyze them, and report the findings in oral presentations and written reports. Prerequisites: CLPS 0010 (PSYC 0010), CLPS 0700 (PSYC 0210), and CLPS 0900 (PSYC/COGS 0090). Enrollment limited to 27.

1800. Language Processing
Explores the nature of language processing with the goal of understanding how we produce and comprehend language. Topics include speech production and speech perception, lexical processing, and syntactic processing. Experimental investigations are studied in an attempt to understand the processes and mechanisms employed in the everyday use of language. Prerequisite: one of CLPS 0020 (COGS 0010), CLPS 0030 (COGS 0410), or CLPS 0800 (COGS 0450).

1810. Syntactic Theory and Syntactic Processing
The interface between work in theoretical syntax and psycholinguistic research on syntactic processing. Consideration of how results in psycholinguistics support various models of human language processing. Recommended prerequisite: CLPS 1330 (COGS 1310).

1820. Language and the Brain
This course will examine the neural systems underlying language processing. Major focus will be on effects of brain injury on speaking and understanding in left hemisphere-
damaged patients who have aphasia, right hemisphere-damaged patients, and split-brain patients. Behavioral, electrophysiological and neuroimaging evidence will be investigated.

1821. Neuroimaging and Language
Examines neuroimaging approaches to language processing including fMRI, PET, TMS, and ERP. Consideration of the neural systems underlying speaking and understanding. Topics include neural basis of speech, lexical/semantic, and syntactic processing, mirror neurons and language, multisensory integration, meanings of words, literacy, and special populations. Recommended: either NEUR0010, CLPS 0020 (COGS0010) or CLPS 0800 (COGS0450) and one of the following: CLPS 0040 (COGS0720), CLPS 0400 (PSYC0470), CLPS 0410 (PSYC0750), CLPS 1820 (COGS1480), CLPS 1822 (COGS1500), NEUR1030, NEUR1660, or by permission.

1822. Subcortical Brain Bases of Language and Thought
Recent studies indicate that the neural bases of human language and thought derive from a complex network of circuits within and connecting subcortical and cortical structures. Students prepare to evaluate published papers, noting the relationships that hold between data and theories. Relates neurophysiologic studies to current linguistic and cognitive theories and provides the background for independent research. Prerequisites: CLPS 0810 (COGS 0320), CLPS 1820 (COGS 1480), CLPS 1821 (PSYC 1100), or NEUR 0010.

1880. Topics in Psycholinguistics

1880A. Speech Prosody
The broad aim of this seminar is to discuss the various ways in which linguistic and paralinguistic meanings can be conveyed by the way that speakers produce their utterances. The topics will include the effect of pitch variation and phrasing on pragmatic meanings and discourse functions, turn-taking strategies, cue phrases and filled pauses, new-given information, or prosody of deceptive speech. Recommended prerequisite: CLPS 0030 (COGS 0410).

1880B. Cognitive Neuroscience of Language Acquisition
The ability to acquire language is unique to humans. This class explores our language-specific biological endowments. Topics include: Genetics and evolution of language; the brain-basis of acquisition; effects of age on language learning ability; effects of environmental differences (such as growing up blind or deaf) on acquisition; and language in special populations such as autism. Students will read and discuss empirical and theoretical articles, and complete writing assignments and problem sets. Prerequisite: CLPS 0060, 0610, 0800, or EDUC 0800, or instructor permission. Enrollment limited to 20. Not open to first year students.

1890. Laboratory in Psycholinguistics
An advanced course in methodological approaches to the study of psycholinguistics. Processes (e.g. with adult lexical access, sentence processing, corpus linguistics, etc.) Recommended prerequisites: CLPS 0800 (COGS 0450) and CLPS 0900 (COGS/PSYC 0090), or equivalent.

1891. Research Methods in Physiologic and Acoustic Phonetics
Introduction to laboratory techniques and the analysis of data relevant to physiologic and acoustic phonetics. Emphasis on the use and interpretation of wave-form and spectrum analysis, electromyography, cineradiography, high-speed motion pictures, computer modeling of oral tract output, and experimental techniques involving the perception of synthetic and natural speech.
1900. Senior Seminar in Cognitive Science
Examines general philosophical and theoretical issues that cut across cognitive science. Each student writes a substantial paper on a topic in cognitive science. Required of cognitive science concentrators. Enrollment limited to concentrators in the 7th semester or beyond, and, by permission, to others who have significant course background in cognitive science.

1970. Independent Study
Independent study or directed research in cognitive science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

1980. Directed Research in Cognitive, Linguistic and Psychological Sciences
Required of all ScB concentrators and Honors students in psychology. Instructor permission required. S/NC only. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

2000. Graduate Proseminar I
Required of all graduate students in the cognitive science program.

2001. Graduate Proseminar II
Required of all graduate students in the cognitive science program.

2010. Neural Components of Reinforcement Learning and Decision Making

2091. Graduate First Year Project Research
Please check Banner for the correct section number and CRN to use when registering for this course.

2092. Graduate First Year Project Research
Please check Banner for the correct section number and CRN to use when registering for this course.

2095. Practicum in Teaching
Each student will assist a designated faculty member in teaching a course in cognitive science or related discipline. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

2096. Directed Graduate Research

2100. Core Topics in Animal and Comparative Behavior
A survey of classical experiments, important principles, and contemporary theories of associative learning and animal cognition.

2132. Graduate Seminar in Learning
Advanced topics in animal and human learning. Topics vary from year to year; examples include theories of associative learning, animal cognition, computational models of learning and performance, and neurobiological models of basic associative processes.

2180. Duration Discrimination

2181. Advanced Topics in Animal and Human Learning
Topics vary from year to year, examples include theories of associative learning, animal cognition, computational models of learning and performance, and neurobiological models of basic associative processes. Open to graduate students only.
2200. Core Topics in Cognition
A core course covering essential background and current issues in cognitive science, including experimental, computational, and neurophysiological perspectives. Three topics rotate yearly: cognition, language, and perception.

2210. Current Topics in Memory Research
A graduate seminar addressing selected topics in memory, including theories of normal and pathological memory, animal models of human memory, and the neural substrates of memory. Topics vary from year to year. Permission required for undergraduates.

2400. Core Topics in the Neural Basis of Behavior
Seminar on comparative aspects of brain evolution and function, with implications for behavior. Open to graduate students only.

2455. The Mind Asleep
Seminar on selected topics in sleep, incorporating the core disciplines of psychology (Behavioral Neuroscience, Sensation and Perception, Cognitive Processes, and Social). Discussion based classes will examine sleep and affect/mood, dreaming, sleep and learning and memory, sensation/perception processes during sleep, effects of sleep deprivation and sleep disorders.

2500. Core Topics in Perception

2510. Graduate Seminar in Vision
Selected topics in vision, including optics of the eye, anatomy of the visual system, photochemistry of vision, psychophysics of color, acuity, models of color vision, and light as a visual stimulus. Specific topics vary.

2700. Core Topics in Social Psychology
A survey of classic and contemporary research in social psychology, including attitude formation and change, person and self perception, stereotyping, and intergroup relations.

2750. Seminar in Social Psychology
A survey of classic and contemporary research in social psychology, including attitude formation and change, person and self perception, stereotyping, and intergroup relations.

2800. Core Topics in Language

2902. Quantitative Methods in Research
Methods of analysis and models of psychological processes. Topics include signal detection theory, scalar timing theory, reaction time, and multidimensional scaling. Appropriate computer techniques introduced.

2906. Experimental Design
The course designed for students at the intermediate level or above and will cover t-tests, power analysis, correlation, simple and multiple linear regression, logistic regression, analysis or variance, non-parametric tests, randomization and bootstrapping, among others.

2908. Multivariate Statistical Techniques
This course covers the basic multivariate techniques currently used in psychology and related sciences: multiple regression, logistic regression, principal components and factor analysis, multivariate analysis of variance, discriminant function analysis, and log-linear analysis. Students will learn these techniques' conceptual foundations, their proper selection for a given data set, and the interpretation of computer output from statistical analysis packages (primarily SPSS). Enrollment limited to 20 graduate students.
Cogut Center for the Humanities

Brown University has long offered a unique focus and quality in the humanities, combining the preservation of knowledge with a spirit of innovation and adventure. The humanities today include ever-vital traditional disciplines such as history, philosophy, language and literary studies, and religious studies. They also include the newer disciplines of art history, musicology, the interpretive dimensions of social sciences such as anthropology and political science, and more recently, interdisciplinary initiatives such as media studies and gender and sexuality studies.

Brown has played a key role in the pioneering of new and interdisciplinary work, while at the same time developing and advancing the frontiers of knowledge within the humanistic disciplines. Scholars at Brown are known as innovators who challenge and redefine the foundational categories of the humanities in the largest sense — by asking what it means to be human. Over the years, they have developed new modes of scholarship at the interstices of older disciplines and across the boundaries of national cultures. Scholars of the ancient, medieval, and early modern worlds have been giving us new concepts and new ways to imagine and conduct research. Those working on modern and contemporary cultures — on the language, literature, and culture of the post-colony, or the complex and often self-contradictory messages with which new media bombard us — have continued to change the horizons of the humanities.

Named for Craig M. Cogut ’75 and Deborah Cogut in recognition of their generous support, the Cogut Center for the Humanities was launched in the fall of 2003 as the Brown Humanities Center to support collaborative research among scholars in the humanities. Today, through its fellowship, grant, and distinguished visitors programs, and regularly scheduled events, the Cogut Center strives to:

• Foster innovative work in the humanities and related disciplines
• Sustain and nurture international perspectives at Brown in an era of increasing globalization
• Explore the history and effects of the rapid growth of technologies of information and visualization
• Examine the public role of the humanities in the context of recent challenges and pressures
• Enrich relations between the humanities and the studio and performing arts
• Investigate the re-emergence of pressing issues of ethics and aesthetics
• Reinvigorate the concept of critique and the role of critical theory in the humanities

The Cogut Center is poised to build on the strengths of Brown University at a moment of unique institutional distinction and growth, and at a time of particular national and global urgency. As a key player in Brown’s Plan for Academic Enrichment, the Cogut Center is
providing multiple programs to bring Brown faculty and students into regular and innovative contact with each other, as well as with national and international scholars and scholarship. In fulfilling its mission to the University and to the field of humanities, the Cogut Center supports and enhances Brown’s stellar reputation in the humanities.

For additional information please visit the Center’s website at: http://www.brown.edu/Departments/Humanities_Center/

Courses of Instruction

For Undergraduates and Graduates

1970. Special Topics in the Humanities
Topics vary from semester to semester. Please see Banner for the current course listing.

1970A. Eating Cultures: Food and Society
This course will look at various ways to understand the complex role of food in society. We will look at issues of food production and consumption, and how our relationship to food contributes to the political and social structures that we live with. Our approach will be historical and pay special attentions to the ways in which communities of color and immigrants have shaped, and have been shaped by, the food they cultivate, harvest, consume, and market. The readings explore how food creates ways for people to form bonds of belonging while also creating bonds of control and regimes of inequality. S/NC.

1970B. Clean and Modern: Meanings of Health and Hygiene in the 19th and 20th Centuries
This seminar will explore the ways in which health and hygiene fit into broader conceptualizations of European "modernity" and the process of modernizing others. The seminar will be organized into three sections. We will start by reading and discussing general histories of public health. Then we will move on to monographs and articles that address disease, the body, and the advent of medicine in various modern European contexts (including "backwards" Russia!). Finally, we will study how modern medical ideas came into contact with local healing traditions in China, British India, and elsewhere. This seminar will be relevant to programs in history, public policy, international relations, and medicine. S/NC.

1970C. Europe in the Vernacular
Why did a few early medieval European authors write not in Latin or Arabic but in vernacular languages like Castilian, Early Middle English, or Old French? We will read primary texts by La¿amon, Alfonso X, Dante, troubadours and anonymous others, and assess previous claims about the "rise of the individual" and various proto-nationalisms as we potentially rewrite the story of how, why, and for whom vernacular writings came to be. Readings in modern English supplemented by medieval languages. Graduate projects must engage a text in a medieval language. Enrollment limited to 20.

1970D. Prejudice in Early Modern England
Examines English attitudes towards the 'other' in the period from the Reformation to the early Enlightenment. Utilizing a combination of theoretical and secondary readings and primary source materials, the course will investigate English prejudices against and stereotypes of religious minorities within England (Catholics and Puritans), the non-English peoples of the British Isles (Scots, Welsh and Irish),...
continental Europeans (particularly the Spanish, the French and the Dutch), and the non-Christian other (Jews, Turks, and Blacks) during a period of revolutionary upheaval. Reserved for First Year students. Enrollment limited to 20.

1970E. Arts of Deformation: Fantasy and Caprice in European Music, Literature and Visual Arts, 1600-1850
This interdisciplinary seminar examines the history and cultural significance of fantasias, capriccios, and other genres of bizarre and grotesque expression across the arts. Themes include the historical origins of "fantasy" and "caprice," the social purposes of creative "free play," the Enlightenment's troubled engagement with the irrational, and the marginality of fantastic genres relative to classical aesthetic traditions. Subject material includes music from Frescobaldi to Liszt, visual arts from Piranesi to Delacroix, and literature from the commedia dell'arte to ETA Hoffmann and Victor Hugo. Working proficiency in either Italian, French or German preferred. No prerequisites; enrollment limited to 20.

1970F. Visualizing History: The Politics of Material Culture in Modern South Asia
This advanced history seminar will examine the making of art, art historical and archaeological knowledge through the nineteenth and twentieth centuries in colonial and postcolonial South Asia, as sites and objects came to be 'discovered,' interpreted and contested through scientific, religious and national claims. We will examine a series of sites, objects, and images, including the Indus Valley seals, Asoka's Buddhist columns, Bodhgaya, sculptures of Hindu gods and goddesses, erotic sculptures, temple at Somnath, and more recently the Babri mosque at Ayodhya, the Bamiyan Buddhas and M. F. Husain's paintings of Hindu goddesses. Unlike an art history course, the sites, objects and images that we will examine do not follow aesthetic or period styles, but rather serve as foci to historically and theoretically examine the making of different kinds of knowledge and the new contestations that they engendered.

What does it mean to be human? Within the present moment, it is common to critically consider one's race, class, gender, and sexual identities, but it is rare to imagine one's "species" as part of this formulation of self. Rather, the category of "humanness" is often still understood as an essential, biological truth. This course asks students to contemplate scientific and cultural constructions of humanness in the 20th century U.S. in two primary ways. First, we will address the literal production and invocation of humanness, by historicizing the evolution and maintenance of the boundaries between the animal, human, and technological worlds. Second, we will consider the symbolic production of humanness, by reflecting upon instances in which particular groups of people are not treated as fully "human" in the socio-political sense. As such, this course understands the "human" to be both a biological marker of species difference, and a category of social difference produced alongside and in dialogue with the categories of race, class, gender, and sexuality. The course is organized both chronologically and thematically, and will draw upon historical, cultural theoretical, scientific, and popular works.

1970H. Specters of Comparison
Comparison, which posits a likeness between the dissimilar, is always profoundly haunted by the question of its ground and judgment. This seminar will examine the comparative logic of capitalist modernity in the works of Marx, Weber, Adorno and
Horkheimer, Foucault, Heidegger, and Benjamin. We will ask the following questions: How is equivalence established between nonequivalent objects? How are actual social relations quantified and measured, and is there an ethics to modern forms of comparability? How does language reflect and produce these operations? Or, to put it differently: What are the forms through which difference "haunts" us? We will pay special attention to figures of the double and the ghost in Hoffmann and Freud. Other topics to be covered include rationalization and the disenchantment of the world, the modern uncanny, "mediauras," colonial comparison, and the ethics of incommensurability.

1970I. Works of Memory
In an age shaped by globalization, migration, mobility, and terrorism, the challenge of analyzing and understanding the work of memory takes on renewed significance. The work of memory comes at the service of quests and questions about "home," "homeland," "race," "a people," "nation," "culture," "trauma," and the like. For example, how do ideas such as "home" begin with an identification with a particular physical place/space and time/history and evolve into an idea, a metaphor, or even a state of mind? What are the public and private mechanics of memory that serve to fortify as well as unsettle individual and collective psyches? What are the effective features of forms of public memory making, such as memorials and memoirs?

1970J. Some Versions of Interiority
How has the presence of the self to itself been conceived across a variety of disciplines? And how might these conceptions affect, or indeed undermine, the familiar epistemological divisions of labor between "biological" and "cultural" accounts of self-awareness? We will consider how the inner is conceived (or dissolved) in traditions ranging from older philosophical concerns with self-awareness or self-presence, to the recent neurophenomenology of self-consciousness. We shall be reflecting on this topic via readings in philosophical phenomenology, in the history of aphasiology and the history of consciousness, and in philosophies of language and of the self. The articulation of thinking is a central question here - while even to frame it in this way is at once contentious. And as one exemplary form of self-presence, is the "inner voice" spontaneous, imposed, or a dictated improvisation? The emphasis here will trace theories, in different disciplines, of the inner voice's location, its vulnerability, or its durability. Detailed readings from broadly philosophical, psychoanalytical and neurological sources will be suggested on a weekly basis, as the course evolves.

1970K. The Origins and Contours of American Nationalism, 1780-1900
American Nationalism, a perennial subject of interest to historians, has received particular attention from all types of scholars in recent years, especially in the wake of international conflicts after the attacks of September 11, 2001. This course seeks to contextualize and historicize the topic of American nationalism by examining a series of interrelated questions: How and when did the United States become a nation, and how and when did American nationalism arise? How does American nationalism compare to nationalism in other regions? What have been the major tensions and conversations around the topic of American citizenship?

1970L. Minority News: Radical Reading and Representation
By reading historical and contemporary accounts of minority news-making, this seminar will offer students a comparative view of how small communities envision their role in the public sphere and how they create counter-publics. As part of the
course, we will engage in original research into the state of current minority presses, their rhetorics, the themes they take up and the kinds of audiences they aim to reach.

1970M. Sexual Identity and International Exchange
This seminar is interested in the extent to which queer culture is importable or exportable. We will study the ways in which LGBTQ people and cultures draw on foreign traditions and representations in their self-articulations. Subjects include: 19th-century European scientific constructions of homosexuality and their legacy today; the Daughters of Bilitis and the French classics; the association of male homosexuality and criminality from Balzac and Genet to contemporary cinema; Baudelaire’s *Flowers of Evil* and the damned lesbian in Anglo-American literature and pulp fiction; the internationalization of American gay culture today. While the course emphasizes Franco-American exchanges, topics will open up during the second half of the semester according to students’ particular interests.

1970N. Two Cultures?
This is a workshop for graduate and advanced undergraduates in both the sciences and the arts to come together to explore where these two “cultures” diverge and connect through method, philosophy, history, and practice. With readings from both the history of science, scientific works, and artistic works written in response to the sciences, we will explore the nature of creativity across the widest of disciplinary boundaries. Particular attention will be paid to those periods in history when the sciences and the humanities were for many practical purposes inseparable. Creative and critical writing will be used to explore the ways students in the arts, humanities and sciences might make alternative forms of expression from their work, as well as other forms of “research” into this rich and diverse territory.

1970O. Testimonies as Historical Documents: Interethnic Relations at a Time of Genocide
This seminar will investigate the manner in which testimonies can be used as historical documents, especially in the reconstruction of communal massacres and genocide on the local level. The primary focus will be on written and oral accounts by eyewitnesses of the Holocaust. We will begin initially with exploring some of the theoretical writings on testimony, and then turn to the historical context of the events described in the testimonies. Though the bulk of the testimonies in question will be by Jewish survivors, we will also have access to accounts by German perpetrators, and the Polish and Ukrainian inhabitants of the same region.

1970Q. Muzak, Art, and Society
This seminar will weave together a history of muzak and a history of minimalist music, considering both in relation to the development of performance arts (with an emphasis on the work and philosophy of John Cage). The course aims to examine and analyze the intersections and conflicts between art and muzak in terms of modern social engineering. Questions to be addressed include, notably: the regulation of collective and individual conducts; the design of coercive or emancipatory environments; the transition from disciplinary society to society of control.

1970R. Literature and the Arts in Today’s Cuba
Cuba today is home to writers, musicians and artists who engage with new media and a global audience against the backdrop of a socialist revolution. This seminar will explore aesthetic and political dimensions of contemporary Cuban culture with authors who will speak to us directly through a video link with Casa de las Américas in Havana. Knowledge of Spanish required.
Primarily for Graduates

2970. Special Topics in the Humanities

Comparative Literature

Professors Ahearn, Bensaïa, Bernstein (Chair), Bossy, Chow, Crossgrove (Emeritus), Evdokimova, Gander, Gluck, Golub, Konstan, Lattimore (Emeritus), Levy, McLaughlin, Merrim, Putnam (Emeritus), Saint-Amand, Scholes (Emeritus), Waldrop, Weinstein; Associate Professors Foley, Haynes, Pucci, Valente, Viswanathan; Assistant Professors Saval, Whitfield; Visiting Assistant Professor Pourgouris; and members of cooperating departments.

The Department of Comparative Literature accepts qualified candidates for the degree of A.B. and Ph. D. In addition to the offerings listed below, candidates should consider such courses as may be pertinent to their particular interests in the Afro-American Studies Program or the Departments of American Civilization; Classics; East Asian Studies; Cognitive, Linguistic, and Psychological Sciences; English; French Studies; German Studies; Hispanic Studies; History; Italian Studies; Judaic Studies; Modern Culture and Media; Philosophy; Portuguese and Brazilian Studies; Religious Studies; Slavic Languages; and Theatre Arts and Performance Studies.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Program

The graduate program in Comparative Literature accommodates a wide range of individual interests in literature and culture, periods, genres, history, criticism, and theory. To pursue such work students must have linguistic preparation in three languages (including English). The program aims at developing broad knowledge of one national literature, a strong competence in two other literatures, and preparation to teach in comparative literature, cultural studies, a national literature, and literary theory.

Doctor of Philosophy

For admission to the doctoral program students will present evidence of literary study in two or three European languages, Japanese, Chinese, or Arabic. They will pursue study of their principal literature historically and in a cross-cultural context, and link it with two additional literatures in terms of genre, periods, theme, or formal features of style and convention. The program may also emphasize theory—including poetics, stylistics, feminist, sociocultural, poststructuralist, and postcolonial approaches. The general requirements for the doctorate are:

Language requirements. The completion of the program requires development of language skills sufficient for advanced work in three literatures. The languages selected (of which one may be the student’s native tongue) are chosen with a view to their appropriateness to the student’s areas of special interest. The department’s major competence is in literary
expression in Western languages. However, our growing programs in classical and modern Chinese, Japanese, and Arabic provide opportunities for students trained in these languages. In addition, the study of Hebrew, ancient and modern, is available through Judaic Studies. Ordinarily two languages from the same group—Romance, Slavic, Germanic (exclusive of English)—will not be selected. For at least one of the foreign languages presented, a high degree of competence will be expected—close to native proficiency in speaking and writing in the case of a modern foreign language. Language competence will be tested by advanced coursework, the full requirement to be satisfied ordinarily during the student’s fourth semester of graduate study.

Course requirements. The student will successfully complete three years of course work in residence—sixteen courses normally, two or three of which may be individual work supervised by a staff member. Individual programs are worked out in consultation with the graduate advisor so as to meet the following requirements:

1. One graduate seminar in Comparative Literature each semester during the first two years of study.
2. A substantial core of courses primarily in one national literature along with significant related work in at least two others. Courses taken in the second and third literatures must include a minimum of two regularly scheduled graduate seminars.
3. A spread of courses comprising work in all three major genres (poetry, drama, narrative) and covering a significant range of distinct cultural epochs (medieval, romantic, modern, and so forth).
4. Some work in the area of literary theory, literary criticism, or literary translation.
5. If pertinent, courses relating literature to other fields of inquiry or expression; for example, linguistics, philosophy, psychology, history, music, the visual arts.

Teaching. Teaching experience, in comparative courses and where applicable in foreign language or English composition, is an integral part of the student’s program. It is expected, circumstances permitting, that every graduate student will serve at least two years as a teaching assistant, and that most students successfully completing requirements will be funded in this way for several years.

Major literature examination and comparative project. This combination of exercises is designed to allow students to develop competence in one national literature while at the same time fostering the approaches and skills necessary for comparative work. At the beginning of the third year, students will take an oral examination on their major literature. During the third year independent study courses will prepare students to present a written comparative project and an oral presentation based upon it which may be developed thereafter into the doctoral thesis.

The dissertation. The doctoral thesis prospectus will be submitted by September 30 of the fourth year of study. Funding for the fifth year will be contingent on substantial, demonstrated progress on the thesis by January of the fourth year.

The Master of Arts Degree

The department does not admit terminal A.M. candidates and does not require a master’s degree as a prerequisite for the doctorate. A student may, if he or she wishes, take an A.M. by completing one year of full-time course work in residence (normally four courses each semester), satisfying two of the three language requirements for the Ph.D., and completing a master’s thesis consisting of an essay of 50 to 60 pages. Upon advancement to doctoral
candidacy (i.e., after successful completion of all Ph.D. requirements save the dissertation) a student, upon request, will be awarded an A.M. degree.

For additional information please visit the department’s website at: http://www.brown.edu/Departments/Comparative_Literature/

Courses of Instruction

Primarily for Undergraduates

0510. Literary Creation and Literary Discourse

0510C. The World of Lyric Poetry
Lyric poetry is the prime mode for conveying emotion in many cultures, from ancient times to the present day. This course will survey the variety of forms and themes from the earliest texts from Greece, Rome, China and Japan, then the glories of the Renaissance and the Tang Dynasty, then move to the challenges for lyric expression in the modern world. For first year students only. D. J. LEVY.

0510G. "The Grand Tour; or a Room with a View": Italy in the Imagination of Others
Italy has for many decades been the place to which people traveled in order to both encounter something quite alien to their own identities and yet a place where they were supposed to find themselves, indeed to construct their proper selves. This course introduces students to some of the most important texts that describe this "grand tour." We will read texts (both literary and travelogues by Goethe, De Stael, Henry James, Hawthorne, Freud, among others, as well as view films (such as "A Room With a View:) - all in order to determine the ways in which Italy "means" for the cultural imagination of Western civilization. For first year students only.

0510H. Introduction to Twentieth-Century Arabic Prose Literature
Provides an introductory overview of the emergence and development of fiction written in Arabic through translated works from Egypt, Palestine, Sudan, Morocco, Saudi Arabia, and Lebanon.

0610. The Functions of Literature

0610G. Literature and the American Presidency
We shall read widely in writings by, and about, selected American presidents, but also focus on the ways in which presidents have used literature as a didactic source in their own writing and thinking. We will attend also to the relationship of culture to power as evidenced in other textual media, such as film. Reserved for First Year students. Enrollment limited to 20.

0610H. Renaissance Epic
Explores Renaissance attempts to renew, parody, and question the classical epic tradition. The study of poetics, narrative, and imagination will be wedded to investigations of beauty, wonder, and nationhood. Authors will include Ariosto, Tasso, Ercilla, Spenser, Camões, du Bartas, and Milton.

0610I. Introduction to Cultural Studies
We live in a cultural saturated with information. The messages we register, the meanings we deduce, and the knowledge upon which we ground our actions and choices require critical examination if we are to engage as thoughtful actors in our personal and civic lives. This class will encourage students to reflect on their initial impressions of and reactions to various media and will give them critical tools to examine how formal and thematic strategies work to shape and elicit our sympathies,
our desires, our fears, and our beliefs. Focusing primarily on visual and written texts drawn from popular culture—video, print, film, and Web sources—students will practice their analytical skills by evaluating these texts in classroom discussions, several short writing assignments, and one longer essay. Reading the work of several cultural theorists, students will learn to analyze persuasive argumentation through an attention to rhetorical and framing devices and to recognize and decipher visual cues, enabling them to interpret texts and images and to produce coherent critical positions of their own. This class will prepare participants for college courses that require them to process knowledge and not simply acquire information.

0710. Literature and its History

0710C. Introduction to Scandinavian Literature
An introduction to major works of Scandinavian writers, painters and filmmakers over the past 150 years. Figures include Kierkegaard, Ibsen, Strindberg, Munch, Hamsun, Josephson, Södergran, Lagerkvist, Vesaas, Cronqvist, August and Vinterberg, as well as children’s books by Astrid Lindgren and Tove Jansson. A. L. WEINSTEIN.

0710I. New Worlds
An interdisciplinary journey-combining history, literature, art, film architecture, cartography-through representations of the many worlds that comprised the colonial Hispanic New World. We traverse the paradisiacal Antilles, the U.S. Southwest, Tenochtitlan/Mexico City, Lima, Potosí. We read European, indigenous, and Creole writers, including: Columbus, Las Casas, Bernal Díaz, Aztec poets, Guaman Poma, Sor Juana. In English. Excellent preparation for study abroad in Latin America. Enrollment limited. Written permission required. S. MERRIM.

0710Q. Odysseus Across the Centuries
Examines the reincarnations of the Homeric figure of Odysseus in contemporary literatures. It approaches the texts historically, culturally and literary. How is the Odysseus myth altered from culture to culture (Greece, Rome, Ireland, the Caribbean), how is it re-adapted in different historical periods, how does Odysseus change as the genre changes (epic, poetry, the novel, film, drama)?

0810. Ideas, Myths, and Themes

0810F. Desire and the Marketplace
Studies love and desire as the interplay between men, women, and money in mercantilized societies, in seventeenth century Japan, eighteenth century England, nineteenth century France, and twentieth century Africa. Novels featuring female protagonists by Saikaku, Defoe, Flaubert, Emecheta and Bâ, readings in economic and feminist theory, and visual art—Japanese woodcuts, Hogarth, nineteenth century French painting, West African arts. M. S. VISWANATHAN.

0810J. The Colonial and Postcolonial Marvelous
A celebration and critique of the marvelous in South American and related literatures (U.S., Caribbean). We follow the marvelous from European exoticizing of the New World during the colonial period to its postcolonial incarnations in ‘magical realism’ and beyond. We attend particularly to the politics and marketing of the marvelous, in writers including Borges, Chamoiseau, Columbus, García Márquez, Fuguet. Reading in English or Spanish. E. K. WHITFIELD and S. MERRIM.

0810W. Caribbean Fiction
Through fiction and film originally in Spanish, French or English and theories of the postcolonial and postmodern, we explore how images of the Caribbean have been
constructed and complicated: as lands of abundance, scenes of historical violence and natural disaster, destinations for colonial and modern-day tourists. Readings include Carpentier, Benítez Rojo, Santos Febres, Chamoiseau, Condé, Kincaid, Brathwaite.

0810X. European Renaissances
Just what is the European renaissance and when and how did it happen and who decided? Let's look at the renaissances of Petrarch, Boccaccio, and Giotto, of Erasmus, and Thomas More and Holbein, of Machiavelli and Castiglione and Raphael. Are these renaissances intellectual, aesthetic, visual, rhetorical? Did they happen in the fourteenth century, the fifteenth, the sixteenth? Or in the nineteenth when they were first clearly described?

0810Y. Greece in the Imagination of Western Authors
Considers contemporary western thinkers (British, American, French and German) whose works are situated in or comment on Greece (both Classical and Modern). It examines novels, short stories, travelogues, and poems that exemplify the relationship of these authors to Greek culture. Authors include: Byron, Shelley, Durrell, Miller, de Bernieres, Freud, Camus, Le Corbusier, Woolf, Twain, Wharton, Forster and others.

0810Z. Myth and Literature
Great authors throughout the ages have been fascinated by ancient mythology and have incorporated elements of it into their texts. Similarly, the ways in which these myths are modified and varied throughout time can serve as a lens into values, traditions and the passage of time. This course will investigate different kinds of cultural myths, and the disparities and similarities--diachronological, geographical and thematic--that we can observe in different versions. We will investigate the values and limitations of interpreting, representing and translating myth in literature. Our focus will be myth in the literature of different Western nations from the medieval period to the twentieth century. Primary texts will include major works by Marie de France, Milton, Goethe, Kleist, Racine, Shakespeare and Kafka. Students will learn to question and engage critically with the historical, cultural, literary and scientific frontiers that separate myth and reality. Assignments will include three short papers and a final paper.

For Undergraduates and Graduates

1210. Introduction to the Theory of Literature
An historical introduction to problems of literary theory from the classical to the postmodern. Issues to be examined include mimesis, rhetoric, hermeneutics, history, psychoanalysis, formalisms and ideological criticism (questions of race, gender, sexuality, postcolonialism). Primarily for advanced undergraduates. Lectures discussions; several short papers. S. Bernstein and Z. Sng.

1410. Studies in Drama

1410K. European Early Modern Drama
An introduction to early modern drama in the French, Italian, Spanish, and English traditions. The goal is to explore a wide range of imaginative impulses in the Renaissance and Baroque periods. Readings will include plays by Corneille, Racine, Calderón, Lope de Vega, Shakespeare, Machiavelli, and Molière.
1410L. *Philosophy and Tragedy*
Explores the intersection of philosophy and tragedy in western literature. Readings include Aeschylus, Sophocles, Seneca, Plato, Aristotle, Racine, Calderón, Descartes, Pascal, Kant, Schelling, Hölderlin, Hegel, Nietzsche, and Heidegger.

1420. *Studies in Narrative*
1420F. *Fantastic and Existentialist Literatures of Argentina, Uruguay and Brazil*
Jorge Luis Borges proclaimed that South American writers can “wield all European themes,” without superstition, with irreverence. This course examines the ways in which (mostly mid-) 20th century writers from Argentina, and Uruguay and Brazil appropriated European fantastic and existentialist fictions, taking them in original directions. Readings, in English or original languages, include Borges, Cortázar, Onetti, Lispector. S. MERRIM.

1420V. *Visionary Fictions*
A series of works revealing the enigmatic features of visionary or ecstatic writing. Writers will be chosen from among Blake, Novalis, Breton, Burroughs, Monique Wittig, Angela Carter, Peter Ackroyd, Jamaica Kincaid. Written permission required. E. J. AHEARN.

1420X. *The European Novel From Goethe to Proust*
Readings of major European novels of the 19th century as literary reflections on philosophical questions such as aesthetic and ethical judgment, subjectivity, mimesis, memory and the novel itself as a genre. Authors include Goethe, Stendhal, Balzac, Dickens, Flaubert and Proust. Selections from Kant, Hegel, Marx, Lukács and Benjamin. K. MCLAUGHLIN.

1420Y. *Gigantic Fictions*
What is the relation between literary gigantism and mimesis? How do ‘gigantic fictions’ threaten to break their literary bounds? What holds these mammoth narratives together? We will address these questions and others through a close reading of three works: Murasaki Shikibu’s *The Tale of Genji*, Tolstoy’s *War and Peace* and James Joyce’s *Ulysses*. M. S. VISWANATHAN.

1421D. *Mediterranean Islands*
Considers the modern literature and culture of Mediterranean islands with particular emphasis on Sicily, Sardinia, the Aegean islands, Cyprus, and Malta. It explores the significance of the island both as a contained space and as part of the diverse Mediterranean region. Assignments will include novels, short stories, poems, travelogues, films as well as ethnographic and theoretical texts.

1430. *Studies in Poetry*
1430N. *The Albatross and the Nightingale: Nineteenth-Century Poetry*
Readings in French, German, British and American poetry of the nineteenth century. Texts selected from: Hölderlin, Mörike, Heine, Hugo, Nerval, Baudelaire, Keats, Hardy, Dickinson, Poe and others. Focus on close reading, and rhetorical and formal elements of poetry. Frequent writing assignments.

1430O. *The Poetry of Childhood*
Selected readings from among Rousseau, Blake, Hölderlin, Wordsworth, Baudelaire, Rimbaud, Nietzsche, Freud, Yeats, Char.

1610. *Studies in Criticism*
1610B. Irony

1610C. Japanese Aesthetics and Poetics
Focuses on the historical development of aesthetic values and their relation to social culture, religion, and national identity in Japan from the Nara period to the 20th century, with particular emphasis on the literary arts. Readings from Fujiwara Teika, Zeami Motokiyo, Sen no Rikyu, Okakura Tenshin, and others. A background in critical theory/philosophy and in East Asian studies helpful.

1610D. Theory of Lyric Poetry
Through readings of recent critical discussions of the lyric genre, we will explore general methodological problems of literary theory. Discussions include: the role of form, structure and tropes in analyzing poetry; problems of subjectivity and voice; the relation between poetry and history; the function of reading; and the problematic “objectivity” of criticism. Readings from Hölderlin, Shelley, Baudelaire, Yeats, Jakobson, Benveniste, Riffaterre, Jauss, Johnson, De Man.

1710. Introduction to Literary Translation

1710A. Introduction to Literary Translation: Translation as Art
Includes discussion of the history and theory of translation, but mainly involves practice in translating poetry or imaginative prose. Conducted as a workshop. S/NC.

B. K. WALDROP.

1810. Studies in the Literature of Ideas

1810C. City (B)Lights
Interdisciplinary explorations of the modern urban experience featuring social sciences, literature and film. Convergences and differences in the presentation of urban life in literature, film, the visual arts, urban planning, and social sciences. City populations, bureaucracy, power groups, alienation, urban crowds, the city as site of the surreal, are central themes. Against the background of classic European urban images, American cities and literary works are foregrounded. E. J. AHEARN.

1810H. Tales of Two Cities: Havana - Miami, San Juan - New York
Compares representations of Havana and San Juan in contemporary fiction and film to literary inscriptions of Cuban Miami and Puerto Rican New York. Explores mapping the city as mapping identity, and city-writing as reconstruction and creation. Views cities through the eyes of children, tourists, and urban detectives; authors include Antonio José Ponte, Roberto G. Fernández, Mayra Santos Febres and Ernesto Quiñones.

1810R. Bilingualism: Language as a Postcolonial Experience
Although the era of European colonialism has long ended, the problem of languages especially in the form of unresolved conflicts between the use of European languages and non-European languages remains ever pressing in societies that went through colonization and decolonization. This historical state of being caught between languages, designated here by the word bilingualism, is intimately linked to a constellation of literary, cultural, and social phenomena, ranging from specific narrative techniques, film subtitling, and practices of translation, to the status of so-called foreign accents and native speaker, and to the existential conditions of mimicry,
double consciousness, alienation, passing, and melancholy. Texts featured may include criticism and theory by Achebe, Bakhtin, Derrida, Dubois, Fanon, Freud, Glissant, Khatibi, Kristeva, Memmi, and Ngugi, as well as fiction by authors such as F. Dostoyevsky, V. Woolf, K. Ishiguro, J. Lahiri, Chang-rae Lee, and others.

1810U. *Angela’s Ashes and What Went Before: Irish Immigration and Literary Creation*
Readings in the major works of Joyce, Beckett and Farrell, without forgetting Jonathan Swift and William Butler Yeats.

1810W. *Marx, Freud, Nietzsche and the Philosophy of Nikos Kazantzakis*
Examines the life and works of Nikos Kazantzakis. Apart from his more famous novels, *The Last Temptation of Christ* and *Zorba the Greek*, students will also read the novels *Christ Recrucified*, *Freedom or Death*, *Saint Francis (The Pauper of God)*, *The Fratricides*, *The Odyssey: A Modern Sequel*, as well as the author's autobiography *Report to Greco*. The course also examines Kazantzakis's philosophical writings (*Saviors of God*), his travel memoirs (Spain, Italy, Sinai, Japan, England, Russia, Jerusalem and Cyprus), and his plays *Prometheus*, *Christopher Columbus*, and *Buddha*. Special emphasis will be placed on the influence of Nietzsche, Bergson, Marx, Freud as well as Buddhism and Christianity on Kazantzakis.

1811X. *Marx and his Critics*
This course will focus on a close study of the work of Karl Marx and its legacy for critical theory. The first part of the course will be dedicated to a reading of Marx's most important texts, with special emphasis given to his theories of economy, of ideology, alienation and fetishism. The second part will be dedicated to a reading of some of Marx's most important readers: Lukacs, Gramsci, Althusser, Zizek and Derrida. Instructor's permission required.

1811Y. *Genius and Melancholia in the Renaissance*
Explores Renaissance accounts of genius, genial inspiration, and melancholia, and their accompanying ideas of intellection and immortality. Primary materials include Dürer, Montaigne, Rabelais, Ficino, Ariosto, Erasmus, Saint Teresa, and Luther. Secondary or contemporary texts include Warburg, Panofsky, Saxl, Klibansky, Wind, Benjamin, Kierkegaard, and Sebald.

1812A. *Literatures of Immigration*
Why do people migrate? How do literary genres, including poetry, fiction, autobiography and memoir, characterize immigrant experiences? How is the experience of “coming from somewhere else” similar and different for each subsequent generation of immigrants? How does literature indicate the impacts of migration on the culture, politics and economics of the countries of immigration and emigration? How do literatures of immigration imagine the past, present and future of networks and communities of immigrants? Focusing on twentieth-century literary texts and the socio-historical context of mass migration, the first half of the course examines immigration literature in the U.S., the second half of the course explores literatures of immigration beyond the U.S., and the course concludes with an inquiry into immigration in our presently globalizing age.

1812D. *Prehistories of the Global: Literature and Modernity Across East and West*
Pairs a series of literary works from the last two centuries juxtaposed around themes of empire, decolonization, modernism, and gender.
1812E. Imagining the Eastern Mediterranean in Literature and Film
Explores cultures and eclectic identities of the Eastern Mediterranean and its cities (Athens, Alexandria, Beirut, Istanbul, Jerusalem) through the works of literature and film. We will focus on two central themes: first, the relationship between fiction and the history/memory of Eastern Mediterranean cities and peoples; second, the origins and sustenance of certain discourses that describe the Eastern Mediterranean with nostalgia for vanished cosmopolitanism. Writers and poets may include Abasiyanik, Adnan, Cavafy, Darwish, Durrell, Kanafani, al-Karrat, Melville, Matalon, Oz, Pamuk, Shammas, and Uzun; filmmakers may include Akin, Bitton, Boulmetis, Chahine, Egoyan, Jacir, Suleiman, and Zaim.

1970. Individual Independent Study
1990. Senior Thesis Preparation
Special work or preparation of honors theses under the supervision of a member of the staff. Open to honors students and to others.

Primarily for Graduates

2520. Seminar in Forms and Genres†
2540. Seminar in Schools and Movements

2540B. Modernism and its Others
Examines European modernism in a wider geographical and cultural context. Apart from considering major literary and theoretical texts of modernism it aims to reassess the concept with the inclusion of neglected but highly active territories of modernism. Major themes include: movements and manifestoes, modernism and national identity, modernist form, tradition and the mythical subtext, Marxism and psychoanalysis.

2650. Theory of Literature

2650F. Irony
A study of the trope of irony and its evaluation, especially in the Romantic tradition. Focus on the epistemological implications of irony and the role it plays in the philosophical tradition and in contemporary criticism. Readings from Plato, Hegel, Schlegel, Kierkegaard, Baudelaire, Lukács, Booth, De Man, Rorty and Derrida. S. Bernstein.

2720. Theory and Practice of Literary Translation
May be repeated for credit.

2720B. Theory and Practice of Literary Translation
Readings in the history and theory of translation from the Renaissance to the present, along with selected major examples of literature in English translation. Students will write two papers: (1) an analysis of a theoretical issue in translation, with ample attention to the historical context of that issue; and (2) either a discussion of an important translation as a criticism of the original work; or a critical comparison of several translations of an original work; or an annotated translation into English of a literary text from a language familiar to the student.

2820. Special Topics in Comparative Literature

2820P. Aesthetics and the Eighteenth Century Subject
The debates about taste, judgment, beauty, sentiment, and sensation in the eighteenth century gave rise to the discourse of aesthetics as we know it today, but they also exerted a powerful influence on how knowledge, virtue, and subjectivity were
imagined in the post-enlightenment period. In this course, we will examine some of the founding texts of aesthetic theory from the era (including Locke, Smith, Burke, Lessing, and Kant), and then turn to consider how aesthetic questions informed and were taken up by Goethe's narrative of subject-formation in his Bildungsroman, Wilhelm Meister's Apprenticeship. In English.

2820Q. *Culture and Politics in Cuba and the Caribbean*
Complicating standard narratives about intellectuals and the Cuban Revolution, explores writings whose relationship to the state is neither affirmative nor oppositional. Focusing on journals and on recent work in cultural theory, history, anthropology, and political science, addresses the evolution and potential of civil society; articulations of marginality; revisions of socialism and the Soviet legacy; and the mobility of theory. Spanish required.

2820S. *Poetry after Kant*
Begins with the intensive study of a selection of writings by Immanuel Kant focused especially on force and conflict in politics and aesthetics. This study, along with relevant readings from more recent work, will provide the basis for an approach to this topic in nineteenth-century poetry. Readings of Kant (Critique of Judgment, "Toward Eternal Peace," The Conflict of the Faculties), Walter Benjamin, Jacques Derrida, and Giorgio Agamben and will lead to several "case studies" of nineteenth-century poetry, including works by Friedrich Hölderlin, Charles Baudelaire, and Matthew Arnold.

2820T. *Universals*
Explores the status of universals in classical, Hellenistic, Scholastic, and Renaissance metaphysics. Also explores the literary implications of this philosophical problem. Readings include Plato, Aristotle, Chrysippus, Augustine, Cicero, Seneca, Abelard, Avicenna, Aquinas, Scotus, Ficino, Cusanus, Pico, and Suárez.

2830. *Special Problems in Comparative Literature*

2830F. *Walter Benjamin and Modern Theory*
Intensive study of Walter Benjamin’s essays on modern culture and literature (in particular Goethe, Baudelaire, Proust, and Kafka). Explores the consequences of his thinking for problems in contemporary literary and cultural theory. German and/or French helpful but not required. K. MCLAUGHLIN.

2980. *Reading and Research*

2990. *Thesis Preparation*
For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing a thesis. No course credit.

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**Center for Computation and Visualization**

At the Center for Computation and Visualization (CCV), we develop and maintain parallel computing and Virtual Reality display resources for use by the University research community, and engage in research in graphics, visualization and computational research. An adjunct activity is assistance and support in developing applications for our technologies in Brown’s curricula. By establishing a matrix for multi-discipline computational research, visualization research and research visualization, we will stimulate
intellectual dialogue and foster new collaboration, broadening and adding new academic structure to the University’s programs of research and science instruction.

The center maintains and is developing immersive and semi-immersive display devices. These include a TAN VR-Cube (also known locally as a “Cave”), a tiled stereo wall and desk-style displays. The Cave is our 8’ cube wherein the floor and three walls are projected to provide a virtual environment. Special glasses allow 3D stereo depth-perception, and a variety of tracking devices allow software to track the position of a user’s hand, head, wand, etc. The Cave also allows sound-based interaction.

We maintain several parallel computing resources. The 98-processor Intel Xeon parallel rendering cluster can be used for parallel computation, and there are two other clusters, a 106-processor AMD Athlon cluster and a 26-processor Intel Xeon cluster, that are dedicated to parallel computation. In addition, we have a 72-processor IBM SP system that is dedicated to parallel computation, and maintain several clusters dedicated to particular research groups. A Lustre parallel filesystem provides 40 terabytes of high-performance disk storage, and a Tivoli Storage Manager system provides 600 terabytes of backup and archival tape storage.

For additional information please visit the center’s website at:
http://www.ccv.brown.edu/.

Computer Science

Professors Black, Charniak (University Professor of Computer Science), Herlihy, Hughes, Istrail (Julie Nguyen Brown Professor in Computational and Mathematical Sciences), Klein, Laidlaw, Mathieu, Preparata (An Wang Professor), Reiss, Savage, Tamassia (Chair), Upfal, van Dam (Thomas J. Watson, Jr., University Professor of Technology and Education), Van Hentenryck, Wegner (Emeritus), Zdonik; Associate Professors Cetintemel (Manning Assistant Professor), Greenwald, Krishnamurthi, Lysyanskaya, Taubin; Associate Professor (Research) Doepner (Vice Chair); Assistant Professors Fonseca, Hays, Jannotti, Jenkins, Raphael, Sellmann; Adjunct Professors Fister, LaViola, Stanford; Adjunct Assistant Professors Meier, Triandopoulos, Pandurangan.

Computer Science combines the intellectual challenge of a new discipline with the excitement of an innovative and rapidly expanding technology. It has been an active area at Brown for over 40 years. The department resides in Brown’s Center for Information Technology; this striking building houses many of the university’s computing activities, as well as the department’s instructional computing facilities and research labs. Faculty, staff and students are provided state-of-the-art computing facilities managed by the department’s own technical staff.

The Department of Computer Science offers standard Sc.B. and A.B. concentrations, standard concentrations in mathematics and computer science, applied mathematics and computer science, economics and computer science, and computational biology, a master’s program, and a Ph.D. program. For a complete description of these standard concentration programs please visit:
http://www.brown.edu/Administration/Registrar/concentration.html.

The undergraduate program is designed to combine educational breadth in the areas of software and theoretical computer science with deeper understanding of specialized areas such as analysis of algorithms, artificial intelligence, computer graphics, computer security, computer systems and networks, information management, programming languages and compilers, software engineering, and theory of computation. Undergraduates usually take
at least one semester of faculty-supervised independent study, working either on a project of their own choice or as a member of a team on a faculty-sponsored research project.

The department also provides a wealth of opportunities for graduate research in computer science. Graduate students at Brown pursue research in a number of areas including: artificial intelligence, combinatorial optimization, computational biology, computational geometry, computational neuroscience, computer graphics, computer vision, cryptography, database systems, design and analysis of algorithms, document engineering, educational technology, intelligent agents, machine learning, mobile and ubiquitous computing, nanocomputing, natural language processing, operating systems and distributed systems, parallel computing, programming languages, robotics, scientific visualization and modeling, software engineering, theory of computation, user interfaces and virtual reality, and verification and reliable systems. The established coordination between the Department of Computer Science and other departments of the University provides an unusual opportunity for advanced research both in traditional “core” computer science and in areas combining computer science and such fields as applied mathematics, cognitive science, engineering, and biology and medicine.

**Undergraduate Programs**

Undergraduate concentrations in computer science encourage students to take both theoretical courses that develop logical and mathematical reasoning abilities and practical courses that provide experience in the construction, design, and implementation of real computing systems.

An additional information about concentrations in computer science may be found on the department’s web page: [http://cs.brown.edu/ugrad/](http://cs.brown.edu/ugrad/) or [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html)

Computer programming is a methodical expression of complicated ideas. An appropriate writing course serves not only to sharpen this ability but also to facilitate the description of programs to others, an integral part of the programming task. Concentrators must take an approved writing course. To qualify for approval, a course should require at least two essays and be graded in part on the quality of those essays. Students wishing to use a particular course to fulfill the writing requirement should obtain a writing approval form from the Department of Computer Science and have it signed by the course’s instructor. Writing requirements are given at: [http://www.cs.brown.edu/ugrad/concentrations/writing.html/](http://www.cs.brown.edu/ugrad/concentrations/writing.html/).

**Graduate Programs**

Brown University offers two graduate degrees in computer science: an Sc.M. for those who wish to improve their professional competence in computer science or to prepare for further graduate study, and a Ph.D. The requirements for each are outlined below.

**Master of Science.** The course requirements for the Sc.M. degree consist of a basic and an advanced component. All courses must be at the 1000-level or higher and must be completed with a grade of B or better.

The basic component consists of six courses. At least two courses must be at the 2000-level. Two courses must be computer science courses that form a coherent major; one course must be a computer science course that complements the major; three additional courses must be in computer science or related areas. Examples of majors and complementary courses are available on the course pairs and complements webpage: [www.cs.brown.edu/grad/masters/reqs/ScM_Courses.pdf](http://www.cs.brown.edu/grad/masters/reqs/ScM_Courses.pdf). The advanced component
requires the student to complete two additional 2000-level courses as part of completing one of the four following options:

A thesis (typically taken as two reading and research courses).

A project (typically taken as two reading and research courses).

Two additional 2000-level courses that demonstrate depth in some area of computer science or a closely related discipline. This pair of courses must be approved by the Director of Master’s Studies.

This will result in a total of eight courses (two of which may be reading and research).

Concurrent ScB and ScM in Computational Biology: The School of Computing at National University of Singapore and The Department of Computer Science at Brown have established a concurrent Bachelor’s and Master’s degree program in Computational Biology. After having first completed four years of undergraduate study at National University of Singapore, qualified students will attend Brown University to complete their fifth and final year of study in computational biology. After the successful completion of requirements set forth by both universities, the students will simultaneously earn both their Sc.B. and Sc.M. degrees.

Doctor of Philosophy. Ph.D. students must satisfy a set of requirements for admission to candidacy, fulfill major and minor course requirements, do a thesis proposal, complete a thesis that embodies the results of original research and gives evidence of high scholarship, and obtain 24 tuition credits.

The requirements for admission to candidacy include a course requirement that encourages breadth of study in diverse areas of computer science, a programming assignment that tests programming ability, and a research project that tests ability to do research. These requirements must be completed by the end of the student’s second year. Upon satisfying these requirements the student will be formally admitted to candidacy for the Ph.D. degree in computer science.

The student must complete one major and two minor course requirements. Each requirement is normally met by the satisfactory completion of two approved one-semester courses. The minor requirements are normally one inside and one outside the field of computer science. The major and minor course requirements are normally completed by the end of the student’s third year in residence.

The student’s thesis research will normally be done under the supervision of a member of the faculty of the Department of Computer Science. The thesis will be read by the thesis supervisor and two readers appointed by the graduate committee upon the recommendation of the thesis supervisor. It will be presented at a meeting open to students, faculty, and the public. Its adequacy will be judged by the thesis supervisor, the readers, and the computer science faculty attending the oral presentation.

Courses of Instruction

Primarily for Undergraduates

0020. Concepts and Challenges of Computer Science
Removes the mystery surrounding computers and the digital world. Introduces a range of topics including the Internet and Multimedia, along with the underlying digital technology and its relevance to our society. Other topics include artificial intelligence, IT security, the
economics of computing and its pervasiveness in today’s world. Analytic skills are developed through HTML and Python assignments. No prerequisites. D. L. STANFORD.

0040. Introduction to Scientific Computing and Problem Solving
An introduction to computer programming and software design in a high-level language. Emphasizes fundamental techniques and strategies for solving scientific problems with computers. Illustrates abstract concepts with a wide range of exemplary applications from engineering, the sciences, and the humanities. Intended primarily for students not concentrating in computer science who want a single application-oriented programming course. No prerequisites.

0060. Computers that Hear, See and maybe Read
Pending Approval.

0090. First Year Seminars
In these seminars we will juxtapose contemporary and classic texts in order to ground issues and ideas, raised by contemporary computer science, in the traditions in which these issues and ideas were discussed before the advent of computers. The goal is to encourage students to construct their own philosophies about the relationship between technology and values.

0090A. Building a Web Application
Computer applications involving web-based interfaces interacting with back-end databases are becoming common. In this course we will develop a web-based solution for a specific problem. In doing so we will study issues related to software engineering, software development, and the design, structure and implementation of web-based applications. Enrollment limited. Written permission required. S. P. REISS.

0150. Introduction to Object-Oriented Programming and Computer Science
Emphasizes object-oriented design and programming in Java, an effective modern technique for producing modular, reusable, internet-aware programs. Also introduces interactive computer graphics, user interface design and some fundamental data structures and algorithms. A sequence of successively more complex graphics programs, including Tetris, helps provide a serious introduction to the field intended for both potential concentrators and those who may take only a single course. No prerequisites. A. VAN DAM.

0160. Introduction to Algorithms and Data Structures
Introduces fundamental techniques for problem solving by computer that are relevant to most areas of computer science, both theoretical and applied. Algorithms and data structures for sorting, searching, graph problems, and geometric problems are covered. Programming assignments conform with the object-oriented methodology introduced in CSCI 0150. Computer graphics animations are used to visualize algorithms and their performance. Prerequisite: CSCI 0150 or written permission. J. F. HUGHES.

0170, 0180. Computer Science: An Integrated Introduction
Although students are taught to use programming languages as tools, the goal of CSCI0170/0180 is not merely to teach programming. On the contrary, the goal is to convey to students that computer science is much more than programming! All of the following fundamental computer science techniques are integrated into the course material: algorithms, data structures, analysis, problem solving, abstract reasoning, and collaboration. In 0170, concrete examples are drawn from different subareas of computer science: arbitrary-precision arithmetic, natural language processing, databases, and strategic games. In 0180, students learn to program in Java while continuing to develop their algorithmic and analytic skills. Object-oriented design of programs is a principal focus. Examples are drawn for areas such as strategy games, databases, discrete-event
simulation, window managers, web client/server programming, route-finding and data compression. A. GREENWALD and U. CETINTEMEL.

0190. Programming with Data Structures and Algorithms
This course is a one-semester introduction to computer science for students with strong prior computer science background. It covers core data structures, algorithms, and analysis techniques similar to those of the two-course introductory sequences (CSCI 0150-0160 and CSCI 0170-0180), integrated with programming. Prerequisite: score of 5 on the CS AP AB exam, equivalent knowledge of Java and data structures, or permission of the instructor. S. KRISHNAMURTHI.

0220. Introduction to Discrete Structures and Probability
Seeks to place on solid foundations the most common structures of computer science, to illustrate proof techniques, to provide the background for an introductory course in computational theory, and to introduce basic concepts of probability theory. Introduces Boolean algebras, logic, set theory, elements of algebraic structures, graph theory, combinatorics, and probability. No prerequisites. F. PREPARATA.

0310. Introduction to Computer Systems
Basic principles of computer organization. Begins with machine representation of data types and logic design, then explores architecture and operations of computer systems, including I/O, pipelining, and memory hierarchies. Uses assembly language as an intermediate abstraction to study introductory operating system and compiler concepts. Prerequisite: CSCI 0150 or CSCI 0180 or CSCI 0190. P. VAN HENGENYCK.

0320. Introduction to Software Engineering
Advanced programming techniques including Java, threads, web-applications, user interfaces and XML. Covers software design including object-oriented design, systems design, web application design and user interface design. Software engineering including modeling, analysis, testing, debugger reuse, the software lifecycle, tools and project management. Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190. CSCI 0220 is recommended. S. P. REISS.

0510. Models of Computation
The course introduces basic models of computation including languages, finite-state automata and Turing machines. Proves fundamental limits on computation (incomputability, the halting problem). Provides the tools to compare the hardness of computational problems (reductions). Introduces computational complexity classes (P, NP, PSPACE and others). Prerequisite: CSCI 0220. A. LYSYANSKAYA.

0530. Directions: The Matrix in Computer Science
The aim of this course is to provide students interested in computer science an introduction to vectors and matrices and their use in modeling and data analysis. Students will study (1) concepts and proofs in linear algebra, (2) data-analysis techniques such as principal component analysis, latent semantic indexing, and linear regression, and (3) applications of these techniques to computer science. Example applications: transformation of shapes, detecting faces in images, error-correcting codes, factoring integers, categorizing new stories, and Google's method for ranking web pages. This course satisfies the linear algebra requirement for the Computer Science Sc.B. Prerequisites: No formal prerequisites, but students are expected to be comfortable with mathematics and with computing.

0931. Introduction to Computation for the Humanities and Social Sciences
Introduces students to the use of computation for solving problems in the social sciences and the humanities. We will investigate a series of real-world problems taken from the news, from books such as Freakonomics, and from current research. Topics covered in-
clude data gathering, data analysis, web-based interfaces, security, algorithms, and scripting.

For Undergraduates and Graduates

1230. *Introduction to Computer Graphics*

Fundamental concepts in 2D and 3D computer graphics, e.g., 2D raster graphics techniques, simple image processing, and user interface design. Focuses on geometric transformations, and 3D modeling, viewing and rendering. Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190. CSCI 0320 is strongly recommended. Students who don’t know C++ should take the minicourse offered during the first week of the semester. CSCI 0530 or MATH 0520 is helpful. A. VAN DAM.

1250. *Introduction to Computer Animation*

Introduction to 3D computer animation production including story writing, production planning, modeling, shading, animation, lighting, and compositing. Students work independently to learn basic skills, then in groups to create a polished short animation. Emphasis is on in-class critique of ongoing work, which is essential for learning the cycle of evaluating work, determining improvements, and implementing them for further evaluation. Students should attend first class to receive instructor’s written permission. B. J. MEIER.

1260. *Introductory Compiler Construction*

Lexical analysis, syntactic analysis, semantic analysis, code generation, code optimization, translator writing systems. Prerequisites: CSCI 0220 and 0320; 0510 is recommended. S. P. REISS.

1270. *Database Management Systems*

Introduction to database structure, organization, languages, and implementation. Relational and object-relational models. Query languages, query processing, query optimization, normalization, file structures, concurrency control and recovery algorithms, and distributed databases. Coverage of modern applications such as the Web, but with emphasis on Database Management Systems internals. Recommended: CSCI 0220 and 0310. S. B. ZDONIK.

1280. *Intermediate 3D Computer Animation*

Continues work begun in CSCI 1250 with deeper exploration of technical and artistic aspects of 3D computer animation including more sophisticated shading and lighting methods and character modeling, rigging, and animation. After a series of individual exercises, students pursue an independent topic and then, working alone or in pairs, create a polished demonstration. Emphasis is on in-class critique of ongoing work. Prerequisite: CSCI 1250. Students may contact the instructor in December for permission. B. J. MEIER.

1340. *Innovating Game Development*

What technologies will shape the next generation of videos? This project-centered course focuses on computational innovations for game development. Students examine innovative game technology through case studies of existing games and talks by industrial and academic game professionals. In teams, students propose and implement a project demonstrating a novel technology for gaming. Recommended: strong computational or engineering background. O. C. JENKINS.

1370. *Virtual Reality Design for Science*

Explores the visual and human-computer interaction design process for scientific applications in Brown’s immersive virtual reality Cave. Joint with RISD. Computer Science and design students learn how to work together effectively; study the process of design; learn about scientific problems; create designs applications; critique, evaluate, realize and iterate designs; and demonstrate final projects. Instructor permission required. D. H. LAIDLAW.
1380. Distributed Computer Systems
Explores the fundamental principles and practice underlying networked information systems, first we cover basic distributed computing mechanisms (e.g., naming, replication, security, etc.) and enabling middleware technologies. We then discuss how these mechanisms and technologies fit together to realize distributed databases and file systems, web-based and mobile information systems. Prerequisite: CSCI 0320 or 0360. T. W. DOEPPNER.

1410. Introduction to Artificial Intelligence
Theoretical and practical approaches to designing intelligent systems. Example tasks range from game playing to hardware verification. Core topics include knowledge representation, search and optimization, and automated reasoning. Application areas include natural language processing, machine vision, machine learning, and robotics. Strongly recommended: CSCI 0160, CSCI 0180 or CSCI 0190; and CSCI 0220. M. SELLMANN.

1430. Introduction to Computer Vision
How can we program computers to understand the visual world? This course treats vision as inference from noisy and uncertain data and emphasizes probabilistic and statistical approaches. Topics may include perception of 3D scene structure from stereo, motion, and shading; segmentation and grouping; texture analysis; learning, object recognition; tracking and motion estimation. Strongly recommended: basic linear algebra, calculus, and probability. M. J. BLACK.

1460. Introduction to Computational Linguistics
Introduction to computational linguistics (also known as natural-language processing) including the related mathematics and several programming projects. Particular topics include: language modeling (as used in e.g., speech recognition, machine translation), machine translation, part-of-speech labeling, syntactic parsing, and pronouns resolution. Mathematical techniques include basic probability, noisy channel models, the EM (Expectation-Maximization) algorithm, hidden Markov models, probabilistic context-free grammars, and the forward-backward algorithm. Prerequisites: CSCI 1410 or instructor permission, which will be given to all students with a solid background in programming and either basic probability, or enough mathematical background to quickly absorb the latter. Not open to first year students.

1480. Building Intelligent Robots
How do robots function autonomously in dynamic, unpredictable environments? This course focuses on programming mobile robots, such as the iRobot Roomba, to perceive and act autonomously in real-world environments. The major paradigms for autonomous control and robot perception are examined and compared with robotic notions in science fiction. Prerequisite: CSCI 0150, CSCI 0170 or CSCI 0190. Recommended: CSCI 1410 or CSCI 1230. O. C. JENKINS.

1490. Introduction to Combinatorial Optimization
This course covers the algorithmic aspects of optimizing decisions in fully observable, non-changing environments. Students are introduced to state-of-the-art optimization methods such as linear programming, integer programming, local search, and constraint programming. Strongly recommended: CSCI 0160, CSCI 0180 or CSCI 0190; CSCI 0510; and CSCI 0530 or MATH 0520 or MATH 0540. M. SELLMANN.

1510. Introduction to Cryptography and Computer Security
This course studies the tools for guaranteeing safe communication and computation in an adversarial setting. We develop notions of security and give provably secure constructions for such cryptographic objects as cryptosystems, signature schemes and pseudorandom generators. We also review the principles for secure system design. Prerequisites: CSCI 0220 and CSCI 0510. A. LYSYANSKAYA.
1550. Probabilistic Methods in Computer Science
Introduction to probability theory in computer science, in particular randomized algorithms and probabilistic analysis of algorithms. Introduces basic probability theory and presents applications of randomized and probabilistic analysis techniques in areas such as combinatorial optimization, data structures, communication, and parallel computation. Assumes no prior knowledge of probability theory. Prerequisite: CSCI 0220 or equivalent. CSCI 1570 recommended but not required. E. UPFAL.

1570. Design and Analysis of Algorithms
A single algorithmic improvement can have a greater impact on our ability to solve a problem than ten years of incremental improvements in CPU speed. We study techniques for designing and analyzing algorithms. Typical problem areas addressed include numerical computing, hashing, searching, dynamic programming, graph algorithms, network flow, and string parsing and matching. Prerequisites: CSCI 0160, CSCI 0180, or CSCI 0190, and CSCI 0220. C. KENYON.

1590. Introduction to Computational Complexity
Introduction to serial and parallel models of computation; time and space complexity classes on these models; the circuit model of computation and its relation to serial and parallel time complexity; space-time tradeoffs on serial computers; area-time tradeoffs on the VLSI computational model; interactive and probabilistically checkable proofs; the definition of NP in terms of probabilistically checkable proofs; hardness of approximations to solutions to NP-hard problems. Prerequisite: CSCI 0510. J. E. SAVAGE.

1600. Introduction to Embedded and Real-Time Software
Comprehensive introduction to the design and implementation of software for programmable embedded computing systems, those enclosed in devices such as cellular phones, game consoles, and car engines. Includes the overall embedded real-time software design and development processes, as well as aspects of embedded hardware and real-time, small-footprint operating systems. Major project component. Prerequisites: CSCI 0320. Enrollment limited. Written permission required. S. P. REISS and J. JANNOTTI.

1610. Building High-Performance Servers
In depth study of modern server design. Considers architectures for building high-performance, robust, scalable, and secure network servers. We will consider all aspects of “mission-critical” servers. Topics include multithreaded and asynchronous programming techniques, database access, performance profiling, security, and redundancy. Teams will build significant projects. Prerequisite: CSCI 0320 or 0360. CSCI 1670 or 1680 is recommended. J. JANNOTTI.

1660. Introduction to Computer Systems Security
This course teaches principles of computer security from an applied viewpoint and provides hands-on experience on security threats and countermeasures. Topics include code execution vulnerabilities (buffer overflow, sandboxing, mobile code), malware (trojans, viruses, and worms), access control (users, roles, policies), cryptosystems (hashing, signatures, certificates), network security (firewalls, TLS, intrusion detection, VPN), and human and social issues. Prerequisites: CSCI 0160, CSCI 0180 or CSCI 0190. R. TAMASSIA.

1670. Operating Systems
The basic principles of operating systems. Part I: fundamental concepts including: multithreaded programming and concurrency, dynamic storage allocation and liberation, linkers and loaders, file systems, and virtual memory. Covers actual systems including Solaris, Linux, and Windows. Part II: operating-system support for distributed systems, including computer communication protocols, remote procedure call protocols, computer security, and distributed file systems. Prerequisite: CSCI 0320. T. W. DOEPPNER.
1680. Computer Networks
Covers the technologies supporting the Internet, from Ethernet and WiFi through the routing
protocols that govern the flow of traffic and the web technologies that are generating
most of it. A major concern is understanding the protocols used on the Internet: what the
issues are, how they work, their shortcomings, and what improvements are on the horizon.
Prerequisite: CSCI 0320, or consent of instructor. J. JANNOTTI.

1690. Operating Systems Laboratory
Half-credit course intended to be taken with CSCI 1670. Students individually write a sim-
ple operating system in C. Serves to reinforce the concepts learned in 1670 and provides
valuable experience in systems programming. Corequisite: CSCI 1670. T. W. DOEPPNER.

1730. Introduction to Programming Languages
Explores the principles of modern programming languages by implementation. Examines
linguistic features, especially control operators such as first-class functions, exceptions,
and continuations. Studies data and their types, including polymorphism, type inference,
and type soundness. Examines compiler and run-time system topics: continuation-passing
style and garbage collection. Prerequisite: CSCI 0160, CSCI 0180 or CSCI 0190. Preferred:
CSCI 0220, CSCI 0310 and CSCI 0510, or instructor's permission. S. KRISHNAMURTHI.

1760. Introduction to Multiprocessor Synchronization
This course examines the theory and practice of multiprocessor synchronization. Subjects
covered include multiprocessor architecture, mutual exclusion, wait-free and lock-free syn-
chronization, spin locks, monitors, load balancing, concurrent data structures, and transac-
tional synchronization. M. P. HERLIHY.

1780. Parallel and Distributed Programming
Covers the practical aspects involved in designing, writing, tuning, and debugging software
designed to run on parallel and distributed systems. Topics might include client-server
computation, threads, networks of workstations, message passing, shared memory, parti-
tioning strategies, load balancing, algorithms, remote procedure call, and synchronization
techniques. Prerequisites: CSCI 0220 and 0320; 0510 recommended. S. P. REISS.

1810. Computational Molecular Biology
Processing molecular biology data (DNA, RNA, proteins) has become central to biological
research and a challenge for science research. Important objectives are molecular sequence
analysis, recognition of genes and regulatory elements, molecular evolution, protein struc-
ture, comparative genomics. This course models the underlying biology in the terms of
computer science and presents the most significant algorithms of molecular computational
biology. Prerequisites: CSCI 0160, CSCI 0180 or CSCI 0190, and CSCI 0220, or consent
of instructor. F. PREPARATA.

1900. Software System Design
Students identify, design, and implement significant software applications and learn and
practice techniques of project management, requirements, specification, analysis, design,
coding, documentation, testing, maintenance, and communication. Prerequisite: CSCI
0320. S. KRISHNAMURTHI.

1950. Special Topics in Computer Science
Course in various branches of Computer Science. Specific topics to be determined at the be-
ginning of each semester.

1970. Senior Seminar
Independent study in various branches of Computer Science.
Primarily for Graduates

2240. Interactive Computer Graphics
Important current topics in computer graphics. Course includes reading and discussing current research papers, multiple assignments and preliminary projects in which students implement recent papers, and a demanding final integrative project done in small groups. Prerequisite: CSCI 0320 and CSCI 1230. J. F. HUGHES.

2270. Topics in Database Management
In-depth treatment of advanced issues in database management systems. Topics vary from year to year and may include distributed databases, mobile data management, data stream processing and web-based data management. Prerequisite: CSCI 1270. S. B. ZDONIK.

2310. Human Factors and User Interface Design
Covers current research issues involving the implementation, evaluation and design of user interfaces, while also providing a basic background in the fundamentals of user interface evaluation, programming, tools, and techniques. A possible topic is programming and designing device-independent interfaces. Previous topics have included the development of pervasive internet-based interfaces and software visualization. Prerequisite: Consent of instructor. S. P. REISS.

2330. Programming Environments
Programming tools; control and data integration; software understanding and debugging; environments for parallel and distributed programming; reverse engineering; configuration management and version control and debugging. Emphasis on current research areas. Prerequisite: consent of instructor. S. P. REISS.

2340. Software Engineering
Topics in the design, specification, construction and validation of programs. Focus will be on tools to support each of these stages. Course will pay special attention to the concerns raised by the properties of modern software systems including distribution, security, component-based decomposition and implicit control. Prerequisite: CSCI 1900 or other upper-level systems coursework. S. KRISHNAMURTHI and S. P. REISS.

2370. Interdisciplinary Scientific Visualization
The solution of scientific problems using computer graphics and visualization. Working in small multidisciplinary groups, students identify scientific problems, propose solutions involving computational modeling and visualization, design and implement the solutions, apply them to the problems, and evaluate their success. Examples include interactive software systems, immersive CAVE applications, or new applications of existing visualization methods. Prerequisites: all: programming experience; CS students: graphics experience; others: problem ideas. D. H. LAIDLAW.

2410. Statistical Models in Natural-Language Understanding
Various topics in computer understanding of natural language, primarily from a statistical point of view. Topics include: hidden Markov models, word-tagging models, probabilistic context-free grammars, syntactic disambiguation, semantic word clustering, word-sense disambiguation, machine translation and lexical semantics. Prerequisite: CSCI 1410. E. CHARNIAK.

2440. Game-Theoretic Artificial Intelligence
This course surveys recent developments in an emerging area known as game-theoretic artificial intelligence (AI), which incorporates fundamental principles of game theory into AI. Research in this area is motivated by game-theoretic applications, such as auction design and voting, as well as AI application areas, such as multiagent systems. Students will conduct theoretical, empirical, and experimental investigations, asking fundamental ques-
tions such as: can the behavior of computational learning agents converge to game-theoretic equilibria? Prerequisite: Consent of instructor. A. R. GREENWALD.

2500. *Topics in Advanced Algorithms*

2510. *Approximation Algorithms*
Deals with NP-hard combinatorial optimization problems by efficiently constructing a suboptimal solution with some specified quality guarantees. We study techniques such as linear programming and semidefinite programming relaxations, and apply them to problems such as facility location, scheduling, bin packing, maximum satisfiability or vertex cover. Prerequisite: CSCI 1490 or 1570.

2520. *Computational Geometry*
Algorithms and data structures for fundamental geometric problems in two and three dimensions. Topics include point location, range searching, convex hull, intersection, Voronoi diagrams, and graph drawing. Applications to computer graphics, circuit layout, information visualization, and computer-aided design are also discussed. Prerequisite: CSCI 1570 or written permission. R. TAMASSIA.

2530. *Design and Analysis of Communication Networks*
A theory seminar focusing on algorithmic and combinatorial issues related to the design and analysis of communication networks for parallel and distributed systems. Topics include packet routing, circuit switching, distributed shared memory, fault tolerance, and more. Prerequisite: CSCI 1550, 1570, or equivalent. E. UPFAL.

2531. *Internet and Web Algorithms*
This advanced graduate course/seminar focuses on the mathematical foundations of algorithms for handling large amounts of data over networks. We'll read and discuss recent papers in information retrieval, search engines, link analysis, probabilistic modeling of the web and social networks, and more. Recommended: CSCI 1550 and CSCI 1570, or equivalent courses.

2540. *Advanced Probabilistic Methods in Computer Science*
Advanced topics in applications of probabilistic methods in design and analysis of algorithms, in particular to randomized algorithms and probabilistic analysis of algorithms. Topics include the Markov chains Monte Carlo method, martingales, entropy as a measure for information and randomness, and more. Prerequisite: CS 155. Recommended but not required: CSCI 1570. E. UPFAL.

2550. *Parallel Computation: Models, Algorithms, Limits*
The theoretical foundations of parallel algorithmics. Analysis of the most important models of parallel computation, such as directed-acyclic computation graphs, shared memory and networks, and standard data-exchange schemes (common address space and message-passing). Algorithmic techniques with numerous examples are cast mostly in the data-parallel framework. Finally, limitations to parallelizability (P-completeness) are analyzed. The content of the course is likely to change as technology evolves. Written permission required for undergraduates. F. PREPARATA.

2560. *Applied Theory of Computation*
Advanced topics in theoretical computer science are chosen from the following list: parallel computation, time and space complexity classes, circuit complexity, I/O complexity, VLSI computation and nanocomputing. J. E. SAVAGE.

2570. *Introduction to Nanocomputing*
Nanoscale technologies employing materials whose smallest dimension is on the order of a few nanometers are expected to replace lithography in the design of chips. We give an introduction to computational nanotechnologies and explore problems presented by their
stochastic nature. Nanotechnologies based on the use of DNA and semiconducting materials will be explored. Prerequisite: CSCI 0510. J. E. SAVAGE.

2580. **Solving Hard Problems in Combinatorial Optimization: Theory and Systems**
The theory of combinatorial optimization and how it is embodied in practical systems. Explores issues encountered in implementing such systems. Emphasizes the wide variety of techniques and methodologies available, including integer programming, local search, constraint programming, and approximation algorithms. Problems addressed may include: scheduling, coloring, traveling salesman tours, and resource allocation. Prerequisites: CSCI 0320 and basic knowledge of linear algebra. P. VAN HENTENRYCK.

2590. **Advanced Topics in Cryptology**
Seminar-style course on advanced topics in cryptography. Example topics are zero-knowledge proofs, multi-party computation, extractors in cryptography, universal composability, anonymous credentials and ecash, interplay of cryptography and game theory. May be repeated for credit. Prerequisites: CSCI 1510 or permission of the instructor.

2730. **Programming Language Theory**
Theoretical models for the semantics of programming languages and the verification of programs. Topics include operational semantics, denotational semantics, type theory and static analyses. Prerequisite: CSCI 1730. S. KRISHNAMURTHI.

2750. **Topics in Parallel and Distributed Computing**
A graduate seminar that will consider an advanced topic (to be determined) in distributed computing. May be repeated for credit. Written permission required for undergraduates. M. P. HERLIHY.

2950. **Special Topics in Computer Science**

2980. **Reading and Research**

2990. **Thesis Preparation**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

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**Development Studies**

*The Undergraduate Concentration in Development Studies* is designed to provide a comparative perspective on the long-term social, political, and economic changes which have accompanied industrialization and the growth of the modern state in Asia, Africa, Latin America and the historical experience of European countries. For details see http://www.brown.edu/Administration/Registrar/concentration.html.

*The A.M. Degree in Development Studies* is designed to suit the needs of individual candidates while meeting the interdisciplinary and comparative objectives of the degree. Normally the program will consist of a minimum of eight courses taken from the instructional offerings of departments and centers which provide advanced instruction on development issues. These will include DS 198, SO 215, EC 151, and AN 204 (or equivalent courses as approved by the program director), as well as a carefully chosen set of courses involving different disciplinary perspectives on development and including at least two additional 200-level courses. All candidates will write a thesis. Students will usually have a reading and speaking competence in a foreign language and are expected to acquire language skills as needed for research.
The Concurrent A.B./A.M. Degree. Students may combine work toward an A.B. in Development Studies while simultaneously working towards the A.M. In this integrated A.B./A.M. degree, candidates will write a single thesis and take a minimum of six courses in addition to those required for the A.B. These must include those specified for the A.M. degree which have not previously been taken. A preliminary version of the A.M. thesis will satisfy the requirements for the A.B. degree. See . The program also welcomes applications to the 5th Year Masters Program, in which the A.M. Degree work follows awarding of the A.B. Degree.

Both the undergraduate concentration and the A.M. program are sponsored by the Watson Institute for International Studies.

Courses of Instruction
For Undergraduates and Graduates
1000. Seminar in Development Studies
Provides an interdisciplinary introduction to Development Studies. Students will read classic and contemporary texts that present development issues and theories from the perspectives of anthropology, economics, history, political science, and sociology. Efforts to connect theoretical debates to understanding contemporary problems will be encouraged. Reserved for sophomore and junior Development Studies concentrators.
1500. Methods in Development Research
An introduction to the various techniques of research in Development Studies, with a focus on qualitative and field methods.
1800. Development Studies Seminar
Integrated interdisciplinary approaches to Development Studies around a specific topic of interest.
1980. Thesis Writing in Development Studies
An integrative seminar designed for concentrators working on senior theses. Others with comparable backgrounds may enroll with written permission. Begins with a review of theoretical and methodological literature on development studies. Written and oral presentations of thesis research will be the central focus of the latter part of the course. Reserved for Development Studies seniors.
1990. Senior Thesis Preparation
Reserved for Development Studies seniors.

Primarily for Graduates
2000. Theory and Research in Development I
Explores a range of substantive debates in development by drawing on empirical and theoretical work from the disciplines of economics, political science, sociology and anthropology. The course aims to provide students with a broad understanding of current debates and research on development, evaluate both the differences and complementarities in disciplinary perspectives and develop a toolkit of interdisciplinary analytic skills that can be applied to concrete research questions.
2010. Theory and Research in Development II
Explores a range of substantive debates in development by drawing on empirical and theoretical work from the disciplines of economics, political science, sociology and anthropology. The course aims to provide students with a broad understanding of current debates and research on development, evaluate both the differences and complementarities in disciplin-
ary perspectives and develop a toolkit of interdisciplinary analytic skills that can be applied to concrete research questions.

2820. **Special Topics in Development Studies**

2990. **Thesis Preparation**

For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit. **The Staff.**

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**Lefschetz Center for Dynamical Systems**

The Lefschetz Center for Dynamical Systems was established by Solomon Lefschetz and J. P. LaSalle at Brown University in the fall of 1964 to carry out a program of basic research and advanced study in the theory and applications of differential equations, dynamical systems and stochastic processes and systems theory. Within its areas, it is one of the leading centers in the world. Areas of application include theoretical mechanics, oceanography, nonlinear optics, plasma physics, stochastic control, and communication theory. Permanent members of the center serve on faculties of the Division of Applied Mathematics, the Division of Engineering, and the Department of Mathematics.

The center attracts distinguished visiting scientists and promising young scientists from the United States and abroad, and has an extensive postdoctoral program.

Members of the center have been supported in their research efforts by the Air Force Office of Scientific Research, the United States Army Research Office, the Office of Naval Research, the National Science Foundation and NASA.

The center was dedicated to the memory of Solomon Lefschetz in August, 1974.

For additional information please visit the Center’s website at: [http://www.dam.brown.edu/lcds/](http://www.dam.brown.edu/lcds/).

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**Early Cultures**

The mission of the program is the comparative study of the history, literatures, and religions of Mediterranean, and West, South, and East Asian antiquity before the Arab conquest. The program is administered by a Director (Professor Alcock) and an executive committee composed of representatives of various departments, centers, and programs.

For additional information regarding the Program in Early Cultures please visit: [http://www.brown.edu/Departments/Early_Cultures/](http://www.brown.edu/Departments/Early_Cultures/).

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**Undergraduate Program**

For a complete description of the standard concentration program leading to the A.B. degree, please visit [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).
Courses of Instruction

For Undergraduates and Graduates

1000. Concentrators Seminar
Seminar for concentrators in ancient studies (juniors and seniors). Topics changing every year. Other interested students admitted with permission. Taught by faculty from academic units participating in ancient studies.

1970. Individual Study Project

1990. Thesis Preparation
Required of seniors in the honors program.

East Asian Studies

Professors Bickford, Grieder (Emeritus), Lattimore (Emeritus), Levy, McClain, Rabson (Emeritus), Roth, Sawada, Wrenn (Emeritus); Associate Professors Smith, Viswanathan, Yamashita, H. Wang, L. Wang; Assistant Professors Perry, Swislocki, Tseng; Senior Lecturers Hu, Jackson, Zhang; Lecturers Tajima, Y. Wang; Teaching Associates Wilkner, Yasuhara.

In addition to the faculty members listed above, who hold full or joint appointments in the Department of East Asian Studies, the Curator of the East Asian Collection, in cooperation with colleagues in the Watson Institute for International Studies, faculty in the Departments of Anthropology, Comparative Literature, Economics, History, History of Art and Architecture, Political Science, Religious Studies, Sociology, and Urban Studies offer courses that contribute directly to the program in East Asian Studies, as listed below (see appropriate departmental listings for fuller descriptions).

Undergraduate Program

For a complete description of the East Asian Studies standard concentration program leading to the bachelor’s degree, please visit:
http://www.brown.edu/Departments-East_Asian_Studies/ or
http://www.brown.edu/Administration/Registrar/concentration.html.

Courses of Instruction

Chinese

Primarily for Undergraduates

0100-0200. Basic Chinese

0150-0250. Advanced Beginning Chinese
A year-long intensive course designed for students with some prior knowledge of Chinese. Designed to enhance listening, speaking, reading, and writing skills. Five classroom meetings weekly. Placement interview required. Staff.
0300. Intermediate Chinese
An intermediate course in Standard Chinese designed to further communicative competence and to develop reading and writing skills. Five classroom meetings weekly. Prerequisite: CHIN 0200 or permission of instructor. STAFF.

0400. Intermediate Chinese
An intermediate course in Standard Chinese designed to further communicative competence and to develop reading and writing skills. Five classroom meetings weekly. Prerequisite: CHIN 0300 or permission of instructor. STAFF.

0500. Advanced Modern Chinese I
An advanced course designed to enable students to read authentic materials. Students enhance their listening, speaking, reading, and writing skills; improve their narrative and descriptive abilities; and learn to express abstract ideas both orally and in writing. Five classroom meetings weekly. Prerequisite: CHIN 0250 or CHIN 0400 or permission of instructor. STAFF.

0600. Advanced Modern Chinese I
An advanced course designed to enable students to read authentic materials. Students enhance their listening, speaking, reading, and writing skills; improve their narrative and descriptive abilities; and learn to express abstract ideas both orally and in writing. Five classroom meetings weekly. Prerequisite: CHIN 0500 or permission of instructor. STAFF.

0700, 0800. Advanced Modern Chinese II
This course is designed to enhance the Chinese proficiency of those who have taken Advanced Modern Chinese I (CHIN 0600) or the equivalent. All four language skills are emphasized through selected authentic materials. At the end of the year, students should be able to express their ideas with sophistication and nuance. Drills on complex sentence patterns will be conducted when necessary. STAFF.

0910. Chinese for Special Topics
For students who are ready to use Chinese in a field of interest. Courses will introduce a basic approach to doing research by using Chinese on various disciplines related to East Asian cultures. Students will read and discuss Chinese texts on specific topics and obtain general background information on topics from reading source materials written in English. Prerequisite CHIN 0600 or equivalent.

0910A. Academic Chinese I
This course trains students to read texts in order to improve language skills and acquire the ability to do research in academic fields. Through reading and discussing literature, newspaper and magazine articles, and academic writings, students will gain a better understanding of traditional and modern China. Prerequisite: CHIN 0800 or permission of the instructor. M. ZHANG.

0910B. Introduction to Classical Chinese
A course aiming to provide the basics of reading Classical Chinese, its grammar, syntax, vocabulary, and word usage. As much as possible, we will use modern Chinese to explicate and discuss classical texts. Readings are original passages from texts dating from the Eastern Zhou to Former Han, 770 BCE to 25 AD, that introduce students to the cultural world of early China. Prerequisite: CHIN 0600 or equivalent, or permission of the instructor. STAFF.

0920. Chinese for Special Topics
For students who are ready to use Chinese in a field of interest. Courses will introduce a basic approach to doing research by using Chinese on various disciplines related to East Asian cultures. Students will read and discuss Chinese texts on specific topics and obtain
general background information on topics from reading source materials written in English. Prerequisite CHIN 0600 or equivalent.

0920A. Advanced Reading and Writing in Chinese
This course trains students to read texts in order to improve language skills and acquire the ability to do research in academic fields. Masterpieces by statesmen, economists, historians, scientists, literary critics, and sociologists will be analyzed and discussed. Focus will be on the training of both analytical ability and writing skills. Prerequisite: CHIN 0800 or permission of the instructor. M. ZHANG.

0920B. Classical Chinese
This course aims to build on basic knowledge of reading Classical Chinese grammar, syntax, and vocabulary. The class will use modern Chinese (Mandarin) to discuss classical texts. Readings are original works of prose and poetry dating from the 2nd to 12th century CE. Prerequisite: CHIN 0910B or permission of the instructor. STAFF.

0920D. Business Chinese
Business Chinese focuses on practical language skills that are most useful in business interactions in Chinese-speaking communities. Classroom activities are largely based on authentic documents and correspondence as well as a textbook. Through intensive practice in the listening, speaking, reading and writing of the Chinese language for business purposes, this course aims at enhancing students' linguistic knowledge in a business context. Classes are conducted in Chinese. Prerequisite: CHIN 0600 or instructor permission. Enrollment limited to 18. STAFF.

For Undergraduates and Graduates

1040. Modern Chinese Literature
Introduces students to the most representative writers in 20th century China. Emphasizes textual and historical analyses. Major issues include Westernization, nationalism, revolution, class, gender, and literary innovations. Designated primarily as a literature course, rather than language class, and conducted entirely in Mandarin Chinese. Prerequisite: CHIN 0800 or permission of instructor. L. WANG.

1910. Independent Study
Reading materials for research in Chinese. STAFF.

East Asian Studies

Primarily for Undergraduates

0950. First Year Seminars

0950A. Turning Japanese: Constructing Nation, Race and Culture in Modern Japan
This first year seminar focuses on Japan's experiences with historical processes and concepts which have transformed the modern world. These include the creation of the nation as the fundamental structure for social and political organization, as well as the evolution and implications of beliefs and practices associated with race, culture and tradition. Participants will work with primary sources and scholarly analysis from diverse disciplinary perspectives. K. SMITH.
316 / Divisions, Departments, Centers, Programs, and Institutes

For Undergraduates and Graduates

1010. From Basho to Banana: Four Centuries of Japanese Literature
This course explores classic writers of Japanese literature written between 1600 and 2000. We will focus on both the specificity of Japanese genre as well as the historical, social relations that have shaped them--Edo merchant culture, modernism, the avant-garde, mass culture and postmodernism, among others. Writers covered will include Ihara Saikaku, Jippensha Ikku, Higuchi Ichiyō, Natsume Soseki, Akutagawa Ryunosuke, Tanizaki Junichiro and Yoshimoto Banana. No prerequisites. S. PERRY.

1050. The Chinese Novel
The purpose of this course is to help us see how the Chinese novel took shape from popular sources, such as storytelling and drama, how the novel drew on history as well as legend, and how its authors and editors express a distinct world view. The class will cover the "masterworks" of the Chinese novel. Through intensive reading, students can explore notions of the hero and heroism, moral action and, more broadly, history and literature from a comparative perspective. All readings are in English translation. Limited to freshmen and sophomores, or by instructor permission. STAFF.

1070. China Modern: An Introduction to the Literature of Twentieth-Century China
A general introduction to modern and contemporary Chinese literature from the May Fourth Movement to contemporary Taiwan and the People’s Republic of China. Emphasizes reading of literary works in relation to topics such as cultural tradition, modernity, nationalism, revolution, class, gender, region, cultural commodification, and literary innovations. Readings in English. No previous knowledge of Chinese required. L. WANG.

1100. Korean Culture and Film
This course aims to introduce and explore various aspects of Korean history, culture and society. Students are expected to develop a comprehensive understanding of Korean culture by examining contemporary films that pertain to issues such as national identity, history, international relations, religion, Korean life style, and family life. Enrollment limited to 20. H. WANG.

1170. Women's Literature in Japan and Korea
This course focuses on Japanese and Korean women's literature from the modern period, giving particular attention to the historical issues and the narrative strategies that play out in celebrated works of women's fiction. The goal of the class is to deepen our understanding of the universal and particular aspects of women's writing in Japan and Korea and at the same time to learn an idiom with which to talk about literary form. Previous coursework in East Asian Studies or Literary Studies is suggested but not required. S. PERRY.

1200. Pop, Political and Patrician: Culture in Japan and the Koreas
This course introduces students to the modern cultures of Japan and Korea through an examination of events, artifacts, and cultural practices. The over-arching goal of the class is two-fold: to create an alternative narrative to the dominant Orientalized vision of East Asian culture and to deepen our knowledge of the overlapping cultural histories of Japan and Korea. Topics covered will include: colonial fiction, the re-creation of tradition, art and atrocity, the proletarian arts, postwar children's culture, the globalization of popular music, myth in the DPRK, shōji print culture, and East Asian activism. S. PERRY.

1270. China Through the Lens: History, Cinema, and Critical Discourse
This is a critical introduction to the history of mainland Chinese film. It focuses on three dimensions of cinematic practice: the historical context of film productions, the specific context/form of each film, and the critical reception of Chinese films in film studies. Important themes such as nation, visual modernity, cinematic narrative, and commercialism will be studied across the three dimensions.
1400. *The Floating World: Early Modern Japanese Culture*
This course treats major trends in Japanese thought and culture of the Tokugawa period (1600-1868), including debates among Confucian scholars; merchant culture; samurai ethics; the popularization of Buddhism; and the rise of nativism in the late period. Emphasis is on reading and analysis of primary texts in translation. Required: a course in East Asian culture or religion. Recommended but not required: RELS 0120. J. SAWADA.

1410. *Japan: Nature, Ritual and the Arts*
This course is an introduction to Japanese cultural and aesthetic traditions as represented in premodern literature drama, architecture, landscapes, tea practices, and the visual arts. Materials include Japanese aesthetic, literary and dramatic writings in translation; modern scholarly treatments; and selected visual works. The course is designed for students who have no previous exposure to Japanese studies at the college level. J. SAWADA.

1880. *Directed Readings in Chinese Thought*

1880A. *Lao Tzu and Huai-nan Tzu*
This seminar will approach early Taoist thought through the study of important essays from the Han dynasty compendium, the *Huai-nan Tzu* and will discuss the historical and philosophical origins of Lao Tzu's *Tao te ching*, heretofore acknowledged as the foundational text of the Taoist tradition. Enrollment limited. Written permission required. H. D. ROTH.

1880B. *Daoism in the Classical Period*
We will explore the key ideas and practices of the early Chinese Taoist tradition from its foundation in the wisdom poetry of "Inward Training" and the *Lao Tzu* through the didactic narratives of the *Chuang Tzu* and the *Huai-nan Tzu*. An emphasis will be placed on situating these ideas in their historical context. A particular focus of the course will be on the contemplative practices that are the basis of early Taoist philosophy, on the literary forms that transmit it, on the techniques of Taoist narrative such as humor and irony, and on placing Taoist thought in a comparative context with Western philosophy. Seminar format. Enrollment limited to 20 students. H. D. ROTH.

1880C. *Zen Meditation in China, Korea, and Japan*
An intensive study of the origin and development of Zen Meditation in China, Korea and Japan featuring historical origins in Indian Mahayana Buddhism and Chinese Daoism. Historical and social contextualization will be balanced by first-person investigations. Both kôan and silent illumination styles will be studied in depth. Weekly seminars will study representative texts in translation; labs will experiment with meditation techniques directly drawn from the readings. H. D. ROTH.

1880D. *Early Daoist Syncretism: Zhuang Zi and Huainan Zi*
The final phase of the classical Daoist tradition has been called "syncretist" by Graham, "Huang-Lao" by Lin. It is the version of Daoism carried into the Han dynasty and the one that transmitted the tradition's earlier works. Casting a broad net we will examine a variety of works from this critical phase including the "Techniques of the Mind" texts in the *Guarzi* collection, the so-called "Huang-Lao" silk manuscripts from the Han tomb at Mawangdui, certain chapters of the *Lushi chunqin*, and selections from the *Zhuangzi* and *Huainanzi*. We will examine the ways in which cosmology, self-cultivation, and political thought coalesce in these works. H. D. ROTH.

1910. *Independent Study* STAFF.

1930, 1940. *Reading and Writing of the Honors Thesis*
Prior admission to honors candidacy required. STAFF.
1950. Undergraduate Seminars in East Asian Studies
These seminars are primarily for juniors and seniors. May be repeated for credit.

1950B. Chinese Women, Gender and Feminism from Historical and Transnational Perspectives
Designed to critically re-evaluate (re)presentations of Chinese women, gender, and feminism in historical, literary, and academic discourses. It examines a diverse body of texts produced through different historical periods and in different geopolitical locations. It emphasizes gender as both a historical construct(s) among competing discourses and as a material process of individual embodiment and disembodiment. The goal of the course is to help advanced students understand Chinese history from a distinctly gendered perspective, to recognize women's roles in history and writing, and to develop a reflective, cross-cultural approach to gender, politics, and the self. Enrollment limited to 20. STAFF.

1950D. Crime, Justice and Punishment in Modern Japan
Explores the practices and ideologies associated with the pursuit of justice, state-sanctioned punishment for wrongdoing, and social order in modern Japan (late 19th century to the present). In order to bring these practices and ideologies to light, we will examine precedent-setting criminal and civil trials within their historical contexts, and draw as well on both popular culture (film and fiction) and the rich scholarship on law and legal history in Japan. The course is intended for advanced undergraduates comfortable with the seminar format and workload. There are no specific prerequisites for admission to the seminar, but all things being equal, preference will be given to students with a background in the study of Japan and/or Japanese history. Enrollment limited to 20. STAFF.

1950F. The Karma of Words
This course is an opportunity for students to further their understanding of East Asian Buddhist attitudes and values by investigating characteristic themes in literature as a whole, rather than by studying formal scriptures and doctrinal tracts. Participants will explore tensions between the religious and poetic impulses and learn to recognize Buddhist symbols in Chinese and Japanese poetry, fiction and plays. Recommended: a course in Asian religions. WRIT Enrollment limited to 20. STAFF.

1950G. Market Economy, Popular Culture, and Mass Media in Contemporary China
Course focuses on mainland Chinese cultural and media production since the mid 1980's, when China began transforming itself culturally and economically into a capitalist society with socialist characteristics. Traditional values, socialist legacy, commercial forces, and globalization have all played significant roles in the ongoing transformation. The goal of the course is to examine the complex interactions among diverse historical forces in a rapidly changing China. Course taught in Mandarin Chinese. Enrollment limited to 20. STAFF.

1950H. Japanese Short Fiction, Film and Anime: Reading and Translation
In this seminar/workshop students will read and discuss a broad range of narrative arts from the modern period, as well as practice the art of translating them in dialogue with canonical works of translation theory. Pre-requisites: JAPN 0600 or equivalent. Enrollment limited to 20. STAFF.

1950I. Revolution and Culture
This seminar investigates cultural practices enacted with the aim of social change. Topics include the Soviet avant-garde, race and the American cultural front, gender and proletarian literature in Japan and colonial Korea, as well as issues of propaganda.
and struggle in the DPRK and China. Instructor permission required. Enrollment limited to 20. STAFF.

1950J. The Chinese Story, Its Authors and Readers
A study of the Chinese story in its social and historical context. The seminar will survey the broad story stereotypes and consider their earlier sources in the classical tale, storytelling, drama, and ritual. All readings are in English translation. Enrollment limited to 20. STAFF.

1950K. Losing Yourself in Love in Pre-Modern Chinese Poetry, Fiction and Drama
A seminar focused on larger-than-life loves in Chinese drama, fiction, and poetry. The course will explore how passion, feeling, and subjectivity was increasingly viewed as essential to human nature and society from the 15th century onward. Enrollment limited to 20. STAFF.

1950N. The Love Letter, Fiction and Desire
A study of the art of the love letter in China of the 16th to 18th centuries. The circulation of letter-writing manuals fueled the rise of letter fiction in China, as it did in Europe in the same period. The seminar will explore how desire serves as a motive for writing to someone far away, an element of the plot, and an end in itself, in comparative and theoretical perspectives. All readings are in English. Enrollment limited to 20. STAFF.

1950O. The Art of Dissent
This seminar investigates the relationship between activism and art in early modern and 20th century Japan and Korea. Historical topics to be discussed in relation to works of fiction, biography, poetry, film and graphic art include the Freedom and People's Rights Movement, Japanese anarchism, pre-WWI communism, feminism, the Kwangju Uprising and the Minjung Munhak Movement. S. PERRY.

1950P. Attachment to Objects in Chinese Literature
A seminar investigating interactions between objects and literary composition in China of the 12th to 16th century, exploring 3 core issues: 1st, what do writers about objects reveal about notions of literary art and artifice? 2nd, in what ways are material artifacts endowed with aesthetic and personal meaning? 3rd, what literary and extra-literary factors shaped exchanges of poetry and gift-giving as linked forms of social intercourse? Readings in English translation. STAFF.

1950Q. Early Chinese Poetry
A survey of the evolution of major forms of Chinese lyric poetry beginning with the Shijing (Book of Songs), the breakthrough to 5-character verse in the Han Dynasty, landscape (shanshui) and field and garden (tianyuan) poetry of the 6 Dynasties, and the flowering of the shi form during the Tang Dynasty. Readings will be in Chinese, discussions in English. Previous study of classical Chinese or permission of the instructor required. D. LEVY.

1950X. Queer Japan: Culture, History and Sexuality
This seminar investigates cultural practices enacted by Japanese gays and lesbians, or otherwise related to same-sex attraction. How have sexual identities traditionally been constructed in Japan, and how has the modern period transformed them? How has same-sex sexuality become figured in the Japanese art, literature and popular culture of the 20th century; and how have the forces of a global LGBT culture interacted with the specific experiences of a same-sex community in Japan? This class explores
questions about queer history, writing and cultural practice by looking at particular
moments in the Japanese past and present. S. PERRY.

1990. Senior Reading and Research: Selected Topics STAFF.

Japanese

Primarily for Undergraduates

0100-0200. Basic Japanese
Introduction to Japanese language. Emphasizes the attainment of good spoken control of
Japanese and develops a foundation of literacy. No prerequisites. K. YAMASHITA.

0150-0250. Advanced Beginning Japanese
Designed for those who have had high-school Japanese or other Japanese language expe-
rience. An opportunity to organize previous knowledge of Japanese and develop a firm basis
of spoken and written Japanese. Prerequisite: Reading and writing knowledge of Hiragana,
Katakana, and some Kanji. Placement test required. H. TAJIMA.

0300. Intermediate Japanese
Further practice of patterns and structures of the language. Readings are introduced on as-
pects of Japanese culture and society to develop reading and writing skills, enhance vocab-
ulary, and provide points of departure for conversation in Japanese. Prerequisite: JAPN
0200 or equivalent. Y. I. JACKSON.

0400. Intermediate Japanese
Further practice of patterns and structures of the language. Readings are introduced on as-
pects of Japanese culture and society to develop reading and writing skills, enhance vocab-
ulary, and provide points of departure for conversation in Japanese. Prerequisite: JAPN
0300 or equivalent. Y. I. JACKSON.

0500, 0600. Advanced Japanese
Continued practice in reading, writing, and speaking. Emphasizes the development of read-
ing proficiency and speaking in cultural contexts. Students read actual articles and selec-
tions from Japanese newspapers. Course includes translation, with writing and discussion
in Japanese. Films and video tapes are shown as supplementary materials. Prerequisite:
JAPN 0400 or equivalent. H. TAJIMA.

0700, 0800. Advanced Readings in Japanese
Reading of articles from Japan's press with discussion in Japanese. Focuses on explanations
and drills on the fine points in grammar and vocabulary as well as on the practice of writing
in various styles. Movies and video tapes are used as supplementary materials. Prerequisite:
JAPN 0600 or equivalent. Y. I. JACKSON.

0910. Japanese for Special Topics
For students who are ready to use Japanese in a field of interest. Courses will introduce a
basic approach to doing research by using Japanese on various disciplines related to East
Asian cultures. Students will read and discuss Japanese texts on specific topics and obtain
general background information on topics from reading source materials written in English.
Prerequisite: JAPN 0600 or equivalent.

0910A. Classical Japanese
This is an introductory course to pre-modern Japanese. It will explore the lifestyle and
philosophy of samurai in the 17th century Japan through reading the book, Gorin no
Sho. The book comprises Miyamoto Musashi’s thoughts on swordplay, winning, and
mind training. The course includes reading background information in English and
viewing films and dramas. K. YAMASHITA.
0910B. Japanese Cities: Tokyo and Kyoto
The goal of this course is to develop ability to use Japanese source materials for research in social sciences. Course covers lifestyles in two contrasting cities, Tokyo and Kyoto. Topics include topography, environmental issues, houses, urban lifestyles, and natural habitation. We will ask questions: why houses are so compact in cities; why crows and boars pick on garbage, etc. Information sources are films, videos, and websites in addition to textbooks. Prerequisite: JAPN 0600 or equivalent. K. YAMASHITA.

0910C. Japanese Linguistics
This course will provide a structural overview of the Japanese language. Students will learn how to develop skills for analyzing the language through looking at sounds, meaning, and grammar. Topics include linguistic analysis of various sentence structures that students often find difficult to use, learning to choose words and sentences in appropriate situations, looking at the relation between language and culture. K. YAMASHITA.

0920. Japanese for Special Topics
For students who are ready to use Japanese in a field of interest. Courses will introduce a basic approach to doing research by using Japanese on various disciplines related to East Asian cultures. Students will read and discuss Japanese texts on specific topics and obtain general background information on topics from reading source materials written in English. Prerequisite: JAPN 0600 or equivalent.

0920A. Business Japanese
This course is designed to teach post-advanced level Japanese language with the focus on effective oral and written communication in business situations. This course emphasizes vocabulary build-up in the area of business and economics, use of formal expressions, business writing, and conversation and presentation skills, as well as familiarizing students with Japanese corporate culture, protocol, and interpersonal relationships. Prerequisite: JAPN 0700 or equivalent. Y. I. JACKSON.

For Undergraduates and Graduates

1010. Readings in Contemporary Japanese Fiction
Reading and discussion of short stories and fiction written after 1945. Intended to acquaint students with a wide range of works and authors popular in present-day Japan and to place them in Japanese literary history through reading analyses by Japanese critics. Prerequisite: JAPN 0700, 0800 or equivalent. STAFF.

1310. Japanese Linguistics: Communication and Understanding Utterances
Introduces a linguistic analysis of Japanese language to attain an overview structure and a foundation for understanding how grammar relates to various modes of communication. Topics include discourse analysis, pragmatics, communicative intention, communication strategies, and intercultural communication gaps. Linguistic data is drawn from films and fiction. Prerequisite: basic knowledge of Japanese grammar, vocabulary, and linguistics. K. YAMASHITA.

1910. Independent Study
Reading materials for research in Japanese. STAFF.
Korean

Primarily for Undergraduates

0100-0200. Beginning Korean
 Begins with an introduction to the Korean writing system (Hangeul) and focuses on building communicative competence in modern Korean in the four language modalities (listening, speaking, reading, writing). Provides a foundation for later work in spoken and written Korean. Five classroom hours per week. No prerequisite. H. Wang.

0300, 0400. Intermediate Korean
 An intermediate course in Korean designed to further communicative competence in spoken Korean and to provide additional reading practice in stylistically higher level materials that are progressively integrated into the given dialogues. Discussions on various aspects of Korean culture and society. Four classroom hours per week. Prerequisite: KREA 0200 or instructor permission. H. Wang.

0920. Korean for Special Topics
 The course is for the students who completed Korean 0400 and are ready for using the language from the field of interest. The course will introduce a basic approach to research by using Korean on various disciplines related to East Asian cultures. Students will read and discuss Korean texts on specific topics and also obtain general background information on the topics from reading source materials written in English. Prerequisite KREA 0400 or equivalent.

0920A. Korean Culture and Society
 Develops oral proficiency in Korean language through a variety of readings on Korean culture and society. By reading about and discussing important aspects and core issues of Korea, students enhance their speaking competence and cultural understanding. Prerequisites: KREA 0400 or permission of instructor. Enrollment limited to: 15. H. Wang.

0920B. Business Korean
 For students who are interested in Korean culture in general and business culture in particular, and in improving their Korean language skills in a business context. The course not only focuses on business and economy-related words and expressions, but also on developing learners' confidence in business writing, conversation and presentations in Korean. Enrollment limited to 15. Prerequisite: KREA 0400 or instructor's permission. H. Wang.

For Undergraduates and Graduates

1910. Independent Study
 Reading materials for research in Korean. Staff.

Economics

Professors Borts, Chay, Foster, Galor, Henderson, Howitt, Kleibergen, Levine, Louy, Munshi, Puterman, Serrano, Vohra, Weil, Welch; Associate Professors Dal Bo, Eliaz, Hoderlein, Knight, Tyler; Assistant Professors Aizer, Baum-Snow, de Clippel, Dean, Mavroeidis, Melly, Nagavarapu, Qiu, Rubinstein; Adjunct Assistant Professor Yasuhara; Adjunct Lecturer Carkovic; Senior Lecturer Friedberg; Professors Emeritus Beckmann, Feldman, Lancaster, Page, Pitt, Ryder, Schupack, Stein.
**Undergraduate Programs**

The main objective of the undergraduate programs is to develop understanding of why economies perform the way they do; specifically, to explain how organizations in society use scarce resources and distribute the resulting product. The program examines the behavior of markets, both in a domestic and international context, and analyzes the effects of government actions. The undergraduate courses emphasize both the development of the tools of theoretical and empirical economic analysis and the application of these tools to the study of specific economic phenomena.

A complete description of the standard concentration programs leading to the bachelor’s degree in Economics, Applied Math-Economics, Computer Science-Economics, and Mathematical Economics can be found on the Economics Department website: [http://www.brown.edu/Departments/Economics/](http://www.brown.edu/Departments/Economics/).

A description of the following interdepartmental programs emphasizing applications of economic analysis can be found on their respective websites:


For additional information regarding standard concentration programs, please visit [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

**Graduate Program**

The Ph.D. program in Economics at Brown trains students in economic theory and the tools of economic analysis. Through course work, participation in seminars, and supervised research, students are taught to conduct theoretical and empirical research at the highest level.

The Ph.D. usually degree requires two years of course work, followed by supervised research and the completion of a doctoral dissertation. The first year involves core courses in microeconomics (ECON 2050, 2060), macroeconomics (ECON 2070, 2080), econometrics (ECON 2030, 2040), and two additional courses, one in mathematics (ECON 2010), and one in applied economics analysis (ECON 2020). Students take written core examinations in microeconomics, macroeconomics, and econometrics at the end of the first year. Starting in the second year, each student chooses two fields of specialization, and takes an oral exam. Each field comprises two advanced courses within the area. Beyond the fields, the student takes three additional advanced courses, for a total of seven. The rest of pre-dissertation requirements include a research paper turned in at the end of the third year and two successful seminar preparations.

The culmination of the Ph.D. program is the dissertation, which embodies the results of the student’s original research. Work on the dissertation usually takes two-three years after completion of course work. Students working on dissertations participate actively in research workshops. After a faculty committee has approved the dissertation, the student takes a final oral examination on the subject of the dissertation.

The work in the Ph.D. program is demanding and the standards of performance are high. The Department’s reputation for providing superb training has enabled its graduates to compile an excellent placement record. Some of the institutions at which recent graduates have obtained positions include major research universities (Chicago, Harvard, John Hopkins, Minnesota, New York University, Penn State, University College London, University of British Columbia, University of Pittsburgh, University of Toronto, University
of Virginia), prestigious liberal arts colleges (Williams), government and international agencies (International Money Fund, Federal Trade Commission, World Bank, Congressional Budget Office, Board of Governors of the Federal Reserve System, US Census Bureau), and private industrial, consulting, and research firms. Brown graduates have an outstanding record of research accomplishments and publications.

The Department offers a one-year A.M. program. Applicant to the A.M. program should apply to the Ph.D. program, and are evaluated using the same criteria as applicants to the Ph.D. program. Students in the A.M. program are not funded by Brown. However, those A.M. students who take the core examination and pass it will continue in the Ph.D. program and receive funding. In addition, Ph.D. students can earn the A.M. on the way to the Ph.D. or can receive the A.M. if they choose not to complete the Ph.D. program. The A.M. requires passing eight courses in the areas of Microeconomics, Macroeconomics, and Econometrics.

Courses of Instruction

Primarily for Undergraduates

0110. Principles of Economics
Extensive coverage of economic issues, institutions, and vocabulary, plus an introduction to economic analysis and its application to current social problems. Required for all economics concentrators. Prerequisite for ECON 1110, 1130, 1210 and 1620. Serves as a general course for students who will take no other economics courses and want a broad introduction to the discipline. Weekly one-hour conference required. R. M. FRIEDBERG and R. SERRANO.

0180. First Year Seminar
Enrollment limited to 20 first-year students. Written permission required.

0510. Development and the International Economy
A course designed primarily for students who do not plan to concentrate in economics but who seek a basic understanding of the economics of less developed countries, including savings and investment, health and education, agriculture and employment, and interactions with the world economy, including trade, international capital flows, aid, and migration. Prerequisite: ECON 0110. STAFF.

0710. Financial Accounting
Basic accounting theory and practice. Accounting procedures for various forms of business organizations. STAFF.

For Undergraduates and Graduates

1110. Intermediate Microeconomics
Tools for use in microeconomic analysis, with some public policy applications. Theory of consumer demand, theories of the firm, market behavior, welfare economics, and general equilibrium. Prerequisite: MATH 0060 and 0070, or MATH 0090, or 0100, or 0170, or 0180, or 0190, or 0200, or 0350; and ECON 0110, or advanced placement. P. DAL BO and STAFF.

1130. Intermediate Microeconomics (Mathematical)
Microeconomic theory: Theories of the consumer and firm, competitive equilibrium, factor markets, imperfect competition, game theory, welfare economics, general equilibrium. May not be taken in addition to ECON 1110. Prerequisite: MATH 0100 or 0170; and ECON 0110 or advanced placement. STAFF.
1160. Managerial Economics
Analysis for making policy decisions within a firm. Goals of the firm, analytical methods for optimizing under constraints. Production decisions, pricing strategies, and investment plans. Advertising, diversification, and research and development. Effect of nonmarket constraints, governmental and self-imposed. Treatment of risk and uncertainty. Prerequisite: ECON 1110 or 1130. STAFF.

1170. Welfare Economics
A survey of theories of economic optimality. Topics covered include efficiency and competition, externalities, social welfare functions, majority voting, the Arrow impossibility theorem, compensation criteria and an introduction to the problems of mechanism design and implementation. Prerequisite: ECON 1110 or 1130. STAFF.

1210. Intermediate Macroeconomics
The economy as a whole: Level and growth of national income, inflation, unemployment, role of government policy. Prerequisite: ECON 0110. A. LESTER, P. HOWITT, and STAFF.

1310. Labor Economics
Labor supply, human capital, income inequality, discrimination, immigration, unemployment. Prerequisite: ECON 1110 or 1130; and 1620. A. AIZER.

1360. Health Economics
This course introduces students to the issues, theory and practice of health economics in the US. Topics include the economic determinants of health, the market for medical care, the market for health insurance and the role of the government in health care. Course work includes data analyses using the program STATA. Prerequisites: ECON 1110 and ECON 1620, or other statistics background; plus permission of instructor. Enrollment limited to: 24. A. AIZER.

1370. Race and Inequality in the United States
We examine racial inequality in the United States, focusing on economic, political, social and historical aspects. Topics include urban poverty, employment discrimination, crime and the criminal justice system, affirmative action, immigration, and low wage labor markets. Black/white relations in the US are the principle but not exclusive concern. Recommended prerequisite: ECON 1110 or 1130. G. C. LOURY.

1390. Research Methods for Economists
This course is designed to prepare students to undertake empirical research in economics. Students thinking of writing an honors thesis or conducting independent research are especially urged to take it during their junior year. We will answer such questions as what does an empirical research paper look like? How do we formulate a hypothesis to test? How can we use data to test our hypothesis? Students will read and discuss papers published in professional journals and perform data analysis as part of the course requirements. Prerequisites: ECON 1110 or 1130; and ECON 1620 or 1630. A. AIZER

1410. Urban Economics
The first part of the course covers the set of conceptual and mathematical models widely used to understand economic activity both between and within cities. The second part of the course examines various urban policy issues including urban transportation, housing, urban poverty, segregation and crime. The course makes extensive use of empirical evidence taken primarily from the United States. Prerequisites: ECON 1110 or 1130. N. BAUM-SNOW.

1420. Urbanization in China
Examines urbanization processes and urban public policy in China. Also draws on historical and recent experience in the U.S. Policy areas including policies affecting urbanization, migration, and industrial location; policies affecting housing, land use, and urban reform;
and policies affecting fiscal decentralization and infrastructure investments such as transportation. Prerequisites: ECON 1110 or ECON 1130. J.V. HENDERSON.

1440. Economic Theories of Firms
Examines theories of why firms exist, their internal organizations and employment relations, ownership and control, efficiency versus conflict approaches, and alternative organizational forms (e.g., employee ownership). Prerequisite: ECON 1110 or 1130. L. PUTTERMAN.

1460. Industrial Organization
A study of industry structure and firm conduct and its economic/antitrust implications. Theoretical and empirical examinations of strategic firm interactions in oligopolistic markets, dominant firm behaviors, and entry deterrence by incumbents. Also economics of innovation: research and development activities and government patent policies. Prerequisite: ECON 1110 or 1130. Some knowledge of calculus required. STAFF.

1470. Bargaining Theory and Applications
Bargaining theory is emerging as an important area within the general rubric of game theory. Emphasis is on providing a relatively elementary version of the theory in order to make it accessible to a large number of students. Covers introductory concepts in game theory, strategic and axiomatic theories of bargaining and their connections, applications to competitive markets, strikes, etc. Prerequisite: ECON 1110 or 1130. P. DAL BO.

1480. Public Economics
An analysis of the role of government in the allocation of resources. Topics include welfare economics (a review), problems of social choice, the evaluation of public expenditures, and taxation. Prerequisite: ECON 1110 or 1130. STAFF.

1500. Current Global Macroeconomic Challenges
Analysis of current economic challenges in the U.S. and China. Topics include fiscal and monetary policies, international trade, capital flows and exchange rate policy, and policies for long-run growth. Emphasis on macroeconomic policies in China and the U.S., including their global impact. Prerequisites: ECON 1210. Also recommended: ECON 1550 and 1850. M. V. CARKOVIC.

1510. Economic Development
The economic problems of less developed countries and the theory of economic development, with emphasis on the roles played by agriculture, industry, and foreign trade. Also: education, health, employment, and migration; capital accumulation; income distribution; investment aspects; the role of price distortions; trade policies; social discount rates, investment criteria, and the general issue of state intervention. Prerequisite: ECON 1110 or 1130, and ECON 1620 or 1630. STAFF.

1520. The Economic Analysis of Institutions
This course deals with the economic analysis of institutions, with a focus on developing countries. The first section covers institutions in traditional agrarian societies. Topics include consumption smoothing and the organization of land, labor and credit markets. The second section focuses on the role of the community in facilitating economic activity. Institutions include cooperatives, networks, marriage and the family. Prerequisites: ECON 1110 and ECON 1620, or equivalent. K. MUNSHI.

1530. Health, Hunger and the Household in Developing Countries
Microeconomic analysis of household behavior in low income societies emphasizing the economic determinants of health and nutrition and the evaluation of policy. The relationship among health, nutrition, fertility, savings, schooling, labor productivity, wage determination, and gender-based inequality. Emphasizes theoretically-based empirical research. Prerequisite: ECON 1110 or 1130. STAFF.
1540. **International Trade**

1550. **International Finance**
The balance of payments; identification and measurement of surpluses and deficits; international monetary standards; the role of gold and paper money; government policies; free versus fixed exchange rates; international capital movements; war and inflation; the International Monetary Fund. Prerequisite: ECON 1210. G. H. BORTS.

1560. **Economic Growth**
A theoretical and empirical examination of economic growth and income differences among countries. Focuses on both the historical experience of countries that are currently rich and the process of catch-up among poor countries. Topics include population growth, accumulation of physical and human capital, technological change, natural resources, income distribution, geography, government, and culture. Prerequisite: ECON 1110 or 1130, and 1210. D. N. WEIL.

1580. **Comparative Economic Systems**
Recent histories, institutional structures, and performance of industrialized economies of the US, Europe, and Asia. The Marxian critique of capitalism; the theory of centrally planned economies; the Soviet economy; and problems of reform and transition. Workers’ self-management as an alternative industrial order. Prerequisite: ECON 1110 or 1130. L. PUTTERMAN.

1590. **The Economy of China since 1949**
The organization, structure, and performance of the economy of the People’s Republic of China. All major economic sectors and both the pre-1979 and the post-1979 periods are examined, with emphasis on institutions. Both analytical and descriptive methods used. Prerequisite: ECON 1110 or 1130. ECON 1210, 1510, and 1580 are recommended but not required. L. PUTTERMAN.

1600. **Economics of the Middle East**
A survey of the economies of the Middle East. Examines various aspects of the economic realities of the region, including economic and human development, water and food security, the economics and politics of oil, population growth and labor mobility, education, the role of the state, economic reform, the political economy of conflict and peace, and the prospects for regional integration. Prerequisite: ECON 1110 or 1130. Y. RUBINSTEIN.

1620. **Introduction to Econometrics**

1630. **Econometrics I**
Advanced introduction to econometrics with applications in finance and economics. How to formulate and test economic questions of interest. The multivariate linear regression model is treated in detail, including tests of the model's underlying assumptions. Other topics include: asymptotic analysis, instrumental variable estimation, and likelihood analysis. Convergence concepts and matrix algebra are used extensively. Prerequisites: ECON 1110 or 1130; and APMA 1650, MATH 1620, or ECON 1620; or equivalent. F. KLEIBERGEN.
1640. Econometrics II
Continuation of ECON 1630 with an emphasis on econometric modeling and applications. Includes applied topics from labor, finance, and macroeconomics. Prerequisite: ECON 1630. S. MAVROEIDIS.

1650. Financial Econometrics
Financial time series, for example, asset returns, options and interest rates, possess a number of stylized features that are analyzed using a specific set of econometric models. This course deals with an introduction to such models. It discusses time series models for analyzing asset returns and interest rates, (GARCH) models to explain volatility, models to explain extreme events which are used for the Value at Risk and models for options prices. Prerequisite: ECON 1620 or ECON 1630, or instructor permission.

1710. Investments I
The function and operation of asset markets; the determinants of the prices of stocks, bonds, options, and futures; the relations between risk, return, and investment management; the capital asset pricing model, normative portfolio management, and market efficiency. Prerequisite: ECON 1110 or 1130, and ECON 1620 or 1630 or APMA 1650. A. YASUHARA, L. QIU and STAFF.

1720. Corporate Finance
A study of theories of decision-making within corporations, with empirical evidence as background. Topics include capital budgeting, risk, securities issuance, capital structure, dividend policy, compensation policy, mergers and acquisitions, real options, financial engineering, securitization. Prerequisite: ECON 1110 or 1130 and ECON 1620 or 1630 or APMA 1650. I. WELCH and STAFF.

1750. Investments II
Individual securities: forwards, futures, options and basic derivatives, pricing conditions. Financial markets: main empirical features, equity premium and risk-free rate puzzles, consumption based asset pricing models, stock market participation, international diversification, and topics in behavioral finance. Prerequisites: ECON 1110 or 1130; ECON 1620 or 1630; or APMA 1650; ECON 1710. A. YASUHARA and STAFF.

1759. Data, Statistics, Finance
An experimental course that prepares students for research of the type conducted in academic finance, hedge funds, and some advanced consulting firms and I-Banks. Nothing like this is offered at any other university as far as the instructor knows. Students that do well in this course should have a head start in academic finance PhD programs, as well as in MBA programs, quantitatively oriented investment funds, finance companies, and consulting firms. Prerequisites: ECON 1110 or 1130, and ECON 1710 or 1720, and ECON 1620 or 1630 or APMA 1650. CSCI0040 or equivalent also recommended as background. Instructor permission required.

1760. Financial Institutions
This course analyzes the role of financial institutions in allocating resources, managing risk, and exerting corporate governance over firms. After studying interest rate determination, the risk and term structure of interest rates, derivatives, and the role of central banks, it takes an international perspective in examining the emergence, operation, and regulation of financial institutions, especially banks. Prerequisite: ECON 1210. R. E. LEVINE.

1770. Fixed Income Securities
The fixed income market is much larger than the stock market in the U.S. Topics covered in this course include basic fixed income securities, term structure, hedging interest rate risk, investment strategies, fixed income derivatives, mortgage-backed securities and asset-
backed securities. Prerequisite: ECON 1110 or 1130, and ECON 1620 or 1630 or APMA 1650, and ECON 1710 or 1720. X. L. QIU.

1790. Corporate Governance and Management
A corporation's economic success depends on access to human capital and other resources, effective management of these resources, and a governance system that ensures effective decision making. The course offers policy prescriptions in economic incentives and regulatory rules that attempt to align management with investors. Prerequisites: ECON 1110 or 1130; ECON 1620 or 1630; or APMA 1650; ECON 1720; ECON 0710. STAFF.

1810. Economics and Psychology
This course is about the challenges that economic theorists face in their quest for economic models in which decision makers have a "richer psychology" than prescribed by textbook models. The enrichment takes two forms: (i) broadening the set of considerations that affect decision makers' behavior beyond simple, material self-interest; (ii) relaxing the standard assumption that agents have unlimited ability to perceive and analyze economic environments, and that they reason about uncertainty as "Bayesian statisticians". Special emphasis will be put on the implications of "psychologically richer" models on market behavior. Prerequisite: ECON 1110 or 1130; and MATH 0100 or 0170 or 0180 or 0190 or 0200 or 0350; and ECON 1620 or 1630 or APMA 1650 or MATH 1610. K. ELIAZ.

1850. Theory of Economic Growth
Analysis of the fundamental elements that determine economic growth. It examines the role of technological progress, population growth, income inequality, and government policy in the determination of (a) the pattern of economic development within a country, and (b) sustainable differences in per capita income and growth rates across countries. Prerequisites: ECON 1210 and either APMA 0330 and 0340 (or equivalent) or MATH 0180, 0200, or 0350 (or equivalent).

1860. The Theory of General Equilibrium
Existence and efficiency of equilibria for a competitive economy; comparative statics; time and uncertainty. Prerequisite: ECON 1110 or 1130. STAFF.

1870. Game Theory and Applications to Economics
Study of the elements of the theory of games. Non-cooperative games. Repeated games. Cooperative games. Applications include bargaining and oligopoly theory. Prerequisites: ECON 1110 or 1130; and MATH 0100, or 0170, or 0180, or 0190, or 0200, or 0350; and ECON 1620 or 1630 or APMA 1650, or MATH 1610. G. DE CLIPPEL.

1880. Introductory Topics on Game Theory
First, we will discuss the several elements that characterize a two-sided matching market and will model several of these markets under the game-theoretic approach. Then, we will introduce the theory of stable matching model by focusing on both the cooperative and non-cooperative aspects of the one-to-one matching markets. Pre-requisites: ECON 1110 or 1130 and ECON 1870.

1960. Honors Tutorial for Economics Majors
Students intending to write an honors thesis in economics must register for this class. The goal is to help students with the process of identifying and defining feasible topics, investigating relevant background literature, framing hypotheses, and planning the structure of their thesis. Each student must find a thesis advisor with interests related to their topic and plan to enroll in ECON 1970 during the final semester of senior year.

1970. Independent Research
Primarily for Graduates

2010. *Mathematics for Economists*
Techniques of mathematical analysis useful in economic theory and econometrics. Linear algebra, constrained maximization, difference and differential equations, calculus of variations. S. Turner and Staff.

2020. *Applied Economics Analysis*
This course provides students with skills needed to integrate economic theory, econometric methods, and data management in the analysis of economic problems. Provides a hands-on perspective including assignments designed to derive testable propositions from simple economic models, illustrate the loading, cleaning and merging of complex survey data, and provide experience in the selection and interpretation of basic econometric methods. N. Qian and A. Foster.

2030. *Introduction to Econometrics I*
The probabilistic and statistical basis of inference in econometrics. B. Melly.

2040. *Econometric Methods*
Applications of mathematical statistics in economics. The nature of economic observations, cross-section and time series analysis, the analysis of variance and regression analysis, problems of estimation. S. Mavroeidis.

2050. *Microeconomics I*
Decision theory: consumer’s and producer’s theory; general competitive equilibrium and welfare economics: the Arrow-Debreu-McKenzie model; social choice. R. Serrano.

2060. *Microeconomics II*
Economics of imperfect information: expected utility, risk and risk aversion, optimization under uncertainty, moral hazard, and self-selection problems. Economics of imperfect competition: monopoly; price discrimination; monopolist competition; market structure in single shot, repeated and staged games; and vertical differentiation. K. Eliaz.

2070. *Macroeconomics I*
Consumption and saving, under both certainty and uncertainty; theory of economic growth; real business cycles; investment; and asset pricing. D. N. Weil.

2080. *Macroeconomics II*
Money, inflation, economic fluctuations and nominal rigidities, monetary and fiscal policy, investment, unemployment, and search and coordination failure. P. Howitt.

2090. *Topics in Microeconomics*
Resource allocation, market failure, and incentives. Examines the most common forms of market failure (incomplete information, incomplete markets, public goods, increasing returns), formulates a general approach to these issues, and explores methods for restoring efficiency including the study of mechanism design. M. Dean.

2160. *Risk, Uncertainty, and Information*
Advanced topics in the theories of risk, uncertainty and information, including the following: Decision making under uncertainty: expected and non-expected utility, measures of risk aversion, stochastic dominance. Models with a small number of agents: optimal risk-sharing, the principal-agent paradigm, contracts. Models with a large number of agents: asymmetric information in centralized and decentralized markets. Implementation theory. R. Serrano.
2180. *Game Theory*

2190. *Topics in Economic Theory*
Topics vary from year to year. Recent topics include: auction theory, cooperative game theory, and general equilibrium theory under incomplete information. May be repeated for credit.

2330. *Topics in Labor Economics*
The course introduces students to procedures used to extract evidence from data and to perform rigorous causal inference in order to evaluate public policy on issues such as schooling, the return to education and returns on late intervention programs. Econometric methods, such as Instrumental Variable, Matching, Control Functions, Self Selection Models and Discrete Choice as well as Panel Data Methods, are discussed in detail. K. CHAY.

2360. *Economics of Health and Population*
An introduction to current research in the economics of health and population. Focuses on studies of empirically-tractable and tested models of individual, household, and firm behaviors and how these behaviors interact through markets and other institutions. Among the subjects considered are the economics of fertility and marriage, the operation of the health services sector, and the implications of population aging. A. AIZER.

2370. *Inequality: Theory and Evidence*
This course uses economic theory to study the problems of inequality. The emphasis is two-fold: (1) to explain persistent resource disparities between individuals or social groups; and, (2) to assess the welfare effects of various equality-promoting policies. Topics include racial stereotypes, residential segregation, distributive justice, incentive effects of preferential policies, dysfunctional identity, and endogenous inequality due to the structure of production and exchange. Enrollment limited. Written permission required. G. C. LOURY.

2410. *Urbanization*
The first part of the course covers social interactions, productivity spillovers, systems of cities models, urban growth, and rural-urban migration. The second part of the course covers topics such as durable housing, land market regulation and exclusion, and local political economy. Besides covering basic theoretical models, emphasis is placed on working through recent empirical papers on both the USA and developing countries. Prerequisites: ECON 2050 and 2060. J. V. HENDERSON.

2420. *The Structure of Cities*
This course covers standard urban land use theory, urban transportation, sorting across political jurisdictions, hedonics, housing, segregation and crime. Empirical examples are taken primarily from the United States. After taking the course, students will have an understanding of standard urban theory and of empirical evidence on various important applied urban topics. In addition, students will gain practical experience in manipulating spatial data sets and simulating urban models. N. BAUM-SNOW.

2470. *Industrial Organization*
Monoplistic competition, market structure and entry, nonprice competition, economics of information. STAFF.

2480. *Public Economics*
Theoretical and empirical analysis of the role of government in private economies. Topics include welfare economics, public goods, externalities, income redistribution, tax revenues, public choice, and fiscal federalism. B. G. KNIGHT.
2510. Economic Development I
This course covers issues related to labor, land, and natural resource markets in developing countries, in partial and general equilibrium settings. Topics covered include: The agricultural household model, under complete and incomplete market assumptions; household and individual labor supply, migration, self-employment, and the informal sector; rental market frictions and sharecropping arrangements; and environmental externalities (e.g., pollution, water usage, etc.), and sustainable development. A. D. Foster.

2520. Economic Development II
This course deals with the economic analysis of institutions, with a particular focus on community-based institutions in developing countries. Institutions covered in this course includes cooperatives, ROSCAS, networks, marriage and the family. K. Munshi and N. Qian.

2530. Behavioral and Experimental Economics
An introduction to the methodology of experimental economics with an emphasis on experiments designed to illuminate problems in organizational design and emergence of institutions, and experiments investigating the operation of social and social-psychological elements of preference such as altruism, inequality aversion, reciprocity, trust, concern for relative standing, envy, and willingness to punish norm violators. Experiments studied will include ones based on the prisoners’ dilemma, dictator game, ultimatum game, and especially the voluntary contribution mechanism (public goods game) and the trust game. L. Putterman.

2580. International Trade
General equilibrium analysis of the theory of international trade and trade policy under perfect competition; trade under imperfect competition; strategic trade policy; trade and growth; and the political economy of trade policy determination. Empirical analysis of trade theories and policy. Additional topics include the theory of preferential trading areas, trade and labor, and the analytics of trade policy reform. Staff.

2590. Topics in International Economics
Advanced theoretical and empirical research topics in international economics emphasizing positive and normative analysis of trade, trade policy and international trading agreements, policy reform and stabilization, exchange rate determination, sovereign debt and currency crises and optimum currency areas. Staff.

2610. Applied Econometrics
Topics in applied econometrics. Both cross-sectional and time series issues will be discussed. Special emphasis will be placed on the link between econometric theory and empirical work. Staff.

2630. Econometric Theory
Standard and generalized linear models, simultaneous equations, maximum likelihood, Bayesian inference, panel data, nonlinear models, asymptotic theory, discrete choice, and limited dependent variable models. F. Kleibergen and S. Mavroeidis.

2640. Microeconometrics
Topics in microeconometrics treated from a modern Bayesian perspective. Limited and qualitative dependent variables, selectivity bias, duration models, panel data. F. Kleibergen.

2660. Macroeconometrics I
Topics in Econometrics. The lecture consists of a number of influential articles in Econometrics on topics like GMM, Empirical Processes, Weak instruments, Non-and Semi-parametric regression, Bootstrap, Edgeworth approximation. S. Mavroeidis.
2820. *Discrete Dynamical Systems and Application to Intertemporal Economics*
This course will focus on the qualitative analysis of discrete dynamical systems and their application for Intertemporal Economics. O. GALOR.

2830. *Dynamic Optimization and Economic Growth*
The role of human capital, income distribution, population growth, technological progress, and international trade in the determination of differences in growth performance across countries. Inequality and economic growth. Technological progress and wage inequality. The transition from stagnation to sustained growth. Evolution and growth. O. GALOR.

2840. *Empirical Analysis of Economic Growth*
Examines economic growth, focusing on the effects of technological change, fertility, income inequality, and government policy. EC 283 is strongly recommended. D. N. WEIL.

2850. *Theory of Innovation-Based Growth†*
Issues concerning innovation-based growth theory, including scale effects and effects of research and development versus capital accumulation. Interactions between growth and phenomena such as fluctuations, unemployment, natural resources, competition, regulation, patent policy, and international trade. P. HOWITT.

2930. *Workshop in Applied Economics*
No course credit.

2950. *Workshop in Econometrics*
No course credit.

2960. *Workshop in Macroeconomics and Related Topics*
No course credit.

2970. *Workshop in Economic Theory*
No course credit.

2971. *Race and Inequality Seminar*
This is a workshop primarily for graduate students and faculty in the Department of Economics where original research on issues of race and inequality are presented by external visitors, along with Brown faculty and graduate students. No course credit.

2980. *Reading and Research*
Individual research projects.

2990. *Thesis Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

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**Education**

Professors García Coll, and Wong (Chair); Associate Professors Li, and Tyler; Assistant Professors Cho, LeBougeois (Research), Rivas-Drake, and Steffes; Senior Lecturer Spoehr; Professor-at-Large Heath; Lecturers Bisaccio, Sigler, and Snyder; Visiting Lecturer Shalaby; Adjunct Professors Demick and Simmons; Clinical Professor Becker; Clinical Assistant Professors Foley and Grady; Adjunct Senior Lecturer Landay; Adjunct Lecturers Berking-Dalzell, Dorr, Elliott, Epstein, Gillette, Heffernan, Nosal, and Yamamoto; Professors Emeriti Archambault, Eschenbacher, Kaestle, and Modell.
The department offers a concentration in Education Studies; individual courses for Brown University students interested in education history, policy, and human development; and UTEP), which leads to teacher certification.

At the graduate level, two Masters programs are offered: the Master of Arts in Teaching (MAT), leading to certification at both elementary and secondary levels, and the P).

For additional information, please visit the department website at: http://www.brown.edu/Departments/Education/index.php

Undergraduate Programs

For a complete description of the following standard concentration programs leading to the bachelor’s degree, please visit:

http://www.brown.edu/Administration/Registrar/concentration.html

Education (Undergraduate Teaching Program)

Education Studies

Graduate Programs

Master of Arts in Teaching Program—Secondary Education

Brown offers a twelve month (summer plus academic year) program to prepare college graduates for careers in secondary education, leading to the degree of master of arts in teaching and secondary certification (grades 7-12). The program involves courses taken in the student’s teaching field (e.g., english, social studies/history, biology/science) and in education, including a summer practicum and academic year experience as a student teacher in a local school. The program involves several departments and is administered by the Department of Education.

A detailed description of the requirements for the Master of Arts in Teaching degree, and of procedures for applying for candidacy are available from the Graduate School.

Master of Arts in Teaching Program—Elementary Education

Brown University, in cooperation with the Wheeler School and in partnership with local public elementary schools, offers a Master of Arts in Teaching leading to elementary teacher certification (grades 1-6).

This program is a strand of the University’s Master of Arts in Teaching Program. Students participate in a highly-collaborative program and spend significant time in public and private school settings working with experienced elementary school teachers. The MAT program begins in the summer and includes two semesters of study. The summer practicum is held at Community Preparatorv School and includes one course in teaching methods.

Student teachers are placed in both area public schools, which have a diverse ethnic population, and at the Wheeler School, a progressive nursery-twelve, coed independent school founded in 1889. This combination allows students to experience two different school environments during the same year.

Master of Arts in Urban Education Policy

Brown offers a master’s level program leading to an A.M. in Urban Education. The UEP program is a twelve-month program dedicated to the study of policy analysis, planning, and development in urban public education. The tightly focused academic curriculum, integrated with a nine-month internship, is designed to impart a set of core skills and
competencies that are necessary for successful careers in urban education policy. The UEP program also provides a solid foundation for those anticipating advanced study in the areas related to urban education policy.

Courses of Instruction

Primarily for Undergraduates

0400. The Campus on Fire: American Colleges and Universities in the 1960’s
Ole Miss, Berkeley, Columbia, and Kent State: just a few of the campus battlegrounds where conflicts over civil rights, the Vietnam War, and other major issues were fought in the 1960’s. Students consult primary and secondary sources about higher education’s role in these conflicts, and why the consequences of its involvement still linger today. For first year students only. L. Spoehr.

0410. First Year Seminar

0410A. New Faces, New Challenges: Immigrant Students in U.S. Schools
What challenges do immigrant students face in adapting to a new system of education? By comparing and contrasting the perspectives education stakeholders--students, teachers, administrators, and parents--this course examines a number of key contributions to the study of the immigrant experience in education, as well as a selection of memoirs and films about the pathways these newcomers take in navigating school and (trans)forming their developing identities.

0410B. Controversies in American Education: A Multidisciplinary Approach
Introduces perspectives on education based in history, economics, sociology, and political science. Students engage foundational texts in each of these fields, using the insights gained to examine controversial issues in American education policy, including policies to address ethnic disparities in student achievement, test-based accountability, class-size reduction, and school choice.

0410C. The Literature of Children and Young Adults
This course considers the literary, dramatic, and visual qualities of the literature of young readers since the 18th century, with a dominant, but not exclusive, focus on literature in English. Topics covered will include dominant themes in visual and textual aspects of these literatures, as well as their history and relationship to societal economics and valuations of children, schooling, and moral codes.

0410D. Brown v. Board of Education
Using sources in history, education, and law this course will explore the landmark Supreme Court case of Brown v. Board of Education which found school segregation unconstitutional and challenged the entire foundation of legal segregation. We will explore the legal, political, and social issues that culminated in Brown and examine the development and deployment of remedies, with particular emphasis on school integration and educational equity. We will consider the legacy of Brown and analyze its impact on the civil rights movement, schooling, law, and politics in the late twentieth century and consider its implications for the future. T. Steffes.

0410E. Empowering Youth: Insights from Research on Urban Adolescents
Together, we consider the design, analysis, and interpretation of research on youth in urban settings. In doing so, we examine the roles of power, privilege, and multiculturalism in research. In the experiential component of the course, students
engage in fieldwork in a local school or community-based youth organization. As part of their fieldwork, students design and undertake a research project, thereby bridging theory with practice. Reserved for First Year students. Enrollment limited to 20. D. RIVAS.

0700. Introduction to Research Design
Pending Approval. This will be a course that introduces various research methodology, both qualitative and quantitative, in the context of social science research. The later part of the course will be application of certain research techniques such as hypothesis testing and ANOVA.

0800. Introduction to Human Development and Education
Introduces the study of human development and education from infancy through young adulthood. Provides a broad overview of scientific understanding of how children develop and how research is generated in the field. Major topics include biological foundations, mind, cognition, language, emotion, social skills, and moral understanding based on developmental theories and empirical research. The educational implications of research on human development are discussed. J. Li.

0850. History of Intercollegiate Athletics
This team-taught course traces the changing place of intercollegiate athletics on the American college campus over the past 150 years. Topics examined include, among others, the relationship between academic and athletic pursuits; commercialization and professionalization; the role of the NCAA and of the media; the cult of the coach; and the significance of race, gender, and class, all viewed through the lenses of social, cultural, and economic history. Emphasis on critical reading, active participation in discussion, and developing research and writing skills. The course will meet twice weekly, sometimes as a whole and sometimes in smaller groups, to discuss readings, films, and guest presentations. Enrollment limited to 30. Preference given to 3rd and 4th semester students. L. SPOEHR and H. CHUDACOFF.

0900. Fieldwork and Seminar in Secondary Education
Combines study of current educational issues with extensive fieldwork that allows the student to observe how these issues translate themselves into reality on a daily basis. Each student reads and discusses recent writing about educational history, theory, and practice, and observes a class in a local school for 32 hours. The final paper synthesizes reading and observations. Enrollment limited. D. BISACCIO.

For Undergraduates and Graduates

1010. The Craft of Teaching
What is the “craft of teaching”? A wide variety of texts are used to investigate the complexity of teaching and learning. Considering current problems as well as reform initiatives, we examine teaching and learning in America from the perspectives of history, public policy, critical theory, sociology, and the arts. Weekly journals and reading critiques; final portfolio presented to the class. S/NC. M. SIGLER.

1020. History of American Education
An introduction to the history of American education, with an emphasis on K-12 public schooling. Using primary and secondary sources, we’ll explore the development and reform of public schools and school systems, the debates over aims and curriculum, and the conflicts over control and inclusion over time, as well as consider the larger social and political significance of schooling for American society. We will also explore how different generations have defined and tried to solve educational dilemmas and how history might help us approach education today. T. STEFFES.
1030. Comparative Education
National systems of formal education, over the past two centuries, have proliferated massively. International organizations, governmental and nongovernmental, have long promoted the universal provision of mass education as central goals in the modern way of life. At the same time, the way children are raised, and the kinds of adults they become, varies considerably. Comparative education seeks to explore this interplay of variety and uniformity. Enrollment limited. Written permission required. J. MODELL.

1040. Sociology of Education
The eclectic sociological imagination is turned upon that crucial modern institution: education. Considers formal education as a contemporary institution and schools as organizations both in comparative perspective and in more microscopic ways. Asks what schools and schooling means to society and to children from different social and economic circumstances. Enrollment limited. Written permission required. J. MODELL.

1050. History of African-American Education
This course will examine the history of African-American education with particular emphasis on the twentieth century. We will explore African-Americans' experiences with schooling under slavery and segregation, the struggle for desegregation and equity North and South, and the place of education in African-Americans' quest for equal rights. We will also consider how the African-American experience with public schooling makes us rethink major narratives of American education, democracy, and equality of opportunity and how an historical understanding of these issues may help us engage contemporary debates. T. STEFFES.

1060. Politics and Public Education
Who exercises power in public education? This course examines the key institutions (e.g. school districts, states, Congress, and the courts) and actors (e.g. parents, teachers, interest groups, and the general public) shaping American K-12 education in order to understand recent policy trends and their consequences for students. Major policies discussed include school finance, textbook adoption, school accountability, and school choice. Particular attention is given to the federal No Child Left Behind Act of 2001 and debates over its reauthorization. Previous coursework in American politics or public policy is suggested but not required.

1070. Student Teaching
Provides no fewer than 180 hours of practice teaching and observation, equivalent to 6 semester hours of credit in institutions operating on a semester hour basis, and fulfills the supervised student teaching requirement for secondary school teaching certification in most states. Prerequisite: EDUC 2060. Restricted to students in the Undergraduate Teacher Education Program. Written permission required. S/NC.

1080. Analysis of Teaching
A critical analysis of the activity of teaching, required to be elected concurrently by those students taking EDUC 1070, Student Teaching. Supports student teaching and emphasizes the analysis of teaching from several theoretical perspectives. May not be elected independently of EDUC 1070. Written permission required. S/NC.

1100. Introduction to Qualitative Research Methods
Designed for sophomores or juniors concentrating in education studies, but also open to other undergraduates interested in qualitative research methods. Through readings, class exercises and discussions, and written assignments, examines issues related to the nature of the qualitative research methods that are commonly used in education, psychology, anthropology, and sociology. Enrollment limited. S/NC. J. DEMICK.
1110. *Introductory Statistics for Education Research and Policy Analysis*
Introduction to the key ideas underlying statistical and quantitative reasoning. A hands-on pedagogical approach utilizing examples from education research and public policy analysis. Topics include the fundamentals of probability, descriptive and summary statistics, statistical inference, bivariate and multivariate regression, correlation, and analysis of variance. Computer-based data analysis reinforces statistical concepts. Enrollment limited. Written permission required. R. CHO.

1130. *Economics of Education I*
How do we attract good teachers to public schools? What are the economic returns to early-childhood intervention programs? These are just two examples of important education policy questions. This course introduces key concepts of microeconomic theory and uses them to analyze these and other policy questions. Organized around a structured sequence of readings. Prerequisite (one of the following): ECON 0110, EDUC 1020, POLS 0100, SOC 0130, or the equivalent. J. H. TYLER.

1150. *Education, the Economy and School Reform*
Changes in the economy have had dramatic negative consequences for those without a college degree. This seminar explores the impact of these changes on workplace organization and the demand for skills, on what is taught in schools, and on school reform. Prerequisites: Education and PP concentrators, EDUC 1130 and EDUC 1110 (or equivalent); Economics concentrators, ECON 1110 or ECON 1130, and ECON 1620. R. CHO.

1160. *Evaluating the Impact of Social Programs*
Does a GED improve the earnings of dropouts? Do stricter gun laws prevent violent crime? Such "causal" questions lie at the heart of public policy decisions. This course examines both the difficulties involved in answering causal policy questions, and research designs that can overcome these difficulties. Prerequisite: EDUC 1110 (ED 111), POLS 1600, ECON 1630, SOC 1100 or equivalent. J. H. TYLER.

1200. *History of American School Reform*
Examines a century of efforts to improve schooling in the U.S., from John Dewey to Theodore Sizer and E.D. Hirsch, from “social efficiency” to charter schools and performance-based standards. How have these movements been affected by the historical contexts in which they operated? Have they produced any lasting results? How, if at all, should current reform movements be informed by the experiences of the past? L. SPOEHR.

1220. *The Anthropology of Education*
Designed to introduce students to the many forms of “education” across the lifespan and in different cultures, this course will call on students to step beyond their own schooling. Of particular importance will be the uses of materials, experts, space and time in different educational settings. Films and print materials will allow students to rethink the idea of “learner” and “teacher” in terms of varying needs, goals, and situations. S. B. HEATH.

1230. *Research for Learning: Cross-disciplinary Patterns and Uses*
A course that considers determinants of quality in social science research and prepares students to read research reports in the popular press with a discriminating eye. In addition, students will learn core concepts of research in Education and the Public Health fields. Students will also gain experience in writing short proposals for summer research projects, independent study, or an honors thesis. Enrollment limited. Written permission required. S. B. HEATH.

1240. *Reframing Psychoanalysis as a Positive Developmental Science: Educational Implications*
This course discusses psychoanalysis as a positive developmental science. It reviews Freud's classic theory and modern psychoanalytic theories. Following critical analysis, an
optimistic reframing of psychoanalysis is proposed. The course then demonstrates the ways in which these theories have shaped problems of interest to those in education and human development (e.g., cognition and learning, self and identity development, classroom dynamics). J. DEMICK.

1260. Emotion, Cognition, Education
Provides an understanding of the role of emotions in influencing cognitive and social development. Reviews selected topics in the growing area of emotions and social cognition. Discussions focus on critical reviews of the literature and the application of the literature to education. Basic knowledge of the area is not assumed, so students in various areas are invited to participate. Written permission required. J. DEMICK.

1270. Adolescent Psychology
Provides systematic treatment of the psychological, biological, and sociocultural nature of the adolescent. Both an individual and a collective perspective on the nature of the adolescent and adolescence are used to provide an analytical and comprehensive understanding of the complex environment and psyche of the adolescent. Readings include theoretical and empirical papers from such areas as psychology, sociology, anthropology, and education. Written permission required. J. DEMICK.

1280. International Perspectives on Informal Education
Internationally, informal learning figures centrally from early childhood through the lifespan. Voluntarily chosen areas of expertise, societally necessary tasks, and interpersonal relationships lead individuals, corporations, and communities to undertake informal education. Central to this course is examination of major means and conditions of such learning in international contexts through four primary themes - play, everyday science, social entrepreneurship, and community collaborations. S. HEATH.

1430. The Psychology of Race, Class, and Gender
Focuses on the social construction of race, class, and gender and how this construction influences an individual's perception of self and other individuals. Topics include identity development, achievement, motivation, and sociopolitical development. Prerequisites: EDUC 0800, 1270 or 1710. Enrollment limited. Written permission required. J. DEMICK.

1450. The Psychology of Teaching and Learning
Seeks both to demystify the process of teaching and to illuminate its complexities. Assists students with such questions as: What shall I teach? How shall I teach it? Will my students respond? What if I have a discipline problem? Focuses on the teaching-learning process and student behavior, as well as research, theory, and illustrations concerned with classroom applications of psychological principles and ideas. Prerequisites: EDUC 0800 or EDUC 1710. J. LI.

1470. Sociology of Children and Adolescents
We persistently sentimentalize children (until adolescence) in our culture, feeling them to be governed jointly by the unfolding of natural developmental processes and the influence of adults. This perspective is challenged by examining children as (sometimes reluctant) participants in social institutions, as enactors and re-negotiators of prescriptions based on age, and as creators of peer society. J. MODELL.

1510. Critical Pedagogy and White Privilege: Crossing Boundaries in Urban Education
These two topics will be studied through the lenses of Cultural Studies and Education. The course will use a variety of resources and approaches including media, print materials, and research that involves observation and fieldwork. A major question driving the course would be: How do educators approach teaching about White Privilege in urban and suburban settings (if they do at all-and if not, why not?) and what difference does it make in student learning, attitudes, and values? The observation and fieldwork component of the
course is designed to start a dialogue, particularly with Providence area secondary teachers, about the issues of White Privilege and critical pedagogy.

1580. *Cross-Cultural Perspectives on Child Development*
Focus on role of culture in child development, infancy to young adulthood. Reviews contemporary theories and empirical research to examine various age periods and domains of development. Major topics: infant care, parenting, socialization, gender roles, cognition, moral development, affect, adolescence, and education and schooling in formal and informal settings. J. Li.

1620. *Teaching Topics in American History and Literature, 1945–1980*
Combines intensive study of primary and secondary sources from American history and literature between 1945 and 1980 with extensive consideration of how to teach these topics to secondary school students. Topics include the Cold War, McCarthyism, consumer society, civil rights, the women’s movement, Vietnam, and Watergate, often studied through unconventional sources such as popular music, movies, television shows, and fiction. Pre-requisite: HIST 0520 or equivalent. Enrollment limited. Written permission required. L. Spoehr.

1650. *Policy Implementation in Education*
This course offers an “analytical foundation” for students interested in public policy implementation, with particular emphasis on education. Drawing on social science research, the course examines strengths and limitations of several frameworks, including the “policy typology” school of thought, the rational actor paradigm, the institutional analysis, the bargain model, the organizational-bureaucratic model, and the “consumer choice” perspective. K. K. Wong.

1710. *History and Theories of Child Development*
An examination of child development from a historical and theoretical perspective, including key historical figures such as Darwin, Hall, Baldwin, Binet, Freud, Watson, Piaget, Vygotsky, Gesell, McGraw, Bowlby, and Bayley. Explores theoretical conceptualizations of children and adolescents and investigates the representations of children in popular culture, governmental legislation, education, and public policy. C. T. García Coll.

1730. *American Higher Education in Historical Context*
A study of 350 years of American higher education. The first part traces the growth and development of American higher education from premodern college to the modern research university. The second part examines issues facing higher education today and places them in historical context. Particular attention is given to: the evolution of curriculum; professionalization; and the often competing priorities of teaching, research and service. L. Spoehr.

1740. *Academic Freedom on Trial: A Century of Campus Controversies*
Inside and outside the classroom—for professors, students, administrators, and others—academic freedom has been contested by forces external and internal to the university. This course focuses on challenges to and changes in the definition and application of “academic freedom” from the end of the 19th century to the present day, with particular attention to academic freedom during times of crisis, especially wartime, and includes consideration of current issues such as speech codes, corporate and government funding of research, and the place of religion on campus. L. Spoehr.

1750. *Contemporary Social Problems: Views from Human Development and Education*
Explores social problems in terms of contemporary theories and research in human development and education. The class chooses issues for discussion and researches their mechanisms and possible solutions. Demands basic knowledge of theory and research in psy-
chology, sociology, or anthropology, and background in educational issues. Prerequisite: EDUC 0800, 1270 or 1710 or any other two social science courses. C. GARCÍA COLL.

1850. **Moral Development and Education**
Examines contending approaches to moral development and its fostering in the home, school and peer group. Topics include philosophical underpinnings of moral theory, cognitive and behavioral dynamics of moral growth, values climate of contemporary American society, the role of schooling, and variations attributable to culture and gender. Prerequisites: EDUC 0800, 1270, or 1710, or COGS 0630, or PSYC 0810. J. LI.

1860. **Social Context of Learning and Development**
Focuses on the social environment that contributes to the development of children's minds, language, self-understanding, relations with others, affect, and attitudes toward learning. Examines the period from birth through young adulthood. Topics include children's social interactions, parental expectations and socialization practices, and the influences of family, peers, school, and media. Prerequisites: EDUC 0800, EDUC 1710, EDUC 1270, COGS 0630, or PSYC 0810, or instructor permission. J. LI.

1970. **Independent Study**

1990, 1991. **Independent Reading and Research**
Supervised reading and/or research for education concentrators who are preparing an honors thesis. Written permission from the honors advisor required. S/NC. STAFF.

Primarily for Graduates

2050. **Psychology of Teaching**
Introduces master of arts in teaching (MAT) students to the necessary and critical role of psychological theory in the classroom. Students develop a theory of instruction paper that incorporates their teaching experience in the Brown Summer High School. Required of and restricted to master of arts in teaching degree candidates. Offered in the MAT summer session only.

2060. **Methods of Teaching**
Restricted to students in the MAT and UTEP programs. Offered during the summer in conjunction with supervised teaching in the Brown Summer High School. S/NC.

2070. **Student Teaching**
Open only to students in the MAT Program. S/NC.

2080. **Analysis of Teaching**
An analysis of certain aspects of teaching activity in their relation to theoretical principles of teaching. Elected in conjunction with EDUC 2070, Student Teaching, and required of all candidates for the master of arts in teaching degree. (Credit related to EDUC 2070.) No course credit.

2090. **Literacy Across the Curriculum**
Focuses on three major areas of pedagogy: literacy across the curriculum, special education, and teaching English Language Learners. Topics include: current theory and practice in the three areas, legal requirements for special education, planning for differentiated instruction, assessment and diagnosis of student skill levels, measuring and reporting student achievement, adapting content for ELLS, selecting and working with texts, and effective vocabulary instruction. S/NC, STAFF.

2110. **Summer Practicum and Analysis**
Introduces MAT students to elementary school students through work in a unique summer enrichment program for inner city Providence children: Summer Prep readings and seminar meetings focus on arts education; introductions to the teaching of literacy, math and sci-
ence; curriculum and lesson planning; creating a community of learners; issues of diversity; and physical education. S/NC. J. EPSTEIN and C. SHALABY.

2120. Practicum and Seminar in Elementary Education
Students participate in an elementary classroom for 2 1/2 days a week for 12 weeks, participating in all aspects of the school day. Students assume responsibility for individualized instruction, small groups and some daily routines. Examines topics in child development; race, class, ethnic and linguistic diversity; assessment; teaching and learning as well as topics arising from the experiences in classrooms. S/NC. J. EPSTEIN and C. SHALABY.

2130. Issues and Trends in Education
Introduces students to a range of topics that define the current debates in education; the competing purposes of state sponsored education; the standards movement; diversity issues and educational outcomes; the reading wars; standardized testing; multicultural and bilingual education; school choice; teacher unions and teacher professionalism. Students read about these issues from multiple perspectives and form their own views of the debates. Open to undergraduate enrollment. Enrollment limited. S/NC. L. SNYDER.

2140. Methods and Materials of Math, Science, and Technology
Using a developmental approach, students are introduced to the major concepts and teaching methods used in elementary math and science classrooms. S/NC. Half credit. S. WILLIAMS.

2150. Language and Literacy in the Elementary School Classroom
An introduction to Comprehensive Literacy instruction in reading and writing, including strategies for teaching interactive read alouds; shared reading and shared writing; phonics and word work; independent reading workshop; guided reading; writer’s notebooks; writing workshop; and children’s literature via an author study. S/NC. Half credit. M. NOSAL.

2270. Student Teaching and Analysis
Provides no fewer than 180 hours of student teaching and observation—equivalent to six semester hours of credit in institutions operating on a semester-hour basis—and fulfills the supervised student teaching requirements for elementary school teaching certification in Rhode island and in ICC member states. S/NC. J. EPSTEIN and C. SHALABY.

2280. Seminar: Principles of Learning and Teaching
A critical analysis of the activity of teaching, restricted to and required of students taking EDUC 2270. The course requires curriculum and lesson planning, reflective analyses of student learning and classroom teaching, and places learning and teaching in context with attention to issues of diversity of schools and their student bodies. S/NC. J. EPSTEIN and P. ULICHNY.

2300. Systems and Structures in Urban Education
The aim of the course is to prepare future education policy leaders to understand, have the tools to investigate and be effective in the context of the many organizations that affect the well-being and ultimate success of urban students. Throughout the course, the city of Providence, along with nearby cities, will be a major “text.” W. SIMMONS AND D. WOLF.

2310. Introduction to Educational Research: Design and Methods
Intensive six-week course designed to prepare future leaders in urban education policy with a fundamental understanding of basic concepts, techniques and strategies of social science research. The course goal is for students to acquire skills and knowledge that enable them to inform the design, implementation and ultimate use of applied research in a policy setting and to appreciate its limitations. E. FOLEY AND M. GRADY.
2320. **Quantitative Research Methods and Data Analysis**  
The goal of this course is to provide students in the Urban Education Policy program with a foundation and understanding of basic statistical analyses so that they will be able to design and carry out their own research and will be able to use data to inform education policy and practice. R. Cho.

2330. **Urban Politics and School Governance**  
This course is a requirement for students of the MA in Urban Education Policy program. It deals with the political science and public policy central question of: How can public institutions be redesigned to improve accountability? Particular attention will be given to the governance and politics in urban public school systems. K. K. Wong.

2340. **Human Development and Urban Education**  
In this course, we will learn relevant theories and research in the academic field of Human Development to urban education practice and policy from preschools to high schools. Special emphasis will be placed in areas where there is research convergence and that are relevant to urban populations and settings. Prerequisites: EDUC 0800 or 1710 or 1750 or instructor’s permission. C. T. García Coll.

2350. **Economics of Education II**  
This course introduces students to the main economic theories and related applied work that inform education policy analysis. In so doing, the course combines economic theory, econometric studies, and education and institutional literature in an examination of current issues in U.S. education, particularly those issues that are most relevant to urban education. The course begins with examinations of key concepts and theories from microeconomics, labor economics, and public economics that are most relevant for studying questions in education. After laying this theoretical foundation the course then examines how these theories can illuminate and aid policy analysis around key topics in U.S. education. Topics include, but will not be limited to: explanations of the education investment decisions of individuals and society; an examination of how the relationship between skills and labor market outcomes have changed over time and what have been the implications for schooling in the U.S.; what economic theory has to say about the "production" of education and the role of additional resources in that endeavor; and the economics of teacher quality, the financing of public K-12 schools, and standards based school reform. J. H. Tyler.

2360. **Policy Analysis and Program Evaluation for Education**  
Informed education policymaking requires reliable information about the causal effects of government programs and other factors shaping educational outcomes. This course offers an overview of education policy analysis with an emphasis on econometric strategies for measuring program impacts. It aims to make students critical consumers of policy evaluations and to equip them with tools to conduct their own research. Topics covered include the political context for policy research, social experiments, alternative strategies for making causal inferences, and cost-benefit analysis. Prerequisites: EDUC 1110, POLS 1600, SOC 1100, or written permission of the instructor. M. West.

2370, 2380. **Internship**  
Students in the Urban Education Policy Master's Program participate in year-long internships in organizations that focus on urban education policy. Each student works with his or her site supervisor to develop a job description for the internship that allows the student to learn from and contribute to the work of the host organization. Half credit. Staff.

2980. **Studies in Education**  
Independent study; must be arranged in advance.

2990. **Thesis Preparation**  
No course credit. C. T. García Coll.
Education Alliance for Equity and Excellence in the Nation’s Schools

The Education Alliance works in collaboration with states, districts, schools, professional organizations, and communities to effect systemic change in education. As an applied research, development, and technical assistance department, The Education Alliance staff applies research findings to advance educational improvement in areas such as professional development, first and second language acquisition, educational leadership, instructional technology, and cultural and linguistic diversity. With over thirty years of experience, The Education Alliance builds the capacity of educational systems to provide equitable opportunities for all students to succeed. Funded annually through federal, state, local, and foundation grants and contracts, the Alliance is an established professional resource for high quality evaluation, development, and technical assistance services.

The Education Alliance conducts over twenty-five rigorous evaluation projects each year that provide educators and policy-makers with quantitative and qualitative information needed to strengthen programs and improve teaching and learning. It also operates the New England Equity Assistance Center (NEEAC), which assists schools in solving equity problems in education. The NEEAC provides training, technical assistance, support, and resources to educators and school systems in New England. In collaboration with the department of Portuguese and Brazilian Studies, the Alliance oversees the masters program in two areas: English as a Second Language and Cross-Cultural Studies, and Portuguese Bilingual Education and Cross-Cultural Studies (see page 610). These programs incorporate current research in language acquisition, multiculturalism, and clinical experiences.

The Executive Director of The Education Alliance is Dr. Adeline Becker.

For additional information please visit: http://www.alliance.brown.edu/.

Egyptology and Ancient Western Asian Studies

Professor Allen (Chair); Associate Professors Depuydt, Steele; Assistant Professors Bestock, Harmansah, Rutz.

Once devoted solely to ancient Egypt, Brown’s newly expanded Department of Egyptology and Ancient Western Asian Studies also encompasses study of the ancient Near East from Mesopotamia to the Mediterranean. Regularly scheduled courses concern the language, history, religion and culture of the ancient Nile Valley and Near East.

Graduate and undergraduate students are encouraged to take courses in related subjects (e.g., Anthropology, Art, Classics, History, Linguistics, Old World Archaeology, Religious Studies, and Judaic Studies) in order to experience diverse approaches that will help them to achieve a better understanding of ancient civilization. Both programs will include archaeological courses in conjunction with the Artemis A.W. and Martha Sharp Joukowsky Institute for Archaeology and the Ancient World. Degrees will be offered in Egyptology or Ancient Western Asian Studies, but the curriculum aims at a well-rounded knowledge of both areas of study.
Undergraduate Program

For a complete description of the current standard concentration program leading to the A.B. degree, please visit:
http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Program

Applications to the graduate program must include a writing sample (or least one college paper in Egyptology or Ancient Western Asian Studies). Reading knowledge of both German and French is recommended. Students selected for preliminary approval will be asked to an interview before being accepted in the program; financial aid in the form of travel and housing is available.

Graduate programs leading to the A.M. and Ph.D. degrees are not rigidly formulated. They are arranged with regard to each student’s needs, interests and previous training.

Completion requirements are currently under revision, pending approval. The program is intended for students seeking the Ph.D. degree in Egyptology or Ancient Western Asian Studies; the A.M. degree will be offered as an option after two years of study. The curriculum normally includes three or four years of courses in language and texts, history, religion, art, and archaeology. Reading knowledge of French and German must be demonstrated by examinations in the first and second years. Egyptology students will be expected to have a command of Middle Egyptian and one other phase (Old or Late Egyptian, Demotic, or Coptic) by the end of the second year, as well as acquaintance with one other ancient language (Akkadian, Hebrew, or other Near Eastern, or Greek) or Arabic, depending on what will best serve their Egyptological interest; similar language proficiency will be required in Ancient Western Asian Studies. Written examinations are given at the end of the second year, and written and oral examinations at the end of the third or fourth year. Upon successful completion of the two-year examinations, the A.M. degree may be granted after submission of a Master’s thesis. The Ph.D. degree requires completion of a dissertation after final examinations.

For additional information please visit the department’s website at:
http://www.brown.edu/Departments/Egyptology/.

Courses of Instruction

Ancient Western Asian Studies

Primarily for Undergraduates

0200. Introduction to Akkadian
Akkadian is the earliest-attested member of the Semitic family of languages and is the language of the Akkadians, Babylonians, and Assyrians, the peoples of Mesopotamia. The numerous texts of this ancient language are written in cuneiform (“wedge-shaped”) script. This course introduces students to Old Babylonian grammar and script. Students will read Old Babylonian contracts and laws from Hammurapi’s "code"; some texts will be read from the original cuneiform.

0210. Intermediate Akkadian
This course continues the introduction to Old Babylonian grammar, script, and texts begun in Introduction to Akkadian. In addition to lessons on grammar, students will read laws from Hammurapi’s "code", letters, contracts, omen texts, royal inscriptions, hymns to the
goddess Ishtar, prayers to the moon-god, and Tablet II of the Epic of Gilgamesh. Prerequisite: AWAS 0200.

0300. Babylon: Myth and Reality
From the Hanging Gardens of Babylon to the Tower of Babel to Babylon 5, the city of Babylon in ancient Iraq holds an important place in contemporary culture. But how much of what is commonly known of Babylon is true? In this course we will explore the ancient city of Babylon through its texts and archaeological remains and investigate the ways Babylon has been viewed over the past two thousand years. Enrollment limited to 20 first year students.

0800. Introduction to the Ancient Near East
This course offers an introduction to the study of the political, social and cultural history of the ancient Near East, from prehistory to the end of the Iron age (ca. 330 BC). Both literary sources and archaeological evidence are examined as relevant. Near East is understood here in its widest geographic extent, including primarily the Mesopotamian lowlands, Iranian and Syro-Anatolian highlands, as well as the Levantine coast. The course not only offers a foundational survey of the historical developments in the region, but also addresses the broader methodological and historiographic problems involved in Near Eastern studies. State formation and the development of complex societies, cult practices and cuneiform literary traditions, art, architecture and material culture, issues of landscape and settlement systems, agricultural production, regional and interregional trade, and craft production will constitute the central issues in the course.

For Undergraduates and Graduates

1100. Imagining the Gods: Myths and Myth-making in Ancient Mesopotamia
Creation, the Flood, the Tower of Babel—well-known myths such as these have their origins in ancient Mesopotamia, the land between the Tigris and Euphrates Rivers. Using both ancient texts in translation and archaeology, this course will explore categories of Mesopotamian culture labeled "myth" and "religion" (roughly 3300-300 BCE), critically examining the ancient evidence as well as various modern interpretations. Topics will include myths of creation and the flood, prophecy and divination, death and the afterlife, ritual, kingship, combat myths and apocalypses, the nature and expression of ancient religious experience, and representations of the divine. There are no prerequisites.

1500. Ancient Babylonian Magic and Medicine
A survey of ancient magic and medicine focusing on Mesopotamia (present-day Iraq, ca. 2500-300 BCE), with an emphasis on beliefs about the body, health, illness, and the causes of disease, such as witchcraft or angry gods. Topics will include the training of healers, exorcists, and herbalists; concepts of contagion and plague, modalities of treatment, incantations, prayers, and empirical remedies like prescriptions; ancient perceptions of problems like sexual dysfunction, the perils of pregnancy, tooth decay, epilepsy, and mental illness. Readings will be drawn from ancient texts (in translation), archaeology, and parallels with ancient Egypt, Greece, Rome, and the Bible. No prerequisites. Not open to first year students.

1600. Astronomy Before the Telescope
This course provides an introduction to the history of astronomy from ancient times down to the invention of the telescope, focusing on the development of astronomy in Babylon, Greece, China, the medieval Islamic world, and Europe. The course will cover topics such as the invention of the zodiac, cosmological models, early astronomical instruments, and the development of astronomical theories. We will also explore the reasons people practiced astronomy in the past. No prior knowledge of astronomy is necessary for this course.
1650. *Time in the Ancient World*
Time plays many roles in civic and everyday life: calendars provide a way of regulating activities ranging from gathering taxes to knowing when to perform religious rituals. This course will provide an introduction to the way time was measured, used, regulated and conceived in the ancient world. We will cover topics such as the calendars used in Mesopotamia, Egypt, Greece and China, sundials and other instruments used for measuring time in the ancient world, and the way time is used in scientific and non-scientific texts.

1700. *Astronomy, Divination and Politics in the Ancient World*
This course will explore the relationship between astronomy, divination and politics in the ancient world. The sky provided ancient cultures with many possibilities for observing occurrences that could be interpreted as omens. In many cultures, celestial omens were directed towards the king and his government. As a result, interpreting and controlling celestial omens became an important political activity. In this course, we will explore how and why astronomical events were used politically in ancient Mesopotamia, the Greco-Roman world, and ancient and medieval China. No prior knowledge of astronomy is necessary for this course.

1750. *Divination in Ancient Mesopotamia*
The interpretation of natural events as portents of good or bad outcomes played an important role in religious, political, scholarly and everyday life in ancient Mesopotamia. In this course we will study Mesopotamian omen literature from textual, scientific, philosophical and cultural viewpoints in order to understand how divination operated and what it was used for.

**Primarily for Graduates**

2120. *Historiography of Exact Sciences*
Introduces graduate students to the sources, problems, and methodologies of the history of astronomy and mathematics from Babylon to Kepler.

2310. *Ancient Scientific Texts*
Readings and analysis of a major scientific text in Akkadian, Arabic, Greek, Latin, or Sanskrit. May be repeated with a different text.

2310A. *Ancient Scientific Texts: Akkadian*
Readings and analysis of a major scientific text in Akkadian.

2310B. *Assyriology I*
The kings of Agade and Assyria took every opportunity to boast about their military victories, successful hunts, the completion of new cities, and the building and decoration of temples and palaces. This course (Agade, Assur, Calah, and Nineveh) examines the history of the kings of Agade and Assyria (2334-612 BC); emphasis is placed on reading Akkadian texts in translation, including royal inscriptions, scholarly letters, and astrological reports.

2310C. *Assyriology II*
This seminar will focus on selected topics of Neo-Assyrian history (1000-612 BC), including: the royal family; the queen and her influence; celebrating New Year's festivals; hunting lions; conquering a city; constructing and decorating palaces and temples; urban renewal and the founding of new cities; the substitute king ritual; and scholarly life. Assyria in the first millennium BC will be examined principally from Assyrian texts in translation.

2310D. *Ancient Scientific Texts: Cuneiform Literature*
2700. Special Topics in Ancient Sciences
This course will be a topics course containing a detailed technical and cultural study of an area of science in a culture of the ancient world. Although intended for graduate students, undergraduate students who have taken AWAS 1600 or a similar course may be admitted at the instructor's discretion.

2980. Reading and Research
2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis.

Egyptology
For Undergraduates and Graduates
1200, 1210. Archaeology of Ancient Egypt
A general survey of the archaeology of ancient Egypt in prehistoric and Pharaonic times. Covers such areas as the development of private and royal funerary monuments, private and royal dwellings, and temples. Attention is also paid to the principles of Egyptian art and architecture and, where appropriate, to archaeological connections with the surrounding cultures. Offered in alternate years.

1310. Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian I)
Much of this two-semester sequence is spent learning the signs, vocabulary, and grammar of one of the oldest languages known. By the end of this introductory year, students read authentic texts of biographical, historical, and literary significance. The cornerstone course in the Department of Egyptology—essential for any serious work in this field and particularly recommended for students in archaeology, history, classics, and religious studies. No prerequisites.

1320. Introduction to Classical Hieroglyphic Egyptian Writing and Language (Middle Egyptian II)
Continuation of a two-semester sequence spent learning the signs, vocabulary, and grammar of one of the oldest languages known. By the end of this introductory year, students read authentic texts of biographical, historical, and literary significance. The cornerstone course in the Department of Egyptology - essential for any serious work in this field and particularly recommended for students in archaeology, history, classics, and religious studies. Prerequisite: EGYT 1310.

1330. Selections from Middle Egyptian Hieroglyphic Texts
Readings from the various genres of classical Egyptian literature, including stories and other literary texts, historical inscriptions, and religious compositions. Students will be expected to translate and discuss assigned texts. Prerequisite: EGYT 1310, 1320. May be repeated once for credit.

1340. Selections from Middle Egyptian Hieratic Texts
Introduction to the hieratic script and readings from a variety of hieratic documents, including literary compositions, letters, and religious texts. Students will be expected to translate and discuss assigned texts. Prerequisite: EGYT 1310, 1320. May be repeated once for credit.

1410. Ancient Egyptian Literature
A survey of one of the most intriguing aspects of ancient Egyptian culture. Readings (in translation) of many of the most significant literary documents that survive from Egypt. Presentation of a reasonable amount of historical perspective. Class discussions concerning
the nature, purpose, quality, and effectiveness of the works read. Two term papers. No prerequisites. Offered in alternate years.

1420. Ancient Egyptian Religion and Magic
An overview of ancient Egyptian religion from both a synchronic and diachronic perspective. Examines such topics as the Egyptian pantheon, cosmology, cosmogony, religious anthropology, personal religion, magic, and funerary beliefs. Introduces the different genres of Egyptian religious texts in translation. Also treats the archaeological evidence which contributes to our understanding of Egyptian religion, including temple and tomb architecture and decoration. Midterm and final exams; one research paper.

1430. History of Egypt I
A survey of the history and society of ancient Egypt from prehistoric times to the end of the Eighteenth Dynasty (ca. 5000-1300 BC). Readings include translations from the original documents that serve as primary sources for the reconstruction of ancient Egyptian history.

1440. History of Egypt II
A survey of the history and society of ancient Egypt from the Ramesside Period to the Roman conquest (ca. 1300-30 BC). Readings include translations from the original documents that serve as primary sources for the reconstruction of ancient Egyptian history.

1450. History of Egypt III, Libyans, Nubians, and Persians in Egypt
Continuation of EGYT 1430, 1440 (not prerequisites). Covers the Third Intermediate and Late Periods (ca. 1000–332 B.C.E.), from the end of the New Kingdom to Alexander’s conquest. Characterized by internal conflict and long intervals of foreign domination, this era is often described as a period of decline, but closer study shows it to be eventful and rich in documentation. Offered in alternate years.

1460. History of Egypt IV. The Age of Cleopatra
Continuation of EGYT 1430, 1440, and 1450 (not prerequisites). A survey of the history and society of ancient Egypt from Alexander’s conquest to the Arab Conquest, ca. 332 B.C.E.–A.D. 600. Covers the Ptolemaic (323–30), Roman (30 B.C.E.–ca. A.D. 300), and Byzantine (ca. A.D. 300–640) periods. Focal point and pivot is the Ptolemaic period, from Alexander the Great to Cleopatra (332–30 B.C.E.). Offered in alternate years.

1490. Calendars and Chronology in Ancient Egypt and the Ancient World
Pending Approval. Time is the dimension of history. Chronology studies how we know when events happened. Chronology is much more important to "BC history" than to "AD history." History books state that the great Ramses II ruled around the thirteenth century B.C.E. But how do we know this? The focus of this class is on the answers to such questions through the study of the foundations of the history of Egypt specifically and of the ancient world in general. Some prior knowledge of Egyptian language or civilization might be handy but is by no means required.

1500. Ancient Egyptian Art and Architecture
Ancient Egyptian art and architecture had a remarkably long history, and much that was produced is amazingly well preserved. A number of experts present various topics including monumental buildings and lavishly decorated tombs, as well as the sculpture, painting, and minor arts of all periods from Predynastic to Nubian. Prerequisite: previous course work in Egyptology (e.g. EGYT 1430 or 1440) or written permission of the instructor.

1510. Ancient Egyptian Art II
Considers the art of ancient Egypt’s New Kingdom or Empire Period (1500–1100 B.C.E.). The relief carving and painting of Theban temples and tombs are studied in detail, and the developments leading to the revolutionary Amarna style of art is carefully analyzed. Decorative arts, Tutankhamun’s treasures, and recent exciting discoveries are all surveyed.
1910, 1920. Senior Seminar

Primarily for Graduates

2210. Introduction to Coptic

Coptic, the last stage of the ancient Egyptian language, was written with essentially Greek alphabetic characters. An introduction to Sahidic, which is perhaps the best represented of the Coptic dialects. Sahidic grammar is explained, and some texts, mainly of a biblical and patristic nature, are read. Open to undergraduates with the consent of the instructor. No prerequisites, but a knowledge of Middle Egyptian or Greek would be helpful.

2310. History of the Ancient Egyptian Language

Diachronic survey of ancient Egyptian from Old Egyptian through Coptic, covering changes in phonology and grammar and analyzing the processes through which these changes took place. Course requirements are short research papers to be presented in class and a final examination. Previous course work in at least one stage of the Egyptian language required; knowledge of Late Egyptian, Demotic (grammar) or Coptic preferable. Prerequisites: EGYT 1310 and EGYT 1320, plus either EGYT 2210, EGYT 2410 or EGYT 2610.

2410. Late Egyptian

Introduction to the grammar of the third historical phase of ancient Egyptian and readings from its various genres, including literary texts, letters, historical inscriptions, and tomb-robbing papyri. Students will be expected to translate and discuss assigned texts. Prerequisites: EGYT 1310, 1320.

2510. Social Life in Ancient Egypt

This course will provide a valuable opportunity to link theory and data innovatively. Taking the lifecycle as its structure, it covers Egyptian life from conception to death and the afterlife, drawing together a range of data sources, such as material culture, iconography, textual data, and human remains.

2610. Introduction to Demotic

Starts with discussions and exercises in the grammar and peculiar script of this late stage of the Egyptian language, followed by readings of actual ancient texts, including The Instructions of Onkhsheshonkh, The Petition of Petiese, and The Story of Setne Khaemwas. Knowledge of Demotic remains essential for a proper understanding of Egypt during the Saite, Persian, Ptolemaic, and Roman periods. Open to undergraduates with consent of instructor. Prerequisites: EGYT 2410 or 2210.

2700. Special Topics in Ancient Science

This course will be a topics course containing a detailed technical and cultural study of an area of science in a culture of the ancient world. Although intended for graduate students, undergraduate students who have taken EGYT 1600 or a similar course may be admitted at the instructor's discretion.

2810. Old Egyptian

Introduction to the grammar of the first historical phase of ancient Egyptian and readings from its two primary genres, the Pyramid Texts and autobiographical inscriptions. Students will be expected to translate and discuss assigned texts. Prerequisites: EGYT 1310, 1320.

2930. Special Topics in Egyptology

2970. Preliminary Examination Preparation

For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. Reading and Research
2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Engineering

Professors Beresford, Bower, Breuer, Briant, Calo, Chason, Clifton, Cooper, Curtin, Donoghue, Freund, Gao, Hurt, Kim, Kimia, Kingon, Kumar, Liu, Maris, Mathiowitz, Maxey, Nurmiokko, Paine, Palmore, Preparata, Richardson, Sheldon, Silverman, Suuberg, Xiao, Xu, Zaslavsky; Professors (Research) Crisco, Jay, Lawandy, Mundy; Clinical Professor Mittlemann; Professors Emeriti Avery, Caswell, Dobbins, Glicksman, Hazeltine, Karlsson, Morse, Mylonas, Needleman, Pearson, Richman, Sibulkin, Tauc, Weiner, Wolovich; Adjunct Professor Durfee; Adjunct Professor (Research) Smith; Associate Professors Bahar, Blume, Daniels, Guduru, Hochberg, Hoffman-Kim, Morgan, Powers, Shenoy, Sun, Swartz, Taubin, Tripathi, Tang, Webster; Adjunct Associate Professor Fleeter; Adjunct Associate Professor (Research) Rankin; Assistant Professors Deoni, Dworak, Frank, Pacifici, Reda, Sibulkin; Adjunct Professors (Research) Haberstroh, Lee, Pennell; Adjunct Assistant Professors Lo, Song; Senior Research Engineers Bull, Jibitsky, McCormick, Patterson; Adjunct Lecturers Amin, Besmann, Bradford, Carachedi, Cohen, DeFrancesco, Durfee, Fontaine, Hradil, Odeh, Petteruti R., Petteruti S; Lecturer Kulaots; Lecturer Emeritus Hermann.

Because engineering is a continuously evolving profession, the Brown University Engineering Undergraduate Curriculum emphasizes an in-depth understanding of the fundamentals of physical and chemical science, mathematics, and engineering science which underlie technical work in all fields of engineering. The Curriculum consists of a common four semester program called the core, required of all Sc.B. candidates in Engineering, and upper level programs in the areas of engineering specialization. The first year of the core program includes instruction in physical sciences, chemistry, mathematics, and engineering. The remainder of the core program includes courses in materials science, thermodynamics, electricity and magnetism, electrical circuits and signals, and applied mathematics. The emphasis on fundamentals provides preparation for dealing with the rapid pace of technological change and with the interdisciplinary demands of modern engineering design and analysis. In addition, a broad exposure to the engineering sciences prior to selection of an area of specialization enables a student to make a well-informed choice of the branch of engineering in which he or she wishes to specialize. ABET-accredited Sc.B. degree programs are offered in biomedical, chemical, civil, computer, electrical, materials, and mechanical engineering. Other concentration programs leading to the Sc.B. or A.B. in Engineering may be designed by individual students in consultation with a faculty advisor in order to meet particular education objectives.

The School of Engineering offers courses of graduate study leading to the degrees of Sc.M. and Ph.D. These programs are available in the general fields of biomedical engineering; electrical sciences and computer engineering; fluid, thermal, and chemical processes; materials science; and the mechanics of solids and structures. Interdepartmental programs are easily arranged with the Division of Applied Mathematics, Departments of Chemistry, Computer Science, Geological Sciences, and Physics. A Master of Science in Innovation Management and Entrepreneurship is offered by the School of Engineering.

Well-equipped laboratories are available for both research and instruction in each of the above fields. The Prince Engineering Laboratory houses systems-scale and biochemical
experimental facilities, including subsonic wind tunnels; a fluid-thermodynamics laboratory; a chemical engineering laboratory that includes facilities for study of combustion, reaction kinetics, carbon materials, microfluids, nanotechnologies, and environmental technologies; and part of the laboratories of applied mechanics, including facilities for studies of stress wave propagation and impact phenomena, general stress analysis, creep of metals and plastics, fatigue and fracture of solids, and soil mechanics. Facilities for work in materials science include laboratories for materials preparation, x-ray diffraction, transmission and scanning electron microscopy, optical and infrared spectroscopy, and electron microprobe analysis. There is also a microelectronics facility, and laboratories for molecular beam epitaxy and quantum electronics, nuclear magnetic resonance, and low-temperature transport measurements. The computer engineering laboratory is dedicated to undergraduate and graduate research on advanced computer system design, computer vision, automatic speech recognition, microphone-array systems, digital control systems, computer graphics, and digital signal processing. In addition to these laboratories, biomedical engineering laboratories are fully equipped for laboratory instruction in cell and molecular biology, tissue culture, histology, analytical biochemistry, genetics, and physiology. The School of Engineering maintains several clusters of high performance computers. The two largest are dedicated to research in computational mechanics and to research in computer engineering/digital systems. An integrated computer workstation facility is available to the undergraduates for instruction and project use in the Charles H. Giancarlo Engineering Laboratories. This facility also houses many of the undergraduate teaching labs. Library facilities are provided by the Sciences Library which contains an outstanding collection of books and periodicals in mathematics, physics, engineering, geology, biology and chemistry.

The Barus and Holley Building houses both the School of Engineering and the Department of Physics. The building contains additional engineering laboratories as well as offices for faculty and graduate students.

**Undergraduate Programs**

Brown Engineering offers the following ABET-accredited Bachelor of Science concentrations:

- Chemical and Biochemical Engineering
- Civil Engineering
- Electrical Engineering
- Materials Engineering
- Mechanical Engineering
- Biomedical Engineering
- Computer Engineering

Other concentrations offered are:

- Bachelor of Science in Engineering Physics
  Offered jointly with the Department of Physics, students take a significant portion of the usual Engineering and Physics program, obtain substantial laboratory experience, and take several upper-level elective courses, focusing on applied material.

- Bachelor of Arts Degrees
  Bachelor of Arts in Engineering with a focus on Environmental Studies
  Bachelor of Arts in Commerce, Organizations and Entrepreneurship (COE)

These degree programs are offered in cooperation with the Environmental Studies Program, and the Departments of Economics and Sociology.
For a complete description of the standard concentration programs leading to the bachelor’s degree, please visit: [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

**Honors:** At the time of graduation, the University grants a degree with honors to any student whose work in his or her field of concentration has been superior and who has prepared an honors thesis of distinction based on independent work. The designation “Honors” is included on the transcript and diploma. Students who have a strong academic record and who wish to be candidates for honors in engineering should consult with the honors supervisor in the Division of Engineering during their junior year. Admission into the engineering honors program will be decided on the basis of a student’s academic record in his or her chosen engineering concentration and a one-page project proposal. The proposal will be developed in conjunction with an engineering faculty member who is willing to supervise the experimental or analytical project. A written thesis and an oral examination based on the work are required near the end of the senior year. Course credit for work done as an honors project can be received by concurrently registering for ENGN 1970 and/or 1971.

**Graduate Programs**

**Master of Science in Engineering**

*Thesis Option:* Candidates must complete a coherent plan of study consisting of eight advanced or graduate level courses and an acceptable thesis. The thesis must be sponsored or cosponsored by a member of the faculty of the Division of Engineering. Two of the required courses are ENGN 2010, 2020 (Mathematical Methods in Engineering and Physics I, II) or their equivalent and no more than two 100-level courses may be used to fulfill the Sc.M. course requirements. In addition, students are required to complete at least two 200-level courses in the Division of Engineering other than ENGN 2970, 2980 (Special Projects: Reading, Research and Design).

*Non-Thesis Option:* Candidates must complete a coherent plan of study consisting of eight advanced or graduate courses, two of which must be ENGN 2010, 2020 or their equivalents, and at least three must be 200-level engineering courses excluding ENGN 2970, 2980. A maximum of one course credit toward the Sc.M. degree will be allowed for either ENGN 2970 or 2980, but not both, in the non-thesis option. Up to three 100-level engineering or other approved science courses may be offered for this option. There is no residency requirement but all work toward the master’s degree must be completed within five years. The proposed program of study must be approved by the graduate representative of the Division of Engineering.

**Master of Science in Innovation Management and Entrepreneurship Engineering**

The Program in Innovation Management and Entrepreneurship (PRIME) Engineering merges engineering science and design with innovation science and entrepreneurship. Students experience the process of value creation of high technology, through bringing embryonic ideas to the marketplace. Students must complete a focused core of courses, which include EN 211 and ENGN 2120, Business Engineering Fundamentals I and II, ENGN 2130 and ENGN 2140, Innovation and Technology Management I and II, ENGN 2911F Topics in Emerging and Breakthrough Technologies (or an advisor approved 2000-level engineering science course). The student must also complete a practicum component where they complete ENGN 2980 Special Projects, Reading, Research and Design course
with an advisor of their choosing, and leverage this experience in ENGN 2910Y Innovation and Entrepreneurship to create value out of the underlying engineering and science developed in ENGN 2980. Any modifications of this program must be approved in advance by the PRIME advisor. The curriculum can be completed in two semesters.

Doctor of Philosophy

Candidates for the Ph.D. must complete an individualized, but coherent program of study leading to the submission of a dissertation embodying original research. Incoming Ph.D. students are strongly encouraged to arrange meetings with individual faculty members during their first semester in residence and to select a research advisor shortly thereafter. At that point, the student, with the approval of his or her advisor, shall devise an appropriate program of study ensuring breadth of knowledge as well as depth of knowledge in a major area that supports the planned dissertation research. The normal residence requirement for the Ph.D. degree is the equivalent of three years of full-time study beyond the bachelor’s degree (i.e. 24 tuition units). At least two semesters beyond the master’s degree must be spent exclusively in full-time study at Brown, although most engineering Ph.D. students spend four to five years in residence at Brown.

Annual Review: The progress of Ph.D. students is reviewed early in the program of study and on a regular annual basis thereafter. Each year during Semester II, the graduate committee of the School of Engineering meets and reviews the academic progress of each of the School’s graduate students. Prior to this annual review, the group graduate representatives will solicit input from individual advisors on the status of each continuing student. The result of the graduate committee’s review will be communicated to each student in writing. The individual research groups may supplement the annual review with their own internal procedures (progress seminars, reports, etc.) and students should consult the graduate representative in their group for details. For students with poor performance in coursework or research, the advisor or group graduate representative can at any time request a decision from the graduate committee on whether the student will be allowed to continue. The graduate committee will make a recommendation based on the students transcripts and advisor’s report on research progress, if any.

Preliminary Examination: To establish Ph.D. candidacy, students must pass a preliminary examination. The preliminary examination follows the completion of a major portion of the course work and must be completed before the end of the sixth semester in residence. Students who have not taken the preliminary examination shall not be allowed to register for semester seven without special approval of the graduate committee. Students should consult the graduate representative in their respective research group for information about the format of the exam, which may be written, oral, or combined depending on the group. Students are responsible for scheduling this examination, while the Office of Student Affairs is responsible for providing a written reminder to all participants and a general invitation to the faculty. The exam results, together with the student’s transcript, and advisor’s report on research progress, if any, will be used by the individual faculty groups to make a recommendation on the Ph.D. candidacy of each student. The group graduate representative will present the recommendations to the division’s graduate committee for approval.

Breadth Requirement: Ph.D. degree recipients are required to demonstrate both depth and breadth of knowledge. To help ensure sufficient breadth, the student must show proficiency in one or two minor subjects taught outside the division, or within the division but outside
the research group in question. Each research group defines its own mechanism to ensure this breadth requirement is fulfilled, either by oral examination (as part of the preliminary exam) or by the achievement of passing grades in course work, taken at anytime during the Ph.D. program. The choice of minor area(s) is to be made by the student in consultation with the thesis advisor and the group graduate representative.

Dissertation and Final Examination: Candidates for the Ph.D. degree are also ultimately required to complete a dissertation that embodies original research and significant creative thought and gives evidence of high scholarship. They then must pass a final examination, which entails an oral defense of their research work. The dissertation and the oral defense must be approved by the faculty advisor, one other member of the engineering faculty, and one additional reader outside the division, or within the division but outside the research group, as appointed by the director of the engineering graduate programs in consultation with their faculty advisor.

The maximum number of courses that may be transferred for the Ph.D. degree is eight and the maximum residence equivalence that can be granted is one year. Students entering from abroad with advanced degrees should establish Sc.M. equivalency by the end of their first year in residence. Forms for this purpose are available from the registrar’s office.

Special Graduate Programs: Students may petition the Graduate Committee of the division if they wish to follow special advanced programs of study. In such a case, the petition must have the sponsorship of three faculty members, at least one of whom shall be from the Division of Engineering. When a significant amount of work is taken in another division or department, one faculty member from each division or department must act as a sponsor.

For additional information please visit the department’s website at:
http://www.engin.brown.edu/index.htm

Courses of Instruction

Primarily for Undergraduates

0020. Transforming Society- Technology and Choices for the Future
This course will address the impact that technology has on society, the central role of technology on many political issues, and the need for all educated individuals to understand basic technology and reach an informed opinion on a particular topic of national or international interest. The course will begin with a brief history of technology.

0030. Introduction to Engineering
An introduction to various engineering disciplines, thought processes, and issues. Topics include computing in engineering, engineering design, optimization, and estimation. Case studies in engineering are used to illustrate engineering fields and scientific principles, including in-depth studies of statics and optics. Laboratories and design projects are included. Prerequisite: MATH 0100, which may be taken concurrently. S/NC.

0040. Dynamics and Vibrations
Study of the kinematics and dynamics of particles and rigid bodies. Principles of motion of mechanical systems. Concepts of inertia, work, kinetic energy, linear momentum, angular momentum, and impact. Applications to engineering systems, satellite orbits, harmonic vibrations of one and two degree of freedom systems. Lectures, recitations, and laboratory. Prerequisite: ENGN 0030. Corequisite: MATH 0200 or 0180.
0090. *Management of Industrial and Nonprofit Organizations*
Exposes students to the concepts and techniques of management. Topics include marketing, strategy, finance, operations, organizational structure, and human relations. Guest lecturers describe aspects of actual organizations. Lectures and discussions.

0120. *First Year Seminar*

0120A. *Crossing the Space Chasm Through Engineering Design*
To experience the challenges of engineering design and of changing an industrial paradigm, we will work in one or several groups to identify a use of space, and a plan for its implementation, that could help transition space from its status as a niche technology. Through the process of design, we will confront the technical, economic, societal and political barriers to obtaining increased benefits from technologies in general, and space in particular, and to making new technologies beneficial to a wider range of users. Interested students should submit an essay describing their interest in the course to the instructor at rick_fleeter@brown.edu. Enrollment limited. Written permission required.

0260. *Mechanical Technology*
A basic machine shop course that, with the help of an instructor, teaches students how to fabricate a few simple objects using hand tools and some basic machines. This course is designed to introduce the student to the machining process and environment. No course credit.

0310. *Mechanics of Solids and Structures*
Mechanical behavior of materials and analysis of stress and deformation in engineering structures and continuous media. Topics include concepts of stress and strain; the elastic, plastic, and time-dependent response of materials; principles of structural analysis and application to simple bar structures, beam theory, instability and buckling, torsion of shafts; general three-dimensional states of stress; Mohr's circle; stress concentrations. Lectures, recitations, and laboratory. Prerequisite: ENGN 0030.

0410. *Materials Science*
Relationship between the structure of matter and its engineering properties. Topics: primary and secondary bonding; crystal structure; atomic transport in solids; defects in crystals; mechanical behavior of materials; phase diagrams and their utilization; heat treatment of metals and alloys; electrical, optical, and magnetic properties of materials; strengthening mechanisms in solids and relationships between microstructure and properties; corrosion and oxidation. Lectures, recitations, and laboratory. Prerequisites: CHEM 0330 or 0100.

0510. *Electricity and Magnetism*
Fundamental laws of electricity and magnetism and their role in engineering applications. Concepts of charge, current, potential, electric field, magnetic field. Resistance, capacitance, and inductance. Electric and magnetic properties of materials. Electromagnetic wave propagation. Lectures, recitation, and laboratory. Prerequisites: ENGN 0030, or PHYS 0070 and 0160, and MATH 0180 or 0200, and corequisite of APMA 0330 or 0350.

0520. *Electrical Circuits and Signals*
An introduction to electrical circuits and signals. Emphasizes the analysis and design of systems described by ordinary linear differential equations. The frequency domain is introduced, including the effects of sampling and windowing in computer simulations. Other topics include transient analysis, Fourier series, and Laplace transform. Laboratories apply concepts to real problems in audio and controls. Lectures, recitation, and laboratory. Prerequisite: APMA 0330.
0720. Thermodynamics
An introduction to macroscopic thermodynamics and some of its engineering applications. Presents basic concepts related to equilibrium, and the zeroth, first and second laws for both closed and open systems. Examples include analysis of engines, turbines, and other current and future energy technologies, phase equilibrium and separation processes, and chemical reactions. Lectures, recitations, and laboratory. Prerequisites: ENGN 0030. Recommended: ENGN 0410 or CHEM 0330.

0810. Fluid Mechanics

0900. Managerial Decision Making
Ways of making effective decisions in managerial situations, especially situations with a significant technological component; decision analysis; time value of money; competitive situations; forecasting; planning and scheduling; manufacturing strategy; corporate culture. Lectures and discussions. Prerequisite: ENGN 0090 or MATH 0100.

0930. Technology and Society Course Series
Primarily for students in the liberal arts; no scientific or mathematical background is required.

For Undergraduates and Graduates

1000. Projects in Engineering Design
Projects in design for concentrators in chemical, electrical, materials, and mechanical engineering. Students generally work in teams on projects that are defined through discussions with the instructor. An assembled product or detailed design description is the goal of the semester’s effort. Prerequisite: completion of engineering core program.

1010. The Entrepreneurial Process: Innovation in Practice
Entrepreneurship is innovation in practice: transforming ideas into opportunities, and, through a deliberate process, opportunities into commercial realities. These entrepreneurial activities can take place in two contexts: the creation of new organizations; and within existing organizations. This course will present an entrepreneurial framework for these entrepreneurial processes, supported by case studies that illustrate essential elements. Successful entrepreneurs and expert practitioners will be introduced who will highlight practical approaches to entrepreneurial success.

1110. Transport and Biotransport Processes
Aim: To develop a fundamental understanding of mass transport in chemical and biological systems. The course includes: mechanism of transport, biochemical interactions and separations; mass transport in reacting systems; absorption; membrane and transvascular transport; electrophoretic separations; pharmacokinetics and drug transport; equilibrium stage processes; distillation and extraction. Other features: design concepts; modern experimental and computing techniques; laboratory exercises.

1120. Chemical and Biochemical Reactor Design
Stoichiometry, thermodynamics, mechanisms, and rate expressions of homogeneous and heterogeneous chemical and biochemical systems. Basic concepts in homogeneous chemical and bioreactor design and ideal reactor models. Chemostats and enzymatic reactors.
Optimization. Temperature and energy effects in reactors. Introduction to heterogeneous chemical and bioreactor design. Co- or prerequisites: ENGN 0810, 1130. Offered in alternate years.

1130. Phase and Chemical Equilibria
Application of the first and second laws of thermodynamics and conservation of mass to the analysis of chemical, biochemical, and environmental processes, phase and chemical equilibria and partitioning of species in multiphase, nonreactive and reactive systems. Thermodynamic properties of fluid mixtures—correlation and estimation. Applications and examples drawn from chemical and biochemical processing and environmental science and technology. Prerequisite: ENGN 0720.

1140. Chemical Process Design
Chemical process synthesis, flow charting, and evaluation of design alternatives. Process equipment sizing as determined by rate phenomena, economics, and thermodynamic limitations. Introduction to optimization theory. Applications of these principles to case studies. Corequisites or prerequisites: ENGN 1110, 1130; or co-prerequisite ENGN 1120.

1210. Biomechanics

1220. Neuroengineering
Bioengineering principles of neural cell operation and synaptic transmission. Experimental methods and models in the study of single neural cells, cortical circuits, and brain activity. Selected topics illustrating neural principles of movement, vision, memory and sensing, and their augmentation in ongoing neural prosthetics research. Students are expected to have completed the basic engineering core, including ENGN 0510. Prior course material at the level of NEUR 0010 at Brown (or equivalent) is strongly recommended.

1230. Instrumentation Design

1300. Structural Analysis
A unified study of truss, beam, frame, plate, and shell structures. Emphasis on principles of virtual work and numerical methods of elastic structural analysis by matrix methods. Includes calculation of deflections and reactions in beam structures, beam vibrations, and column buckling. Theorems of plastic limit analysis. Plate bending. Membrane stresses and local bending effects in axially symmetric shells. Prerequisite: ENGN 0310.

1340. Water Supply and Wastewater Treatment
The hydrological cycle, surface water hydrology, ground water hydrology. Emphasis on the formulation of mathematical models of various flow problems and their solution by analytical or numerical means. Typical problems: open channel and river flows; flood routing; ground water flow in aquifers and into wells. Topics in wastewater treatment plant design: mixing, residence time, aeration, and bacteriological and chemical treatment processes. Prerequisite: ENGN 0810.

1360. Soil Mechanics and Principles of Foundation Engineering
Classification and identification of geological materials; mechanical and physical properties and methods of testing. Elements of the analysis of stress and strain in rock and soil
masses; theories of failure, theory of seepage. Problems of building foundations; consolidation and settlement; stability of earth slopes and embankments. Includes geotechnical laboratory. Prerequisite: ENGN 0310.

1370. Advanced Engineering Mechanics
A unified study of the dynamics of particles, rigid bodies, and deformable continua. Generalized coordinates and Lagrange’s equations; variational principles; stability of equilibrium; vibrations of discrete systems and of elastic continua, and wave propagation. Prerequisites: ENGN 0040, APMA 0340, or equivalent.

1380. Design of Civil Engineering Structures
This course provides an introduction to the design of steel and reinforced concrete structures using ultimate strength methods. Lectures will cover key concepts of design theory, building codes, and standards using examples from real structures. Students will apply concepts through computer labs, homework problems, and a design project. Lectures plus lab. Prerequisite: ENGN 1300.

1400. Analytical Methods in Biomaterials
Analytical methods and instrumentation currently used to characterize biomaterials. Specific methods/instrumentation covered include: molecular scale analysis (NMR, FTIR, UV-Vis spectroscopy); surface analysis (AFM, SEM, XPS, contact angle goniometry, ellipsometry, quartz crystal microbalance, electrochemistry, grazing angle IR); bulk analysis (DSC, mechanical testing) and biological analysis (bioassays, fluorescence and confocal microscopy). Prerequisites: CHEM 0330, CHEM 0350; ENGN 0040; and BIOL 0200.

1410. Physical Chemistry of Solids
Application of physical chemistry and solid state chemistry to the structure and properties of engineering solids as used in solid state devices, ceramics, and metallurgy. Equilibrium and free energy of heterogeneous systems, thermodynamics of solutions, chemical kinetics, diffusion, catalysis and corrosion, solid state transformations. Case studies taken from industrial practice. Prerequisites: ENGN 0410, 0720.

1420. Kinetics Processes in Materials Science and Engineering
This course introduces the basic principles and formulations that describe kinetic processes in materials science and engineering. These are divided into the following principle types of mechanisms: solid state diffusion, reactions at surfaces and interfaces, and phase transformations. The final section of the course applies these principles to several relevant materials processing systems. Prerequisites: ENGN 0410, 0720, 1410 or equivalent.

1440. Mechanical Properties of Materials
 Begins with basic concepts of mechanical properties common to all materials, with some emphasis on dislocation theory. Particular attention is given to the relationship between mechanical properties and microstructures. The different types of mechanical tests that are used in each of these fields are analyzed. Lectures plus laboratories. Prerequisite: ENGN 0410.

1450. Properties and Processing of Electronic Materials
Focuses on the science of electronic materials, the materials at the heart of modern microelectronics and optoelectronics. Addresses fundamental issues controlling their properties, processing, and reliability. Topics include band structure of semiconductors, basic devices structures (junctions and transistors), sputter deposition, molecularbeam epitaxy, chemical vapor deposition, ion implantation, oxidation, issues affecting reliability, and materials. Materials challenges that must be resolved for future generations of electronic devices.

1470. Structure and Properties of Nonmetallic Materials
A study of the structure and properties of nonmetallic materials such as glasses, polymers, elastomers, and ceramics. The crystal structure of ceramics and polymers, and the noncrysy-
talline networks and chains of glasses, polymers, and elastomers and the generation of microstructures and macrostructures are considered. The mechanical, chemical, electrical, magnetic, and optical properties and their dependence on structure are developed. Laboratory. Prerequisite: ENGN 0410.

1480. Metallic Materials
The microstructure of metals, microstructural evolution during processing, and the relationships between the microstructure and the physical properties of the material. Crystallography and x-ray diffraction. Crystalline defects, dislocations, grain boundaries, and their effects on mechanical and other properties. Solid state diffusion and solid state phase transformations. Oxidation and corrosion. Laboratory. Prerequisite: ENGN 0410, 1410.

1490. Biomaterials
Biomaterials science, the study of the application of materials to problems in biology and medicine, is characterized by medical needs, basic research, and advanced technological development. Topics covered in this course include materials used in bone and joint replacement, the cardiovascular system, artificial organs, skin and nerve regeneration, implantable electrodes and electronic devices, drug delivery, and ophthalmology.

1560. Applied Electromagnetics
Applied engineering concepts in contemporary electromagnetics, with emphasis on microwave and guided wave (fiber) optics. A review of electromagnetic wave propagation in free space, followed by treatment of guided wave concepts. Topics include electrical transmission lines, microstriplines, directional couplers, other microwave guided wave components, and wiring limits on a microelectronic chip. Prerequisite: ENGN 0510 or PHYS 0470 or equivalent good first course in Electricity and Magnetism.

1570. Linear System Analysis
Analysis of discrete and continuous electrical signals and systems in both time and frequency domains. Modulation, sampling, spectral analysis, analog and digital filtering. Fourier, Laplace and z-transforms, the state-space approach, stability of linear systems. Prerequisite: ENGN 0520.

1580. Communication Systems
Analysis and design of modern digital communication systems. Includes: sampling theorem; entropy measure of signal information content; pulse code modulation; amplitude and single sideband modulation; review of probability theory; stochastic processes and their use in communication systems; detection of signals buried in noise; communication channel capacity; coding principles; communication networks. Laboratory projects. Prerequisite: ENGN 1570; APMA 1650 or MATH 1610 helpful but not required.

1590. Introduction to Semiconductors and Semiconductor Electronics
An introduction to the physics of fundamental electronic processes that underlie the operation of semiconductor devices on a microscopic scale. Basic electronic properties of semiconductors and effects at interfaces heterogeneous media, such as p-n junctions and quantum wells. Other junctions such as Schottky barriers and MOS structures are treated. Prerequisites: ENGN 0410 and 0510.

1600. Design and Implementation of Very Large-Scale Integrated Systems
VLSI (Very Large Scale Integration) CMOS (Complementary Metal Oxide Semiconductor) technology is the main driver of our digital revolution. The goal of the course is to learn how to design and implement VLSI digital circuits and optimize them with respect to different objectives such as area, speed, and power dissipation. Design and analysis will be carried out using computer-aided tools. Prerequisite: ENGN 1630, or instructor permission.
1610. **Image Understanding**

Image processing is a technology experiencing explosive growth; it is central to medical image analysis and transmission, industrial inspection, image enhancement, indexing into pictorial and video databases, e.g., WWW, and to robotic vision, face recognition, and image compression. This senior-level undergraduate course covers theoretical underpinnings of this field and includes a series of practical MATLAB image processing projects. ENGN 1570 is recommended but not required. For seniors only.

1620. **Analysis and Design of Electronic Circuits**

Elementary device physics and circuit characteristics of semiconductor diodes, bipolar junction transistors (BJTs), and field effect transistors (FETs). Analysis and design of practical circuits using discrete semiconductor devices. Constraint on and techniques for linear integrated circuit (IC) design and the use of linear ICs as circuit building blocks. Laboratory. Prerequisites: ENGN 0510, 0520 or equivalent.

1630. **Digital Electronics Systems Design**

Fundamentals of digital logic design including: Boolean algebra, gates, truth tables, logic families, flip-flops, finite state machines, memory, and timing. More advanced topics include A-D conversion, binary arithmetic, CPU organization, programmable logic (CPLDs and FPGAs), and VHDL. Extensive laboratory requirement. Permission required for sophomores.

1640. **Design of Computing Systems**

Architectures of computers with particular reference to current microprocessors, traditional computers, and vector and parallel processors. Ideas discussed include floating point arithmetic units, advanced computer arithmetic, RISC architectures, advanced memory structures, pipelining, I/O concepts, bussing, synchronous and asynchronous concepts, instruction set design, parallel processors, vector machines, computer architecture classification, high speed data transmission, and error correcting codes. Laboratory. Prerequisite: ENGN 1630 or CSCI 0310, or written permission.

1650. **Embedded Microprocessor Design**

This is a combined lecture and design project course offering experience in the open-ended design of an electronic product or system employing an embedded microprocessor by small-group design teams. Activity includes product specification, circuit design, programming, printed circuit layout, construction, packaging, and economic assessment. Teams are expected to produce functional products. Lecture topics will be adjusted to reflect the chosen design problems. Emphasis is placed on the criteria for choosing processors and on the interfaces and programming requirements of the system. Primarily for senior concentrators. Experience with C programming is helpful but not required. Prerequisite ENGN 1630 or permission of the instructor.

1680. **Design and Fabrication of Semiconductor Devices**

Contemporary practice in the design and fabrication of semiconductor devices. The realization of basic electronic device functions on the semiconductor platform is a central theme in a coordinated lecture and laboratory course. Topics include microcircuit photolithography; layout and design scaling rules for integrated circuits; and techniques in semiconductor and thin film processing as they apply to ULSI circuit manufacturing. Prerequisite: ENGN 1590 or permission.

1690. **Photonics and Applications**

Engineering foundations of contemporary photonics and optoelectronics, including applications to broad spectrum of technologies from internet to optical data storage, to laser material processing and biomedical engineering. Course strategy is to teach basic photonic processes and show their engineering applications in optoelectronic devices and optoelectronic systems. Topical content includes: Light as wave interference and optical

1700. Applied Thermodynamics
Control volume formulations of thermodynamic principles applied to the study of compressible fluids as working fluids in engines and thermodynamic devices. Applications include compressors and turbines, gas turbines, jet, ramjet and rocket engines, steam plants, refrigeration, and internal combustion engines. Combustion and flames are also considered. Prerequisites: ENGN 0720 and 0810.

1710. Heat and Mass Transfer
Heat conduction and diffusion: steady and unsteady transport with heat and mass generation in two and three dimensions; numerical solutions. Radiant heat transfer: Kirchhoff’s Law and the perfect emitter, radiation intensity and surface emissive power, real surface radiation; view factors for black and gray surfaces. Convective heat and mass transfer: laminar and turbulent flow. Lectures, section, and lab. Prerequisite: ENGN 0810.

1720. Design of Engines and Turbines

1740. Computer Aided Visualization and Design
Provides instruction in the application of computers to the design methods in engineering. Hands-on experience in use of CAD/CAE software packages for geometric modeling, visualization, and drafting. Emphasis on applications to solids and structural problems. Independent design projects are carried out. Course counts as an ABET upper-level design course for mechanical and civil engineering concentrators. Prerequisite: ENGN 0310. Enrollment limited.

1750. Advanced Mechanics of Solids

1760. Machine Design
Design of mechanical devices utilizing techniques developed in ENGN 1750. Additional subjects include material failure criteria, vibration of multimass systems, and control systems. Prerequisite: ENGN 1370. Please contact Professor Rick Fleeter for special permission.

1860. Advanced Fluid Mechanics
Aims to give mechanical engineering students a deeper and more thorough grounding in principles and basic applications. Topics include review of the conservation principles; inviscid flow; viscous flow, including aerodynamics lubrication theory; laminar boundary layers; wave motions and wave drag. Lectures, assignments, computational projects, and laboratory. Prerequisites: ENGN 0720 and 0810.
1900. Construction of the Entrepreneurial Enterprise Framework: From Decision Making to Opportunity Creation
Students examine and engage with the decision making process in the modern enterprise, including investment, negotiation, and opportunity creation. This is done in an entrepreneurial context. Teams research and present orally and in writing on major class themes. Case studies, Socratic discussion models, readings, guest lectures, rhetoric and writing fellows support for videotaped oral and written business plans are utilized. Enrollment limited. Written permission required.

1930. Special Topics in Engineering

Written permission and topic description required.

An introduction to methods of mathematical analysis in physical science and engineering. Includes linear algebra and tensor analysis; analytic functions of a complex variable; integration in the complex plane; potential theory. The second semester course includes probability theory; eigenvalue problems; calculus of variations and extremum principles; wave propagation; other partial differential equations of evolution.

An introduction to methods of mathematical analysis in physical science and engineering. Includes probability theory; eigenvalue problems; calculus of variations and extremum principles; wave propagation; other partial differential equations of evolution.

2110. Business Engineering Fundamentals I
Examines core concepts in distinct areas through three modules: (1) intellectual property and business law, (2) technical marketing and (3) finance. All aspects of intellectual property will be treated, models on how to analyze markets will be discussed, culminating in a finance module which utilizes accounting fundamentals and models to perform financial analysis.

2120. Business Engineering Fundamentals II
Examines core concepts in distinct areas through three modules: (1) organizations, leadership, and human capital, (2) implementing radical technology change, and (3) engineering ethics. Organization, leadership and human capital focuses on the attributes of effective leadership and the tactical operation of start-up companies, implementing radical technological change centers on disruptive technologies and their adaptation in the marketplace, and ethics treats the issues that arise in small start-up organizations with an emphasis on the interface of ethics and environmental, health and safety issues.

2130. Innovation and Technology Management I
Examines core concepts in distinct areas through three modules: (1) engineering management, (2) financial engineering, and (3) managerial statistics. Engineering management covers the practices of administering engineering and science activities, including planning and analysis, financial engineering demonstrates the power of the finance-engineering interface where robust mathematical models can be adapted to the business environment, and managerial statistics focusing on the sophisticated treatment of statistics as applied to market intelligence, project management, and financial models.

2140. Innovation and Technology Management II
Examines concepts in distinct areas through three modules: (1) research and development management, (2) quality planning, forecasting, and project management, and (3) principles of operations research. R&D management addresses issues associated with the planning a
new entrepreneurial venture, planning and forecasting emphasizes models to planning, scheduling and controlling an high technology engineering projects, and operations research provides quantitative tools useful in inventory theory, forecasting and decision analysis.

2210. *Continuum Mechanics*

2220. *Mechanics of Solids*

2240. *Linear Elasticity*

2260. *Stress Waves in Solids*

2270. *Advanced Elasticity*

2280. *Topics in Continuum Mechanics*
Devoted to one or more advanced topics in continuum mechanics not covered in detail by the regular courses. Examples are: nonlinear viscoelastic constitutive equations, strain gradient and micropolar theories of elasticity, coupled mechanical and thermal or electromagnetic phenomena, and continuum thermodynamics.

2290. *Plasticity*
Theory of the inelastic behavior of materials with negligible time effects. Experimental background for metals and fundamental postulates for plastic stress-strain relations. Variational principles for incremental elastic-plastic problems, uniqueness. Upper and lower bound theorems of limit analysis and shakedown. Slip line theory. Representative problems in structural analysis, metal forming, indentation, strain and stress concentrations at notches, and ductile failure.

2320. *Experimental Mechanics*
The design and evaluation of experiments in solid mechanics. Considers methods for experimental stress analysis and for the mechanical testing of materials. Topics covered include photoelasticity, creep and relaxation tests, high-speed testing, stress wave propagation, fatigue, and fracture. Techniques, instrumentation, and recording systems for the static and dynamic measurement of mechanical parameters such as forces, displacements, velocities, accelerations, and strains.
2340. **Computational Methods in Structural Mechanics**

2370. **Topics in Solid and Structural Mechanics**
Devoted to one or more advanced topics in solid and structural mechanics not covered in detail by the regular courses, such as: numerical methods in solid mechanics, theory of optimal design, shell structures and instability, or other topics of interest to the staff or visitors.

2380. **Fracture Mechanics**

2400. **Electron Microscopy in Materials Science**
Theory of electron optics and principles of transmission electron microscopy, including dynamical theory of electron diffraction and image contrast. Applications to materials analysis including defect, boundary, and phase analysis. Analytical electron microscopy including convergent beam diffraction, energy dispersive x-ray analysis, and energy loss spectroscopy. Intensive laboratory exercises.

2410. **Thermodynamics of Materials**

2420. **Kinetic Processes and Mechanisms in Materials Science**
Continuum and atomistic descriptions of diffusion in solids. Reactions involving surfaces and interfaces, including evaporation, adsorption, grain growth, and coarsening. Phase transformation kinetics, including nucleation, growth, solidification, spinodal decomposition, and martensitic transformations. Analysis of systems with multiple kinetic mechanisms (typical examples include oxidation, crystal growth, and sintering). Prerequisite: background in basic thermodynamics. Recommended: ENGN 1410 or 2410 or equivalent.

2430. **Deformation Behavior of Materials**
Linear elasticity as applied to isotropic and anisotropic materials; yield criteria including Von Mises, Tresca, Mohr-Coulomb, and Hill. Dislocation theory. Mechanisms of hardening. Microstructural models of ductile, intergranular, and cleavage fracture. Toughening mechanisms. Creep. Fatigue. Prerequisites: ENGN 0410 and 1440 or equivalent.

2440. **Strength of Solids**
Mechanical behavior of solids as interpreted through atomistic mechanisms. Theory and characteristics of dislocations in continuous and crystalline media. Intrinsic and extrinsic stacking faults, extended dislocations, point defects, nodes and networks, disclinations, crystal boundaries. Applications of dislocation theory to single and polycrystal plasticity, work-hardening, stress-corrosion, creep, fatigue, hardening mechanisms, etc.
2490. **Special Topics in Materials Science**

Explosive growth in medical image analysis has enabled noninvasive methods to diagnose and treat diseases. The course will first discuss the fundamentals of formation of medical images such as CT, MRI, ultrasound, and nuclear imaging; then consider clinical constraints and discuss methods in image guided therapy/surgery, techniques to detect, delineate, measure, and visualize medical organs and structures.

2500. **Medical Image Analysis**

Recognition of the class association of a pattern based on feature measurements. Topics: statistical decision and estimation theories in Euclidean n-space as a framework; linguistic, geometric, and algebraic models for representing complicated pattern data and for pattern recognition; nearest neighbor classification; supervised and unsupervised learning; clustering; artificial neural networks. Applications to computer vision. MATLAB projects.

2520. **Pattern Recognition and Computer Vision**

Recognition of the class association of a pattern based on feature measurements. Topics: statistical decision and estimation theories in Euclidean n-space as a framework; linguistic, geometric, and algebraic models for representing complicated pattern data and for pattern recognition; nearest neighbor classification; supervised and unsupervised learning; clustering; artificial neural networks. Applications to computer vision. MATLAB projects.

2530. **Digital Signal Processing**

An introduction to the basics of linear, shift invariant systems and signals. Quantization and sampling issues are introduced. Discrete time and DFT properties, fast DFT algorithms, and spectral analysis are discussed. IIR and FIR digital filter design is a focus; stochastic and deterministic signals are introduced. MATLAB exercises are a significant part of the course.

2540. **Speech Processing**

The basics for speech production and hearing are introduced. PDEs and simplified vocal-tract models are derived. LPC, DFT filterbank and time varying signal processing for speech recognition analysis are discussed in mathematical detail. Dynamic programming, vector quantization, hidden Markov modeling, and neural-network pattern recognition for speech are introduced. Offered every other year.

2560. **Computer Vision**

An interdisciplinary exploration of the fundamentals of engineering computer vision systems (e.g., medical imaging, satellite photo interpretation, industrial inspection, robotics, etc.). Classical machine vision paradigms in relation to perceptual theories, physiology of the visual context, and mathematical frameworks. Selections from Gestalt psychology, Gibsonian approach primate visual pathways, edge-detection, segmentation, orientation-selectivity, relaxation-labeling, shading, texture, stereo, shape, object-recognition.

2570. **Applied Stochastic Processes**

The study of stochastic processes and a number of applications central to electrical engineering. Analysis of continuous and discrete time Gaussian and second order stochastic processes. Stochastic calculus. Innovations and spectral representations. Markov random fields. Applications to Kalman filtering, the detection of signals in the presence of noise, and two-dimensional image processing. MATLAB projects. Prerequisite: an undergraduate level course in probability or statistics.

2600. **Electronic Processes in Semiconductors**

Electronic processes primarily in semiconductors with tetrahedral bonding (Si, Ge, GaAs compounds). Topics include phonon spectra, band structure, impurity states, electron and hole distributions, optical properties, electron plasma, scattering processes, excess and hot carriers, semiconductor-metal transitions, one-and two-dimensional electron gas, and amorphous semiconductors. Prerequisite: PHYS 2410 or equivalent.

2610. **Physics of Solid State Devices**

Current and proposed semiconductor devices: bipolar transistors (silicon and heterojunction); field effect transistors (MOSFETs, heterostructure, and submicron FETs); hot-electron and quantum-effect devices; and photonic devices (LEDs, semiconductor lasers, and
photodetectors). Prerequisites: EN 159 or equivalent introductory device course; some quantum mechanics helpful but not required.

2620. **Solid State Quantum and Optoelectronics**
Incorporates the study of interaction of radiation with matter emphasizing lasers, nonlinear optics, and semiconductor quantum electronics. Q-switching and mode-locking, electro- and acousto-optic interactions, harmonic generation and parametric processes, self-focusing and phase modulation, stimulated Raman and Brillouin scattering, ultrashort pulse generation, nonlinear processes of conduction electrons in semiconductors, bulk and surface polaritons. Prerequisite: ENGN 2060 or equivalent.

2630. **Electro-Optical Properties of Materials and Biomolecules**
Fundamental ideas and principles relevant to the understanding of the electrical and optical properties of materials and bio-molecules are emphasized. The mathematics is deliberately kept to a minimum. Topics include metals, semiconductors dielectric materials, magnetic materials, superconductors, carbon nanotubes, DNA, photosynthesis and redox proteins. Prerequisites: ENGN 0510 and PHYS 0470.

2660. **Physics and Technology of Semiconductor Heterostructures**
Covers, largely from an experimental point of view, topics of current interest in semiconductor heterostructure physics and technology; magnetotransport in two-dimensional electron gas; integer and fractional quantum Hall effects; resonant tunneling and superlattice transport; optical and transport properties of quantum wires and dots; heterostructure-based devices; other topics of student interest. Prerequisites: PH 141 or equivalent quantum mechanics, ENGN 1590 or introductory device course helpful but not required.

2730. **Advanced Thermodynamics I**
Fundamental principles of macroscopic equilibrium; thermodynamic stability; Gibbs relations and chemical thermodynamics; applications to various systems, including fluids, solids, and magnetic and dielectric materials. Fundamental principles of macroscopic non-equilibrium thermodynamics (irreversible processes). Entropy production; Curie’s principle; Onsager-Casimir reciprocal relations; applications to transport and relaxation phenomena in continuous systems.

2740. **Advanced Thermodynamics II**
Introduction to the statistical mechanics of equilibrium phenomena for classical and quantum-mechanical systems. Ensemble theory; fluctuations; statistical interpretation of the laws of thermodynamics; applications to ideal gases, chemical equilibrium, simple crystals, magnetic and dielectric materials, radiation, and condensation phenomena.

2760. **Heat and Mass Transfer**

2810. **Fluid Mechanics I**
Formulation of the basic conservation laws for a viscous, heat conducting, compressible fluid. Molecular basis for thermodynamic and transport properties. Kinematics of vorticity and its transport and diffusion. Introduction to potential flow theory. Viscous flow theory; the application of dimensional analysis and scaling to obtain low and high Reynolds number limits.
2820. **Fluid Mechanics II**
Introduction to concepts basic to current fluid mechanics research: hydrodynamic stability, the concept of average fluid mechanics, introduction to turbulence and to multiphase flow, wave motion, and topics in inviscid and compressible flow.

2910. **Special Topics in Engineering**

2970. **Preliminary Examination Preparation**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. **Special Projects, Reading, Research and Design**

2990. **Thesis Preparation**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

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**English**

Professors Armstrong, Blasing, Doane, Gould, Kahn, Keach, Landow, McLaughlin (Chair), Rabb, Redfield, Rooney, Rosen, Smith; Associate Professors Bewes, Bryan, Burrows, Egan, Foley, George, Katz, Kim, Murray, Nabers, Reichman, Rodriguez; Assistant Professors Feerick, Khalip, Ryan; Senior Lecturers Imbriglio, Stanley, Taylor; Lecturer Imbriglio; Adjunct Professor Eder.

**Undergraduate Program**
For a complete description of the standard concentration program leading to the A.B. degree in Literatures and Cultures in English, please visit the department’s website at: [http://www.brown.edu/Departments/English/undergraduate/](http://www.brown.edu/Departments/English/undergraduate/) or visit [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

**Graduate Programs**
The department accepts candidates for the degrees of Ph.D. and A.M. In addition to the regular Graduate School application, the department requires the GRE general test (no more than three years old) for admission to either program. Please visit [http://www.brown.edu/Departments/English/graduate/](http://www.brown.edu/Departments/English/graduate/).

**Master of Arts**
The masters program in Literatures and Cultures in English is intended for students seeking to engage in the advanced study of literature, literary theory and criticism. Through their coursework, students develop their critical skills, deepen their historical understanding of literatures written in English, and gain expertise in critical theory. This degree is often sought by students who may wish eventually to pursue a doctorate. The A.M. degree may also be awarded to Ph.D. students in the course of their progress toward the doctorate.

The A.M. degree requires the completion of eight courses, one of which may be a research/independent study course, and a thesis. These courses should build upon and extend the student’s undergraduate preparation in English and American literature and should reflect some specialized interest. The program may be entirely in English, or may include one related course offered by another department, e.g., history, philosophy, a foreign literature, or another appropriate area. Students undertake an extended research
project culminating in a 35-45 page thesis together with full references and a bibliography. A full-time student in this program can complete the work for the A.M. within one calendar year.

Course Requirements for the A.M.:

1. At least one course from each of the following areas:
   - Area I: Medieval and Early Modern Literatures and Cultures
   - Area II: Enlightenment and the Rise of National Literatures and Cultures
   - Area III: Modern and Contemporary Literatures and Cultures
2. At least one course that has been designated theory-intensive. Students may also use a theory-intensive course to satisfy one of the three area requirements listed above.

Language Requirement: A candidate for the A.M. should show competence in one foreign language. Normally this is demonstrated by passing a departmental translation examination.

Doctor of Philosophy

The doctoral program in Literatures and Cultures in English offers professional training in literary criticism, theory, research methods, and the teaching of literature and writing. The first two years will be devoted to course work and fulfillment of the foreign language requirement. The qualifying examination is taken by the end of the third year. The remaining time in the program is devoted to completing the dissertation and securing employment.

Courses: A full-time doctoral candidate will register for six courses during the first year of study. Over the second and third years, the student will take another seven courses. In the second year, students who already have an A.M. in English or graduate credit from another institution may transfer up to a year of course work toward the requirements for the Ph.D. at the discretion of the department.

Course Requirements for the Ph.D.

1. At least one course from each of the following areas:
   - Area I: Medieval and Early Modern Literatures and Cultures
   - Area II: Enlightenment and the Rise of National Literatures and Cultures
   - Area III: Modern and Contemporary Literatures and Cultures
2. During the first year of study, one course that has been designated a theory-intensive course. The theory-intensive course may also be used to satisfy one of the three area requirements listed above.
3. ENGL 2950, Seminar in Pedagogy and Composition Theory, taken in the fall semester of the second year.

Teaching: The department requires its Ph.D. students to do two years of supervised teaching. A waiver is granted only in special circumstances; for further information, see the department's Graduate Student Handbook.

Foreign Languages: The foreign language requirement may be met in two ways. The candidate may either show competence in two languages, by passing departmental translation exams, or may demonstrate advanced knowledge of a single language, by passing a departmental exam, and then successfully completing a graduate-level foreign language course or translation project.
Qualifying Examination: The purpose of the qualifying examination is to certify a candidate’s mastery of the scholarly field in which he or she has chosen to specialize. The exam is given by a committee of three faculty members chosen by the candidate; it is oral and lasts approximately two and a half hours. It is based on a Field Statement of up to 25 pages written by the candidate in consultation with the committee. The exam is taken at the end of the third year, soon after the completion of course work and before the submission of a dissertation proposal. (See the departmental Graduate Student Handbook for details.)

Dissertation: The doctoral dissertation is a substantial work of criticism and scholarship that makes a contribution to professionally recognized areas of literary study.

Courses of Instruction

Primarily for Undergraduates

0110. Critical Reading and Writing I: The Academic Essay
An introduction to university-level writing. Students produce and revise multiple drafts of essays, practice essential skills of paragraph organization, and develop techniques of critical analysis and research. Readings from a wide range of texts in literature, the media, and academic disciplines. Assignments move from personal response papers to formal academic essays. Enroll ment limited. Written permission required. S/NC. C. IMBRIGLIO, L. K. STANLEY and STAFF.

0130. Critical Reading and Writing II: The Research Essay
For the confident writer. Offers students who have mastered the fundamentals of the critical essay an opportunity to acquire the skills to write a research essay, including formulation of a research problem, use of primary evidence, and techniques of documentation. Individual section topics are drawn from literature, history, the social sciences, the arts, and the sciences. Writing sample may be required. Enrollment limited. Written permission required. S/NC. E. S. TAYLOR and STAFF.

0160. Journalistic Writing
An introduction to journalistic writing that focuses on techniques of investigation, reporting, and feature writing. Uses readings, visiting journalists, and field experience to address ethical and cultural debates involving the profession of journalism. Writing assignments range from news coverage of current events to investigative feature articles. Prerequisite: ENGL 0110, ENGL 0130, or ENGL 0180, or equivalent. Writing sample required. Class list will be reduced to 17 after writing samples are reviewed during the first week of class. Enrollment limited to 17. Banner registrations after classes begin require instructor approval. S/NC. T. BRETON and STAFF.

0180. Introduction to Creative Nonfiction
Designed to familiarize students with the techniques and narrative structures of creative nonfiction. Reading and writing focus on personal essays, memoir, science writing, travel writing, and other related subgenres. May serve as preparation for ENGL1180. Writing sample may be required. Enrollment limited. Banner registrations after classes begin require instructor approval. S/NC. E. S. TAYLOR, L. K. STANLEY and STAFF.

0200. Seminars in Writing, Literatures, and Cultures
Offers students a focused experience with reading and writing on a literary or cultural topic. Requires 18–20 pages of finished critical prose dealing with the literary, cultural, and theoretical problems raised. Course goal is to improve students’ ability to perform close reading and textual analysis. May count as elective credit toward the concentration in English, but may not be used toward fulfillment of the four-course focus or the theory or scholarly area requirements. Enrollment limited. Written permission required.
0210. *Introductory General Topics in Medieval and Early Modern Literatures and Cultures*

These introductory general topics courses are designed to give students a coherent sense of the literary history and the major critical developments during a substantial portion of the period covered by the department’s Area I research field: Medieval and Early Modern Literatures and Cultures. English concentrators are encouraged to take at least one of these courses to apply toward the Area I English concentration requirements.

0210B. *The Romance of Travel*

Considers the role of the strange, new, and fantastic in travel accounts of the Medieval period and Renaissance. If travel writers offered their stories as “windows to the world,” we will treat them as representations that expose, reinforce, and subvert the author’s cultural, political, and social attitudes. Works by Marco Polo, Chaucer, Columbus, Ralegh, Rabelais, Shakespeare, and Crusoe. J. Feerick.

0210C. *English Drama 1350–1700*

This course presents great plays not written by Shakespeare, from the mystery plays of the late Middle Ages through Restoration drama. We will address these questions: What kinds of plays spoke to what kinds of audiences? How do changes in theatrical style relate to social change? How do genre, convention, staging, and acting style shape a dramatic text? C. Kahn.

0210E. *Three Great Poets: Shakespeare, Donne, Milton*

We will study these premier Renaissance poets from all angles possible, to understand the historical situations and political issues that shaped their writing, the authors and ideas that influenced them, the traditional forms they appropriated for new purposes. Most of all, we will study them to appreciate the power of poetry as a source of knowledge and inspiration.

0210F. *Beowulf to Aphra Behn: The Earliest British Literatures*

Major texts and a few surprises from literatures composed in Old English, Old Irish, Anglo-Norman, Middle English, and Early Modern English. We will read texts in their historical and cultural contexts. Texts include anonymously authored narratives like *Beowulf* and *Sir Gawain and the Green Knight*, selected Canterbury Tales by Chaucer, and texts by Sir Thomas Malory, Spenser, Shakespeare, and Aphra Behn. Not open to seniors. E. J. Bryan.

0250. *Introductory Seminars in Medieval and Early Modern Literatures and Cultures*

0250D. *Objects of Beauty in Renaissance Culture*

What made a poem or a play as beautiful in 16th-century England as a hat or the right pair of shoes? Literary history and aesthetics from Wyatt, Surrey, and More, through Sidney, Shakespeare, Jonson, and Donne. S. M. Foley.

0250E. *The Medieval King Arthur*

Where did stories of King Arthur come from and how did they develop in the Middle Ages? We will read the earliest narratives of King Arthur and his companions, in histories and romances from Celtic, Anglo-Norman, and Middle English sources, to examine Arthur’s varying personas of warrior, king, lover, thief. Enrollment limited to 20 first-year students. FYS E. J. Bryan.

0250F. *Shakespeare’s Present Tense*

*Shakespeare in Love* suggests how Shakespeare was clued in to elite and popular cultures. Current adaptations like *O* and *10 Things I Hate About You* demonstrate how Shakespeare provides anachronistic clues to issues of the present.
This course will trace such clues by examining the cultural origins and ongoing adaptations of *Romeo and Juliet*, *Hamlet*, *Othello*, *Twelfth Night*, *Henry V*, and the sonnets. Enrollment limited to 20 first-year students. FYS S. M. FOLEY.

0400. *Introductory Special Topics in Medieval and Early Modern Literatures and Cultures*

0400A. *Introduction to Shakespeare*
This course will explore issues of concern to Shakespeare's audiences from his time to ours--love, war, race, sex, good and evil--through a representative selection of plays. Lectures will discuss historical contexts, theatrical conditions, and critical strategies. Designed for students beginning college-level study of Shakespeare. Two lectures and one discussion meeting weekly. C. KAHN, J. FEERICK.

0400C. *Matters of Romance*
Narratives (1100-1500) of men, women, and elves seeking identity on the road, in bed, and at court. Readings (in modern English) include Arthurian romances, *Havelok*, lais by Marie de France, and Chaucer's "Wife of Bath's Tale." Primarily for freshmen and sophomores. E. J. BRYAN.

0410. *Introductory General Topics in the Enlightenment and the Rise of National Literatures and Cultures*
These introductory general topics courses are designed to give students a coherent sense of the literary history and the major critical developments during a substantial period covered by the department's Area II research field: The Enlightenment and the Rise of National Literatures and Cultures. English concentrators are encouraged to take at least one of these courses to apply to the Area II English concentration requirements.

0410A. *Literature and the Fantastic*
Considers the changing ways Renaissance, Romantic, Victorian, and late-19th-century authors incorporate non-realistic and fantastic themes and elements in literature. Special attention to the relationship between realism and fantasy in different genres. Readings include stories (gothic, ghost, and adventure), fairy tales, short novels, plays, and poems. Shakespeare, Swift, Brothers Grimm, Charles Dickens, Tennyson, Robert Browning, Christina Rossetti, Lewis Carroll, Bram Stoker, Henry James. Two lectures and one discussion meeting weekly. V. RYAN.

0410B. *Introduction to British and American Romanticism*
An exploration of "Romanticism" in literature written and read on both sides of the Atlantic between 1775 and 1865. Poetry, fiction, and essays by writers such as Blake, Wollstonecraft, Wordsworth, Coleridge, Byron, Percy Shelley, Mary Shelley, Keats, Thoreau, Emerson, Fuller, Hawthorne. W. KEACH.

0410C. *Inventing America*
Even before there was a United States, American authors argued over just what distinguished "America" from other communities. For what, they wondered, did or should America stand? Examines the rhetorical battles waged in some key pre-Civil War American literary texts over the meaning and/or meanings of America. Authors studied may include Bradstreet, Franklin, Douglass, and Melville. J. F. EGAN.

0410E. *Foundations of the Novel*
Introduces students to the first stages of novel writing in England and to historical and theoretical issues relating to the novel’s “rise” to the dominant genre of the modern era. Eighteenth-century works of fiction are long; however, texts selected for this course are less long. They include Defoe's *Moll Flanders*, Richardson's *Pamela* and Fielding’s *Joseph Andrews*. M. A. RABB.
0410F. **Devils, Demons, and Do Gooders**  
Who hasn't struggled with the problem of good and evil? Who hasn't wondered what lurks in the dark recesses of the soul? We will investigate how Milton, Mary Shelley, Melville, Poe, and Hawthorne, among others, grapple with these fundamental questions of judgment. J. F. EGAN.

0410G. **Literature and Revolutions, 1640–1840**  
Key developments in British and American literature understood in relation to the historical and cultural forces that produced the English Revolution, the American Revolution, the French Revolution, and the Industrial Revolution. Readings in major writers such as Milton, Paine, Blake, Wollstonecraft, Emerson, Barrett Browning, and Dickens, and in some of their non-canonical contemporaries. Focus on the emergence of a transatlantic literary culture. W. KEACH.

0410H. **Mariners, Renegades, and Castaways: American Fiction and the Romance of the Sea**  
Examines one of the most distinctive of literary genres: the sea novel. Ostensibly stories of mystery and adventure, these texts are also meticulous accounts of working life at sea. Reads a number of well-known and lesser known American tales of the sea, including Poe's *The Adventures of A. Gordon Pym*, Melville's *Moby-Dick*, London's *The Sea-Wolf*, and Crane's "The Open Boat." S. BURROWS.

0410I. **The Literature and Politics of Friendship**  
Considers changing concepts of friendship as a key to major developments in British and American literature from the Renaissance through the 19th century. Special attention given to the ways the literary history of friendship intersects with leading political questions of the day. Shakespeare, Donne, Milton, Defoe, Wordsworth, Keats, Percy and Mary Shelley, Dickens, Poe, Melville, and Henry James. K. MCLAUGHLIN.

0410J. **The Literature of Identity from Shakespeare to Wilde**  
This course will explore various conceptions of personal identity, with an emphasis on Romanticism. We'll read Anglo-American philosophical and literary texts (mostly poetry) from the Renaissance through the 19th century, taking some excursions into contemporary theory (queer, feminist, post-structuralist). Writers will include Shakespeare, Montaigne, Locke, Hume, Rousseau, Wordsworth, Keats, Emerson, Browning, and Wilde. J. KHALIP.

0450. **Introductory Seminars in the Enlightenment and Rise of National Literatures and Cultures**  
First-year seminars limited to 20 students.

0450A. **Hawthorne and James**  
An introduction to a pair of writers whose work continues to shape our understanding of American literature and American identity. Focusing on much of their most important work, our aim will be to understand how their conceptions of the relationship between writing and history both complicate and complement each other. Limited to 20 first-year students. FYS S. BURROWS.

0450B. **Lincoln, Whitman, and The Civil War**  
An introduction to the literature of the American Civil War: Whitman, Lincoln, Melville, Stowe, and other autobiographical and military narratives. Limited to 20 first-year students. FYS P. GOULD.
0450C. Literature of The American South
The South is as much a state of mind as a place on the map, and some of the major figures in American literature have contributed to the making of what we think of when we think of “the South.” Explores the sometimes contradictory but always important meanings of the American South. Authors include Poe, Douglass, and Faulkner. Limited to 20 first-year students. FYS J. F. EGAN.

0450D. The Simple Art of Murder
A survey of the role of criminal enterprise in American literary history. Authors to be considered include Poe, Hawthorne, Harper, Chandler, Alcott, Twain, Hammett, Highsmith, and Wright. FYS D. NABERS.

0450E. Inventing America
One of the distinguishing features of American literature may be its seemingly constant struggle with the idea of America itself. For what, these authors wonder, does/should America stand? We will examine the rhetorical battles waged in some major works of American literature over the meaning and/or meanings of our national identity. Authors include Franklin, Hawthorne, Melville, and Fitzgerald. Limited to 20 first-year students. FYS J. F. EGAN.

0450F. Man and Machine
Examines the fascination with "human" machines and "mechanical" humans in the 18th, 19th, and 20th centuries. What hopes and what fears are associated with human machines? How has the automaton challenged fundamental concepts such as "subjectivity," "intelligence," "consciousness," and "progress"? Authors include Henry David Thoreau, Henry Adams, Thomas Carlyle, Mary Shelley, H.G. Wells, E.M. Forster, William Gibson. Enrollment limited to 20 first-year students. FYS V. RYAN.

0450G. The Transatlantic American Novel
This course reads American literature across national boundaries, focusing on the novel genre and the question of "American" identity as a problem in itself. The course takes up this problem in a wide array of novels spanning the period between the late eighteenth and twentieth centuries. Writers include Crevecoeur, Susanna Rowson, Poe, Melville, Twain, and Nella Larsen. Limited to 20 first-year students. FYS P. GOULD.

0600. Introductory Special Topics in the Enlightenment and the Rise of National Literatures and Cultures

0600A. Literature and Print Culture
The cultural impact of widely circulating printed material -- books of poetry, essays, and fiction but also newspapers, stock certificates, and advertisements -- makes the period 1660-1740 the first technologically enabled information age. The production and consumption of published texts changed the world for the restored monarch and his licentious court, for the rising bourgeoisie, and for the newly literate classes. We will follow several controversies, experiments, and innovations of the print revolution in works as apparently diverse as Milton's epic poetry, Manley's erotic secret histories, and the ads in The Spectator. Other canonical and non-canonical writers include Rochester, Behn, Dryden, Swift, Manley, Haywood, and Defoe. M. RABB.

0600B. The Gothic
The course will investigate the origins and development of Gothic literature from its invention during the eighteenth century to its postmodern forms. We will consider
conventional figures (monsters, distressed heroines, moldering castles), common themes (fear, horror, the supernatural, the irrational, the transgressive), and the cultural work they do. Readings include Walpole, Lewis, Radcliffe, Shelley, James, and King. M. A. RAIBB.

0600D. *Mark Twain's America*
A course for all kinds of readers of Twain and his contemporaries. Close readings of fiction and essays that focus on race, slavery, capitalism, and the development of "modern" literature. Works include *Puddinhead Wilson, Huck Finn,* and *Connecticut Yankee.* P. GOULD.

0600E. *British Romanticism*
Readings in British Romantic writing, canonical and noncanonical, emphasizing how historical and political change, philosophical disposition, and subjective consciousness become articulated in verse and prose. Literary representations of and responses to the French Revolution, the Industrial Revolution, the struggle against black slavery. Blake, Wollstonecraft, Olaudah Equiano, William Wordsworth, Dorothy Wordsworth, Coleridge, Percy Shelley, Mary Shelley, Byron, Keats, Clare. W. KEACH.

0600H. *Victorian Self and Society*
This multi-genre course is an introduction to literature and culture of the Victorian period, looking at the changing ideas of society and the individual's place within that larger community in an age of empire, industrialization, urbanization, class conflict, and religious crisis. Topics include conceptions of the role of art and culture in society, the railway mania of the 1840s, the "great stink" of London, women's suffrage and the condition of women, and the Great Exhibition of 1851. Readings will include Carlyle, Charlotte Brontë, Ruskin, Robert Browning, Dickens, Tennyson, Christina Rossetti, George Eliot, and Lewis Carroll. V. RYAN.

0600K. *Fictions and Frauds: Literature and the Historical Imagination*
What happened at the Salem witchcraft trials? How and why did the American Revolution begin? Why were slave narratives so easily forged? This course looks at the role American fiction and historical writing have played in telling the "truth" about the nation's past. P. GOULD.

0610. *Introductory General Topics in Modern and Contemporary Literatures and Cultures*
These introductory general topics courses are designed to give students a coherent sense of the literary history and major critical developments during a substantial portion of the period covered by the department’s Area III research field: Modern and Contemporary Literatures and Cultures. English concentrators are encouraged to take at least one of these courses to apply toward the Area III English concentration requirements.

0610A. *Introduction to African American Literature, 1742-1920*
Surveys African American writing from the beginnings to the Harlem Renaissance, reading both poetry and prose (primarily slave narratives, speeches, essays, and fiction). Attention to how African American authors have shaped a literature out of available cultural and aesthetic resources. D. L. DENNISTON.

0610B. *Introduction to African American Literature, 1920-present*
All genres of literature from the Harlem Renaissance to the present, tracing the development of an African American literary tradition. D. L. DENNISTON.
0610C. Twentieth-Century American Fiction
Through detailed readings of a variety of novels from almost every decade, this class explores the various ways fiction responded to what has been called the American century. Our main emphasis will be on the relationship between aesthetic and national representation. Writers to include Wharton, Fitzgerald, Faulkner, Ellison, Kingston, and DeLillo. S. BURROWS.

0610D. Introduction to Asian American Literature
An introductory survey that familiarizes students with key critical issues that have shaped the study of Asian American literature. It addresses the historical and political issues with which literary works are engaged, but the primary emphasis of the course is on textual analysis: on how texts give literary shape to the experiences they depict. Two lectures and one discussion meeting weekly. D. Y. KIM.

0610E. Postcolonial Literature
Examines fiction, drama, poetry, travel writing, and cultural theory by contemporary writers from former colonies of the British Empire. We study works by Anglophone African, Caribbean, and South Asian writers. Issues include: nationalism and globalization; cultural identity and diaspora; individual interiority and collective aspirations; literary form and the very idea of "postcolonial" literature. Authors include: J. M. Coetzee, Amitav Ghosh, V. S. Naipaul, Michael Ondaatje, Caryl Phillips, Derek Walcott, Zoë Wicomb. O. GEORGE.

0610F. Introduction to Modernism: Past, Future, Exile, Home
An introduction to European Modernism with an emphasis on British Literature. We will address ideas of personal and national history through literary and aesthetic innovations of the first half of the 20th century, as well as the relationship--literary, cultural, historical and psychological--between constructions of home and abroad. Texts include James, Conrad, Forster, Joyce, Proust, Woolf, Faulkner, Waugh, and Freud, as well as films by Sergei Eisenstein and Fritz Lang. R. REICHMAN.

0610G. 20th-century American Fiction and Mass Culture
How did American fiction in the 20th century respond to the growing national influence of mass culture industries such as film, television, and recording? How have fiction writers represented the consumer culture that generated those industries? Questions along these lines frame the interpretation of works by Theodore Dreiser, James Weldon Johnson, Nathanael West, Richard Wright, Don Delillo, and John Edgar Wideman. R. MURRAY.

0610H. Cultures and Countercultures: The American Novel after World War II
A study of the postwar American novel in the context of the intellectual history of the 1950s, 1960s, and 1970s. We will read the postwar novel in relation to the affluent society, the vital center, the lonely crowd, the power elite, the one-dimensional man, the post-industrial society. Authors to be considered include Baldwin, Bellow, Ellison, Highsmith, McCarthy, O'Connor, Petry, Pynchon, and Roth. Two lectures and one discussion meeting weekly. D. NABERS.

0610I. Contemporary British Fiction
This course covers the euphoric parochialism of the post-War years, the social polarization of Thatcherism, and the multicultural inclusiveness of the New Labour period. It is intended as an introduction to theories of culture, ideology and literary form, as well as an overview of some of the most important British writers of the second half of the last century, including both Amises, Ishiguro, Hollinghurst, Kelman, Spark, Naipaul, Smith. T. BEWES.
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0610K. 20th-Century Literatures in English
This course offers a broad introduction to a range of literatures written in English, tracing shifts in the formal conventions of fiction and poetry. We examine ongoing debates about what literature is and what social role it plays. We consider how these debates respond to historical changes such as industrialization, the collapse of global empires, and movements for social equality. Writers include Dreiser, Woolf, Eliot, Hughes, Toomer, Cather, Morrison, Hwang, Rushdie. T. KatZ, D. Y. Kim.

0650. Introductory Seminars in Modern and Contemporary Literatures and Cultures
First-year seminars limited to 20 students.

0650A. "Model Minority" Writers: Cold War Fictions of Race and Ethnicity
Explores the construction of race and ethnicity in U.S. writings of the 50s, paying particular attention to how literary texts negotiate the ideological demands of Cold War anti-communism. Writers studied may include Saul Bellow, Carlos Bulosan, Ralph Ellison, Jack Kerouac, Norman Mailer, John Okada, and Jade Snow Wong. Enrollment limited to 20 first-year students. FYS

0650B. Black Atlantic Narratives of Africa
We will study fiction, drama, and autobiography by black writers who have used the motif of a literal or symbolic journey to Africa to explore in powerful ways issues of the trans-Atlantic slave trade, Africa as land and concept, individual and collective memory. Writers will include Maryse Conde, Charles Johnson, George Lamming, Paule Marshall, Toni Morrison, and Derek Walcott. Enrollment limited to 20 first-year students. FYS

0650C. Englishness and Britishness in Contemporary Fiction
How have writers of fiction responded to recent developments in British political culture? How has the category of Englishness changed during that period? This course offers an overview of some of the most important British writers of the last twenty years and an introduction to theories of culture and ideology. Readings include Ishiguro, Kelman, Caryl Phillips, Zadie Smith. Enrollment limited to 20 first-year students. FYS T. R. Bewes.

0650F. Is There a Theory of the Short Story?
This course considers the question in the title by looking at works of short fiction by Melville, Conrad, Bierce, Joyce, Lawrence, Kafka, Wicomb, Paley, O'Connor, Beckett, White, and literary theories by figures such as Lukacs, Bakhtin and Deleuze. Enrollment limited to 20 first-year students. FYS T. R. Bewes.

0650H. Realism and Modernism
The novel as a genre has been closely identified with the act of representation. What it means to represent "reality," however, has varied widely. This seminar will explore how the representation of reality changes as modern fiction questions the assumptions about knowing, language, and society that defined the great tradition of realism. Limited to 20 first-year students. Banner registration after classes begin requires instructor approval. FYS P. B. Armstrong.

0650J. The Problem of Women's Writing
Combines a survey of British and American women writers with an interrogation of the concept of women’s writing. Authors will include Austen and Bronte, Walker and Viramontes; theoretical topics will include the figure of the author, subjectivity and ideology, the concept of a separate women’s canon or tradition, and the complex
0650K. The Roaring Twenties
The 1920s helped solidify much of what we consider modern in 20th-century U.S. culture. This course reads literature of the decade in the context of a broader culture, including film and advertising, to think about the period’s important topics: the rise of mass culture and of public relations, changes in women’s position, consumerism, nativism and race relations. Writers include Fitzgerald, Hemingway, Larsen, Toomer, Parker. Enrollment limited to 20 first-year students. FYS E. F. ROONEY.

0800. Introductory Special Topics in Modern and Contemporary Literatures and Cultures

0800A. City Novels
We will discuss 20th-century novels and films about the city from the U.S. and England to ask a range of questions: In these works, how does the city shape the way we grow up, think, move, and see? How is the city divided by class, by race, by gender? Do these novels imagine potential solutions to the problems it sees? Authors may include Crane, Dos Passos, Woolf, Wright, Cisneros, Smith, Calvino. E. T. KATZ.

0800B. African American Literature and the Legacy of Slavery
Traces the relationship between the African American literary tradition and slavery from the antebellum slave narrative to the flowering of historical novels about slavery at the end of the twentieth century. Positions these texts within specific literary, historical, and political frameworks. Authors may include Frederick Douglass, Harriet Jacobs, Charles Chesnutt, Octavia Butler, and Toni Morrison. R. D. MURRAY.

0800C. Writing War
Examines the challenges that war poses to representation, and particularly to language and literary expression in the modern era. We will focus primarily on the First and Second World Wars, exploring the specific pressures war puts on novels and poetry, as well as on history, psychology, and ethics. Works by Sassoon, Owen, Hemingway, Woolf, Rebecca West, Graham Greene, Pat Barker, Tim O’Brien, Georges Perec. R. REICHMAN.

0800D. The Dead and the Living
Explores ethical, historical, and personal dilemmas in modernism through the relation between the dead and the living. What claims do the dead have on the living? How do the living shape the lives of the dead? Readings in literature, psychoanalysis, and philosophy, including James, Woolf, Benjamin, Freud, Joyce, Sebald, and Barnes. Two lectures and one discussion meeting weekly. R. REICHMAN.

0800E. African and Caribbean Tales of Transition
This course concentrates on the "Bildungsroman" -- the novel of education -- in contemporary fiction by Anglophone African and Caribbean authors. Issues include the following: cultural, generational, and other differences; experience, memory and narrative; reality and fantasy. Particular attention to the interplay of form and content, as well as the relationship between literature and the real world "out there." Authors include: Peter Abrahams, Ngozi Adichie, Erna Brodber, Jamaica Kincaid, George Lamming, Ezekiel Mphahlele. O. GEORGE.

0800F. Being There: Bearing Witness in Modern Times
What is the significance of one who says, "I was there"? This course explores the ethical, literary and historical dimensions of witnessing in an era when traumatic
events are increasingly relayed secondhand or recorded in image and sound. Texts include Forster, Woolf, Camus, Nabokov, Celan, Coetzee; films by Hitchcock and Lanzmann; readings in law and psychology.

0910. **Special Introductory Topics in Literatures and Cultures in English**

For Undergraduates and Graduates

1110. **The Teaching and Practice of Writing**

The Teaching and Practice of Writing offers students selected into the Writing Fellows Program, an undergraduate peer tutoring program, the chance to study composition theory in tandem with a selection of literary essays so that they may become adept at responding to the work of their peers and also become better writers themselves. Students review a series of sample student essays and also work with each other on the essays that they write in class. Enrollment is restricted to undergraduates who have been accepted into the Writing Fellows Program in the preceding July. Instructor's permission required. S/NC.

1140. **Critical Reading and Writing III: Topics in Literary and Cultural Criticism**

For advanced writers. Situates rhetorical theory and practice in contexts of cutting-edge literary, cultural, and interdisciplinary criticism, public discourse, and public intellectual debate. Individual sections explore one or more of the following subgenres: rhetorical criticism, hybrid personal-critical essays, case studies, legal argument and advocacy, documentary, satire, commentaries, and review essays.

Writing sample required. Prerequisite: ENGL0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 12 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC.

1140A. **The Literary Scholar**

For the advanced writer. To write as a literary scholar or critic, we analyze theoretical and cultural frames through which research and ideas are given shape and significance within the discipline. We generate, research and revise four essays, moving from close reading to inter-textual analysis to grappling with varied sources to explore a literary subject, problem, or artist in an engaging intellectual journey. Writing sample required. Prerequisite: ENGL0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 12 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC. C. IMBRIGLIO, L. STANLEY.

1140B. **The Public Intellectual**

This course offers advanced writers an opportunity to practice sophisticated, engaged critical writing in academic, personal, and civic modes. Emphasis will be on writing "public" essays (general audience essays that do intellectual work or academic essays that address public topics), ideally in fluid, "hybrid," audience-appropriate forms. Areas of investigation will include (but are not limited to) the review essay, the cultural analysis essay, literary documentary, and the extended persuasive/analytic essay. It will include some brief "touchstone" investigations into rhetorical theory, with the aim of helping to broaden our concepts of audience, analyze the constitutive and imaginative effects of language, increase the real-world effectiveness of our own language practices, and situate our writing within current political, cultural, aesthetic and intellectual debates. Students must have sophomore standing or higher in order to be admitted to the class. A writing sample will be administered on the first day of class. Prerequisite: ENGL0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 12 after writing samples are reviewed during the first week of classes.
Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC. C. IMBRIGLIO.

1160. *Special Topics in Journalism*  
Class list will be reduced after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators.

1160A. *Advanced Feature Writing*  
For the advanced writer. Nothing provides people with more pleasure than a “good read.” This journalism seminar helps students develop the skills to spin feature stories that newspaper and magazine readers will stay with from beginning to end, both for print and on-line publications. Students will spend substantial time off-campus conducting in-depth interviews and sharpening their investigative reporting skills. The art of narrative storytelling will be emphasized. Prerequisite: ENGL0160 or published clips submitted before the first week of classes. Class list will be reduced to 17 after writing samples are reviewed. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC. T. BRETON.

1160B. *Editors/Producers*  
Enrollment limited to 17. Written permission required. S/NC. E. S. TAYLOR.

1160C. *Radio Nonfiction*  
For advanced writers only. Introduction to radio writing and producing. Students find and research stories, interview, draft, edit and fine-tune for radio presentation. Genres include news, profile, feature and personal narratives, editorial and review. Weekly labs focus on recording equipment, digital editing and mixing, and music use. Final project: half-hour radio feature ready for broadcast. Preference given to students who have taken ENGL0160, advanced nonfiction writing courses, English concentrators, or students who have worked at WBSR or WBRU. A writing sample will be administered on the first day of class. Class list will be reduced to 12 after writing samples are reviewed. S/NC. E. S. TAYLOR.

1160D. *The Common Critic*  
For the advanced writer. Aimed at the cultivated consumer of books, magazines and newspapers-- what has traditionally been called the common reader. Students will attend films, plays, art shows, concerts or dance performances and write weekly reviews based on these experiences. Readings include Orwell, Woolf, Shaw, Kael, Tynan, Clive James, Zbigniew Herbert, and current reviews. Writing sample submitted at first class; also a previous sample, if possible, submitted at the same time. Class list will be reduced to 12 after writing samples are reviewed during the first week of classes. Banner registrations after classes begin require instructor approval. S/NC. R. EDER.

1180. *Special Topics in Creative Nonfiction*  
Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC.

1180A. *Crime Writing*  
This course offers students the opportunity to study crime reportage. We will read and analyze excerpts from classics in the genre, magazine articles, and newspaper accounts. Students will develop semester-long individual writing projects covering a
particular crime, and can work either with Providence and Brown University police on a local incident, or research a case through secondary source material. S/NC.

1180E. Lifewriting
Features theoretical and practical study of lifewriting's various forms—memoir, diary, essay, and autobiography—and the crafting of personal narrative. Students read books, view films, and keep an electronic diary and paper notebook. Requirements include a personal critical essay and autobiography. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC.

1180F. Literary Journalism
Focusing on the craft of literary techniques in a range of journalistic modes, we will read John McPhee, Diane Ackerman, Ian Frazier, Susan Orlean and Tracy Kidder, among others. Workshops and conferences on student work, which can include personal essays, immersion journalism, researched argumentative essays and magazine-style feature articles. Complete and polish several shorter pieces and one longer feature-length article. S/NC.

1180G. Lyricism and Lucidity
For the advanced writer. This course will explore two subsets of the personal essay that blur or cross boundary lines—the lyric essay and the photographic essay—in both traditional and experimental formats. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC. C. IMBRIGLIO.

1180J. Tales of the Real World
For the advanced writer, this section offers a chance to practice the pleasures and challenges of nonfiction analysis and story-telling in the forms of literary journalism, historical narrative, and personal essay or memoir. Inspirations will include Truman Capote, Sebastian Junger, Jamaica Kinkaid, and Maxine Hong Kingston. Intensive practice in researching, interviewing, redrafting, and editing. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC. E. S. TAYLOR.

1180K. The Art of Literary Nonfiction
For the advanced writer. Based on Roland Barthes' notion of the fragment, this workshop features an incremental, literary approach to writing nonfiction, in both traditional and experimental formats. In response to daily assignments, students will produce numerous short pieces and three extended "essays," to be gathered into a chapbook at the end of the course. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC. C. IMBRIGLIO.
1180L. Travel Writing: In the Domain of the Other
For the advanced writer. Huck Finn's intention "to light out for the Territory" reflects
a pervasive desire to be somewhere else. Restless curiosity about the Other affects
teach as writing about travel, and reading about travel. Will concentrate on
contemporary travel writers (Heat-Moon, Didion, Chatwin, numerous others) and
experiment with various types of narrative structures. Writing sample required.
Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be
reduced to 17 after writing samples are reviewed during the first week of classes.
Preference will be given to English concentrators. S/NC. L. K. STANLEY.

1180M. Special Delivery: Letters and Diaries
While letters and diaries are constrained by "dailiness"--the writer’s informal situation
in time--they often form the basis of more formal communications, including the
novel. We will keep diaries as self-conscious intellectual enterprises and write letters
to address their roles in various literary modes. The final project will be an epistolary
essay incorporating structures and motifs from both sub-genres. Writing sample
required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list
will be reduced to 17 after writing samples are reviewed during the first week of
classes. Preference will be given to English concentrators. S/NC.

1180P. Further Adventures in Creative Nonfiction
A workshop course for students who have taken EL 18 or the equivalent and are
looking for further explorations of voice and form. Work can include personal essays,
literary journalism and travel writing. Readings from Ian Frazier, Joan Didion, David
Sedaris, John McPhee and others. Writing sample required. Prerequisite: ENGL
0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given
to English concentrators. Banner registrations after classes begin require instructor
approval. S/NC.

1180Q. Narrating History
For the advanced writer: the protocols of historical narrative and essay for a general
audience. Using the archives of Brown, the Rhode Island Historical Society, and the
student's family (if feasible), each writer will research primary and secondary sources,
use interviews and oral histories, to help shape three engaging, instructive true stories
of the past. Intensive library work, revisions, and peer editing. Writing sample
required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list
will be reduced to 17 after writing samples are reviewed during the first week of
classes. Preference will be given to English concentrators. Banner registrations after
classes begin require instructor approval. S/NC. E. TAYLOR.

1190. Special Topics in Expository Writing
Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or
1190. Class list will be reduced to 17 after writing samples are reviewed during the first
week of classes. Preference will be given to English concentrators. S/NC.

1190A. “The Arrangement of Words”: Liberating Fiction(s)
For the advanced writer. The fiction writer's perception of writing is often excluded
from or seen as marginal to academic studies. Concentrating on American fiction
writers 1918-1945 (Hemingway, Faulkner, Welty, O'Connor, others), we examine
their nonfictional and fictional prose on writing fiction. Journals, weekly response
papers, three formal essays; does not include writing fiction. Writing sample required.
Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be
reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC. L. K. STANLEY.

1190B. Real Language: Poetics, Romantics, Writing
Concentrates on the first generation Romantics (Wordsworth and Coleridge) and their poetic/aesthetic experiments to correlate "the real language of men" with poetic perception. Along with primary sources (prose and poetry), we read scholarly, critical, and theoretical texts to construct ways of reading English Romantic poetry and then work on different kinds of writing that derive from those readings. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC. L. K. STANLEY.

1190F. My So-Called Life: The Art of the Literary Memoir
The literary memoir offers students inspiration and warning as to the possibilities and limits of using their own experience as text. We study personal essays, narratives, and prose poems by a variety of writers. Advanced writers only. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC. E. TAYLOR.

1190G. Science as Writing, Scientists as Writers
For the advanced writer. Investigates the ways science, scientists, and science-related issues have been represented in fiction and nonfiction written for general audiences. Writing assignments include an informal online journal, literary/cultural analyses, fiction or personal essay, and scientific journalism. Readings from literary, journalistic, and scientific writers. A background in science is useful but not required. Science and humanities students welcome. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. S/NC. C. IMBRIGLIO.

1190H. Writing Science, Writing the Sacred
Explores the relationships between two dominant intellectual paradigms-science and religion-and asks students to respond by writing their own "sacred" and science-related texts. Genres to read and write will be poetry and critical/literary nonfiction. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC. C. IMBRIGLIO.

1190I. Writing the Southeast Asian War
It was the Vietnam War, the American War, the Southeast Asian diaspora. By reading varied genres responding to the experience of the war in Southeast Asia and its aftermath, we will study how any experience is multitudinous and how genres manipulate experience in different ways. Analysis and practice of memoir, fiction, poetry, and oral history. Writing sample required. Prerequisite: ENGL 0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. S/NC. E. S. TAYLOR.
1190K. Literary Biography
For the advanced writer. How does one narrate the twists and turns of a life while simultaneously doing justice to whatever literature the subject managed to produce as he or she plodded through each day? We will examine examples of literary biographies for, among other things, voice, form, and research methods. Students will be required to produce their own pieces of literary biography. Prerequisite: ENGL 0130, 0160, or 0180. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor permission. Enrollment limited. S/NC. J. F. EGAN.

1190L. Creative Nonfiction: Practice and Criticism
For advanced writers. What is Creative Nonfiction? Writers have flocked to it; scholars have questioned it. Does it harm the truth? Is it narrative with too much "I" and too little "Eye"? What makes it significant? To help us explore persistent questions about form, point of view, ethics, research methods, and identity, we will read contemporary texts. Intensive reading responses, research, drafting, and revision. Two critical essays; one piece of creative nonfiction. Prerequisite: ENGL0130, 0160, 0180, 1140, 1160, 1180, or 1190. Class list will be reduced to 17 after writing samples are reviewed during the first week of classes. Preference will be given to English concentrators. Banner registrations after classes begin require instructor approval. S/NC. E. TAYLOR.

1200. Independent Study in Nonfiction Writing
Tutorial instruction oriented toward some work in progress by the student. Requires submission of a written proposal to a faculty supervisor.

1210. History of the English Language
Provides an introduction to the study of the English language from a historical, linguistic, and philological perspective, and an overview of the study of the "Englishes" that populate our globe. While providing students with the ability to identify and explain language change through historical periods, also examines language as a social and political phenomenon.

1310. Special Topics in Medieval and Early Modern Literatures and Cultures

1310A. "Firing the Canon": Early Modern Women Writers
Rediscovery and reconsideration of works by early modern women have changed the literary canon: works by women are becoming mainstream, and they are changing the way we read "traditional" texts. This course includes poetry, drama, fiction, letters, diaries, and essays by writers including Lanyer, Wroth, Cavendish, Behn, Manley, Haywood, Scott, Fielding, and Montagu. M. RABB.

1310B. American Degenerates
Colonial British-Americans were called, among other names, monstrous, wild, impotent, and grotesque. They could not, it was said, produce writing worth reading. We will explore the ways in which American writers embraced and/or challenged these charges of cultural and bodily degeneracy. In the process, we will examine the development of modern notions of literature and identity. J. F. EGAN.

1310C. Arguments of Form in Renaissance Poetry
In the literatures of the European Renaissance, stylistic innovation is a marker of cultural change. The production of sonnets, of neoclassical epigrams, and of poems aspiring to be Ovidian or Vergilian opens up a theoretical space for arguments about
faith, thought, words, the self, and society. Readings from Wyatt, Surrey, Gascoigne, Spenser, Sidney, Shakespeare, Donne, Jonson, Milton, and others. S. M. FOLEY.

1310D. Between Gods and Beasts: The Renaissance Ovid
Ovid’s Metamorphoses, an epic compendium of classical myths, narrates with wit and pathos the transformations of body and mind wrought by sexual passion. Central to Renaissance conceptions of the human, it inspired drama, poetry, and narrative. Readings: Shakespeare, Marlowe, Donne, Spenser, Milton. C. KAHN.

1310E. Border Crossings in Renaissance Drama
Investigates how distant peoples and places, from Ireland to the West Indies, from East to West, are constructed for the English stage. We will read Marlowe’s Tamburlaine, Fletcher’s Island Princess, Heywood’s Fair Maid of the West, the anonymous Stukeley play, Shakespeare’s Othello, and Daborne’s A Christian Turned Turk to observe what dangers and freedoms these plays ascribe to specific geographies. J. FEERICK.

1310F. Early Modern Utopias
Why does the early modern period witness a flourishing of utopias from More to Milton? We will explore this question, in reading a range of utopias by writers such as Montaigne, More, Raleigh, Bacon, Hall, and Cavendish, engaging them not just as visions of ideal societies, but as efforts at reform of England and Englishness. J. FEERICK.

1310H. The Origins of American Literature
Where does American literature begin? Can it be said to have a single point of origin? Can writings by people who did not consider themselves American be the source of our national literary tradition? Does such a tradition even exist and, if so, what are its main characteristics? Authors may include Columbus, de Vaca, Shakespeare, Bradstreet, and Native American tales. J. F. EGAN.

1310J. Imagining the Individual in Renaissance England

1310N. Renaissance Drama
An introduction to the great classics and some less-known gems of a stellar period in English drama. Plays by Marlowe, Jonson, Webster, Middleton, and Ford, in the context of urban culture, English nationhood, gender and sexuality, playhouses and playing companies, and forms of theatricality. C. KAHN.

1310O. Restoration and Early Eighteenth-Century Literature
A survey of writing and cultural history in England between 1660 and 1750, emphasizing innovation and experimentation in drama, satire, poetry, and fiction. Readings include work by Behn, Rochester, Swift, and Defoe. M. A. RABB.

1310S. Women and the Book in the Middle Ages
We will read texts authored by medieval women such as Marie de France, Marjorie Kempe, Julian of Norwich, and Christine de Pizan, and we will explore other textual roles of women, including book ownership and patronage, translation and scribal transmission. The result? A complex picture of mediated and mediating female participants in manuscript culture. Some readings in Middle English. E. J. BRYAN.
1310T. Chaucer
Texts in Middle English by Geoffrey Chaucer including the romance Troilus and Criseyde; dream vision poems Book of the Duchess, House of Fame, and Parliament of Fowls; Chaucer's translation of Boethius's Consolation of Philosophy; his shorter poems; and two Canterbury Tales. Prior knowledge of Middle English not required. Not open to first-year students.. E. J. BRYAN.

1310U. Monsters, Giants, and Fantastic Landscapes in Early American Literature
Monsters, giants, “exotic natives,” and unknown continents fill the pages of early American writing. Examines how the well-known and obscure writers of early America used the strange and the fabulous to suggest new ways of being normal. J. F. EGAN.

1310V. Chaucer: The Canterbury Tales
Middle English poetic narratives by Geoffrey Chaucer’s band of fictional pilgrims, read in their 14th-century historical and literary contexts. Prior knowledge of Middle English not required. Not open to first-year students. E. J. BRYAN.

1310W. English Poetry and the Renaissance
The names of Spenser, Sidney, Shakespeare, Donne, Jonson, Milton, and other poets inscribe a golden age of poetry in the cultural mythography of English-language literature. Who are these poets and what stories are told about them? In their time? During the long eighteenth century? By Wordsworth and Browning? By Eliot, the high modernists, and postmoderns? S. M. FOLEY.

1310Y. Besides Paradise Lost: Milton's Other Poems
A study of Milton's lyric and dramatic poetry, including the sonnets, Latin poems, L’Allegro, Il Penseroso, the Nativity Ode, Lycidas, Comus, the verse epistles and Samson Agonistes. S. M. FOLEY.

1360. Special Topics Seminars in Medieval and Early Modern Literatures and Cultures

1360A. The Stage as Globe in Renaissance Drama
Investigates how distant peoples and places, from Ireland to the West Indies, from East to West, are constructed for the English stage. We will read Marlowe's Tamburlaine, Fletcher's Island Princess, Heywood's Fair Maid of the West, the anonymous Stukeley play, Shakespeare's Othello, and Daborne's A Christian Turned Turk to observe what dangers and freedoms these plays ascribe to specific geographies. Enrollment limited. J. FEERICK.

1360B. Inventing Britain
Focuses on the internal colonization of the British Isles as represented by chronicle histories, drama, masques, and epic and lyric poetry: How do the English define themselves as a center striving to incorporate the British periphery? Authors may include Spenser, Shakespeare, King James I, Bacon, Jonson, Milton, and Marvel. J. FEERICK.

1360C. Language and Form in Shakespearean Studies
Shakespeare's poems and plays are a working dictionary of early modern English and an inventory of the possibilities of formal invention in early modern culture. How can we reach a historically informed awareness of form and formality in Shakespeare? What is the history of formalism in Shakespearean studies? What new modes of inquiry issue from questions of form?
1360D. Medieval Manuscript Studies: Paleography, Codicology, and Interpretation
How to read a medieval manuscript. Students will learn to transcribe and date 5th-through 16th-century scripts in Old and Middle English and some Latin texts, and will learn about interpretive methods. Prior course work in Middle English recommended, and acquaintance with Latin and/or Old English and/or Old French and/or medieval Spanish helpful.

1360F. Quest, Vision, Diaspora: Medieval Journey Narratives
Medieval texts explored ideas of self, love, rite-of-passage, spirituality, and group identity through narratives of travel, both imagined and real. We will read romance quests that foray to fairylands and wastelands, visionary journeys to hell, pilgrimages of self discovery, an epic exodus that founds King Arthur's nation, and a 14th-century round-the-world travelogue. Chaucer, Malory, Kempe, Mandeville, Layamon, Anonymous. Middle English readings. Not open to first-year students. Enrollment limited. E. J. BRYAN.

1360H. Seminar in Old English Literature
This course will offer a thorough introduction to the earliest period of English language and literature, and allow students, by the end of the course, to read and appreciate a language that is both intriguingly foreign and importantly familiar. We will start with an extensive coverage of grammar and syntax, before reading short texts, and Old English poetry, including excerpts from *Beowulf*. Enrollment limited.

1360J. Literatures of Medieval England
In the multilingual society of medieval England, the choice to write in English was culturally loaded. We read, in their cultural contexts, lyrics, romances, debate poems, dream visions, Breton lays, Arthurian histories, women’s devotional writings, and saints’ legends written in Middle English between 1100 and 1485. Readings are in Middle English. Not open to first-year students. Enrollment limited. E. J. BRYAN.

1360K. Shakespeare and Company
What makes Shakespeare different from Marlowe or Jonson, Middleton or Webster? They all belonged to a community of actors and playwrights who competed for audiences in a fledgling entertainment industry. Reading Shakespeare’s plays in tandem with those of his contemporaries, we will consider the genres, sources, styles and conventions they shared, and the issues that concerned them. Enrollment limited. C. KAHN.

1360M. Spenser, Milton, and the Politics of the English Epic
We will read the literary and political writings of England’s two major authors of epic -- Spenser and Milton -- assessing their investment in contemporary debates about nation and conquest, rule and liberty, and sexuality and selfhood. Along with the major poems, we will read these authors’ shorter literary and political writings. Enrollment limited. J. FEERICK.

1360N. Shakespeare and European Culture
How do Shakespeare’s work embody and transform the cultures of Europe? What is his relationship to ancient Greece and Rome? To the moral and political philosophies of the sixteenth century? To contemporary literary fashion? Enrollment limited. S. M. FOLEY.

1360O. The Ties that Bind: Domestic Friction and Renaissance Drama
From revenge plays to domestic tragedies, family is a value to kill and die for in Renaissance drama. This course considers the cultural pressures such violence
responds to, the contaminations it guards against, and explores the political life of these violent domestic affairs. Works by Kyd, Shakespeare, Heywood, Webster, and Middleton. Not open to first-year students. Enrollment limited. J. Feerick.

1360P. Shakespeare
We will study six plays intensively, testing various critical perspectives while getting acquainted with Shakespeare scholarship and criticism. Oral presentations; two short papers; a 20-page research paper. Prerequisite: Introduction to Shakespeare or a college-level equivalent. Enrollment limited. C. Kahn.

1360R. Modernism and the Early Modern: 17th-Century
Did human nature become modern in the seventeenth century or did modern people just think so? This course will study style, science, politics and cultural transactions in this period of revolution and restoration, examining such texts as Donne's satires and epistles and Eliot's high modernist essays on the division of human nature in this period. Enrollment limited to 20. S. M. Foley.

1360S. Between Gods and Beasts: The Renaissance Ovid
Ovid's Metamorphoses, an epic compendium of classical myths, narrates with wit and pathos the transformations of body and mind wrought by sexual passion. Central to Renaissance conceptions of the human, it inspired drama, poetry, and narrative. Readings: Shakespeare, Marlowe, Donne, Spenser, Milton. Students who have taken ENGL 1310D may not register for this course. Enrollment limited to 20. C. Kahn.

1400. Undergraduate Independent Study in Medieval and Early Modern Literatures and Cultures
Tutorial instruction oriented toward a literary research topic.

1410. American Poetry I: Puritans through the Nineteenth Century

1510. Special Topics in the Enlightenment and the Rise of National Literatures and Cultures
1510A. Austen and Her Predecessors
Before turning to an in-depth consideration of Austen’s major work, this course takes a revisionary view of the rise of the novel by studying fiction by women writers from Aphra Behn to Mary Wollstonecraft. Readings include Haywood’s Love in Excess, Inchbald’s A Simple Story, Burney’s Evelina, and, of course, Austen’s Northanger Abbey, Pride and Prejudice, Emma, Mansfield Park, and Persuasion. M. A. Rabhi.

1510B. Liberalism and American Culture
A course in the relationship between the rise of liberalism and American literary history. Writings from Franklin, Jefferson, Emerson, Fuller, Rowson, Twain, and Charlotte Perkins Gilman. P. Gould.

1510D. The Literature of the American South
The South is as much a state of mind as a place on the map, and some of the major figures in American literature have contributed to the making of what we think of when we think of “the South.” Explores sometimes contradictory but always important meanings of the American South. Authors include Poe, Douglass, and Twain. J. F. Egan.
1510E. American Renaissance
An intensive reading in American literature between 1820 and 1860, with special attention to Romanticism, race and slavery, and the historical novel. P. GOULD.

1510H. Why the Novel Happened
Readings in "early" novels of 18th-century England and in more recent explanations of the novel’s rise to dominance as a popular modern genre. How have changing ideas of truth, virtue, gender, money, politics, history, or the human subject interacted with the practices of narrative fiction? Writers to be considered include Behn, Haywood, Defoe, Richardson, Fielding, Sterne, Lewis, Watt, Lukaes, McKeon, and Bakhtin. M. A. RABB.

1510I. Eighteenth-Century Novel
How and why did the novel become the dominant literary mode? This course considers the “rise” of the novel during the “long” eighteenth century. Beginning with Behn and Defoe, readings include works by Richardson, Fielding, Sterne, Smollett, Lewis, and Godwin. M. A. RABB.

1510J. Eighteenth-Century Women Writers
Rediscovery and reconsideration of works by women during the eighteenth century are changing the literary canon: works by women are becoming mainstream, and they are changing the way we read 'traditional’ texts. This course includes poetry, drama, fiction, letters, diaries, and essays by writers including Manley, Haywood, Centlivre, Scott, Fielding, Montagu, Sheridan, Burney, Radcliffe, and Wollstonecraft. M. A. RABB.

1510L. Fiction and Mass Media in Nineteenth-Century England and America
Explores critiques of the mass media from Carlyle and Arnold to Benjamin and McLuhan by way of a reading of important works of popular Anglo-American fiction of the 19th century. Criticism includes essays by Carlyle, Arnold, Benjamin, and McLuhan; literature includes fiction by Poe, Dickens, Melville, Stevenson, and James. K. MCLAUGHLIN.

1510O. Inventing Race in America
What is “race”? Where does it come from? This course argues that categories of racial difference–far from being fixed or natural–have emerged from within writing. We trace the emergence of “race” in America from the late 16th century to the present day by reading 17th-century British colonial writing, 18th-century racial scientists, Jefferson, Crevecoeur, Melville, Faulkner, Mukherjee, and Silko. J. F. EGAN.

1510T. Swift and His Contemporaries
Swift’s works are central to this course’s investigation of literature, politics, and society, Anglo-Irish relations, and the great outpouring of satire in English in the early 18th century. Irony, parody, and mock-heroes inventively transform genres while challenging “abuses” of learning, government, religion, colonialism, and even love. Other writers include Congreve, Manley, Addison, Steele, Montagu, Pope, and Gay. M. A. RABB.

1510V. Civil Rights and American Literature
An examination of the relations between legal theory and practice and literature, with a particular emphasis on the nature and significance of those relations in the historical development of American discourses of civil rights. Readings include Thoreau, Douglass, Wright, and Perry, and legal theorists such as Dworkin, Unger, Cardozo, and Fish.
1510W. George Eliot
The course will study George Eliot's major works, including *Adam Bede*, *Middlemarch*, and *Daniel Deronda*, as well as examples of her essays and criticism. We will consider her experiments with literary realism, which helped secure for the novel form a position as high art. Giving attention to George Eliot's emphasis on conflicting ethical systems, from sympathy, utilitarian economics, and theology, to theories of physiological necessity, we will also examine the question of choice—including personal, women's social, professional, and marriage choices—that lies at the heart of many of her novels.

1510Z. American Fiction at the Turn of the Century
An investigation of the varied styles and methods adopted by writers as diverse as James, Crane, Dreiser, and Chesnutt in order to do justice to the dizzying changes taking place in American society at the turn of the century. Our aim will be twofold: first, to create working definitions of some of the period's most well-known fictional modes—most notably realism and naturalism; second, to question whether such definitions are ultimately of use in understanding the complex relationship between literature and its historical context. S. BURROWS.

1511A. American Literature of The Civil War
An examination of the way the Civil War is represented in American literature from Reconstruction to the present. Authors to be considered include Grant, Twain, Dixon, Chesnutt, DuBois, Faulkner, Morrison, Ellison. D. NABERS.

1511B. The Victorian Novel
Challenges the notion of a Great Tradition or mainstream Victorian novel by looking at the proliferation of subgenres—e.g., sensation fiction, crime fiction, thug fiction, colonial adventures stories—of which the period is known. Includes novels by Mary Shelley, the Brontës, Dickens, Mrs. Henry Wood, Eliot, Hardy, Stevenson, Haggard, Stoker, and Wilde.

1511C. Lincoln, Whitman, and The Civil War
A literary and cultural history of the Civil War with special emphasis on Whitman's poetry and Lincoln's addresses and letters. It focuses on issues of race, democracy, and modernity. P. GOULD.

1511E. Monsters, Giants, and Fantastic Landscapes
Monsters, giants, and exotic landscapes fill the pages of much writing in English before 1900. We will examine the ways in which a number of writers before 1900 use the strange and the fabulous to suggest new ways of understanding what it means to be normal. Authors may include Columbus, Shakespeare, Mary Shelley, and Poe.

1511G. Dickens and Others
An introduction to the novels of Charles Dickens (1812-1870) that considers these works in relation to other important intellectual, historical, and literary developments of mid-19th-century England. Special attention given to the political, social, and philosophical significance of "others" in Dickens's writing and in related works from the period. In addition to a set of Dickens's novels, readings include selections from Mill, Arnold, Marx, Tennyson, Eliot, and others. K. McLAUGHLIN.

1511H. Literature of the American Renaissance
A survey of the major figures of mid-19th-century American literature, with a particular emphasis on how the writers of the period engaged the political and legal issues informing the sectional conflict on the eve of the Civil War. Authors to be
considered include Poe, Hawthorne, Melville, Dickinson, Stowe, Douglass, Brown, Jacobs, and Whitman. Students who have taken ENGL 0600F may not register for this course. D. Nabers

1560. Seminars in the Enlightenment and the Rise of National Literatures and Cultures

1560A. Jane Austen and George Eliot
A survey of the major novels of Austen and Eliot. Readings will also include contemporary reviews and responses, letters, and Eliot's critical prose, as well as literary theory and criticism addressing questions such as novelistic form, realism and narrativity, the problem of the subject, the politics of aesthetics, and the changing status of the woman writer in the 19th century. Enrollment limited to 20 seniors and juniors. E. F. Rooney.

1560B. Melville
A seminar looking closely at the relation between the life and literary work of Herman Melville, with an extended reading of his masterpiece, *Moby-Dick*. The course will look at the history of writing and publishing during Melville’s era and consider some of his contemporaries like Hawthorne and Harriet Beecher Stowe. Enrollment limited to 20. P. Gould.

1560E. The Modern Self and Its Others
How do eighteenth-century representations of personal and public identity mark the emergence of the modern 'subject' as defined by gender, race, nation, language, and the body? Readings will include selections by Swift, Pope, Montague, Stern, Johnson, and Berney. M. Rabb.

1560F. Nineteenth-Century American Imperialism
Examines a number of different types of texts—novels, essays, journalism, oral narratives—in order to trace the connections between the internal colonialism of America in the nineteenth century and U.S. colonial ventures in the Caribbean, Asia, and Latin America. Writers to include Melville, Twain, Marti, Black Elk, Crane, Du Bois, and Roosevelt. S. Burrows.

1560G. Romantic Orientalism
Representations of "the East" in British writing and visual art from 1775 to 1825. Historical and theoretical accounts of "orientalism" and analysis of the political and ideological sources and consequences of "orientalist" representation. Readings in Wordsworth, Coleridge, Owenson, DeQuincey, Byron, Percy Shelley, and Mary Shelley. W. Keach.

1560H. The Victorian Novel
What specific historical conditions can be seen to have led to the emergence of the novel as a leading literary form in the Victorian era? What cultural work was it called upon to perform? How does it address broader philosophical, economic, political and social questions of the Victorian era? Authors include Dickens, Eliot, Hardy, Stevenson, and Conrad. Enrollment limited. Written permission required. K. McLaughlin.

1560M. Orientalism and the Place of Literature
Literary representations of "the East" from the Enlightenment through Modernism and their relation to changing conceptions of the meaning and value of "literature" itself. Thinking about "place" in representational, geopolitical, and institutional terms. Readings from the "Arabian Nights," Mary Wortley Montagu, Oliver Goldsmith, Coleridge, Byron, De Quincey, Kipling, Michael Ondaatje, and others; theoretical and
historical perspectives from Said, Williams, Eagleton, and others. Enrollment limited. Written permission required. W. KEACH.

1560N. Eighteenth-Century Novel
The 18th century marks the beginning of the novel as we know it. This course considers the "rise" of fiction during the "long" eighteenth century. Beginning with Behn, Haywood and Defoe, readings include works by Richardson, Fielding, Sterne, Smollett, Lewis, and Godwin. M. RABB.

1560O. Slavery and American Literature
This course examines the ways in which slavery is represented in 19th-century American literature. We will consider efforts to delineate the social practices and effects of chattel slavery and deployments of slavery as a form of political rhetoric. Readings include works by Douglass, Jacobs, Stowe, Melville, Howells, Twain, and DuBois. Enrollment limited. Written permission required. D. NABERS.

1560Q. The Poetry of Politics: Baudelaire, Arnold, Whitman
Explores the special challenge to the traditional form of lyric poetry posed by the post-industrial modern city of the mid-19th century. We will study the poetry and prose of Charles Baudelaire, Matthew Arnold, and Walt Whitman as responses to the urban conditions represented by mid-19th-century Paris, London, and New York. Motifs to be considered include modernity, commodification, and crowds. Priority will be given to junior and senior concentrators in English, Comparative Literature, Modern Culture and Media, and French Studies. First-year students and sophomores may request permission by email to take the course.

1560R. From Frankenstein to Einstein: Literature and Science from 1800 to 1950
Science and literature as interrelated ways of knowing and learning, focusing on questions of language, observation, interpretation, and value. Themes include utopias and dystopias, evolution and degeneration, man and machine, entropy and chaos, and the relationship between literary imagination and scientific creativity. Readings include poems, plays, novels, and essays (Mary Shelley, Tennyson, Huxley, Arnold, Holmes, Wells, Stoppard) alongside a range of scientific writing (Darwin, Faraday, Huxley, Gould, James Watson). Enrollment limited. K. MCLAUGHLIN.

1560S. Forms of American Realism, 1865-1945
An inquiry into the nature of realism and an examination of its various historical manifestations-literary, legal, political, and aesthetic-between the Civil War and World War II. Authors to be considered include DeForest, Chesnutt, Twain, Howells, Norris, Gilman, Wharton, Hemingway, Steinbeck, Hurston, and Wright. Enrollment limited. D. NABERS

1560T. Literature, Religion, and "Culture Wars" in America
This course examines important moments where religious and literary histories converge. It reads "classic" American literary works in context of ongoing conflicts between evangelical and secular forces in American life, and it thinks about literature as an arena where these very categories are contested and revised. Major readings will include works by John Winthrop, Benjamin Franklin, Harriet Beecher Stowe, African American women preachers, Emerson, Mark Twain, and Flannery O'Connor. Enrollment restricted. P. GOULD.

1560U. Radicals and Conservatives: the later 18th Century
The relationship between literature and society is demonstrated by conservatives like "Dictionary" Johnson as well as by radicals like visionary Blake. Readings include
works by Johnson, Boswell, Burke, Gibbon, Sterne, Burney, Wollstonecraft, Godwin, and Blake. Enrollment limited to 20.  M. RABB.

1560V. *The Lives of a Text*
Books are composed not merely of concepts, for they are material objects whose forms, functions, and value can vary widely. We will make extensive use of rare editions at the John Hay Library to help us explore not only the literary content of works but also their production and dissemination in various formats and for various audiences. Authors include Shakespeare, Irving, Poe. Enrollment limited to 15.  J. F. EGAN.

1560W. *Getting Emotional: Sociality, Strife, and the Romantic Self*
This course examines relationships between such terms as emotions, feelings, politics, and society in several key texts from 18th- and 19th-century literature. What does it mean to "get emotional"? What does it mean to "feel"? If feelings are or can be violent, are they meaningful? Can feeling be thought? This course will consider these questions in 19th-century novels, stories, poetry, and philosophical essays. Authors include: Wordsworth, Austen, Blake, Coleridge, Keats, Shelley, Oscar Wilde, Pater, Kant, Melville, Hofmannsthal, Hume. Enrollment limited to 20.  J. KHALIP.

1560X. *Transatlantic America*
What was "transatlantic" culture in colonial and 19th-century America? How did American writers continue to engage and respond to English culture? Franklin, Emerson, Sedgwick, Paine, Addison and Steele, Carlyle, and others. Enrollment limited.  P. GOULD.

1560Y. *The Ethics of Romanticism*
An exploration of the intersections of moral philosophy and Romantic literature and culture. Writers studied may include Smith, Hume, Bentham, Hazlitt, Hegel, Wordsworth, Coleridge, Keats, Shelley, Byron, Godwin, Equiano, Austen. We will consider how writings of the Enlightenment and Romantic period differently reflect upon problems of knowledge, otherness, identity, community, and aesthetics, and how these reflections are related to the ethical imagination. We will also juxtapose our selections with several recent theoretical debates. Enrollment limited. J. KHALIP.

1560Z. *Time and Narrative*
This course studies fiction that experiments with the representation of time alongside philosophical and critical texts on the theory of time. We will consider how engagements with the question of time shape the structures, language, characters, plots, themes, and goals of narrative, looking at topics such as time and language, story and narration, memory and history. We will also consider the impact of technological and social developments on the sense of time (the wristwatch, the telegraph, railway timetables). Authors include St. Augustine, Laurence Sterne, John Locke, David Hume, Ambrose Bierce, Charles Dickens, H.G. Wells, Thomas Hardy, Henry James, Virginia Woolf. Enrollment limited. V. RYAN.

1561C. *Swift and His Contemporaries*
Jonathan Swift's works are central to this course's investigation of early 18th-century literature and culture. The reading focuses on the period as an "information age" energized by issues not unlike those of our own time: partisan politics, money, proliferation of new forms of textuality, globalization, changing views on gender and sexuality, love, religion, and war. The emphasis will be on irony, parody, and satire. Other writers include Congreve, Defoe, Manley, Pope, Gay, Montagu, Addison, and
Steele. Students who have taken ENGL 1510T may not register for this course. Not open to first-year students or students who have taken ENGL1510T. Enrollment limited. M. RABB.

1561D. Writing and the Ruins of Empire
An exploration of literary representations of "empire" and "imperialism" from the 18th century to the present. Readings in Gibbon's *Decline and Fall of the Roman Empire*, Volney's *Ruins of Empire*, and a wide range of 19th- and 20th-century texts. Some consideration of theories of imperialism and of visual representations of cultures of empire. Enrollment limited to 20. Prior coursework in 18th- and 19th-century literature advised. W. KEACH.

1561E. The Western
An examination of the formula Western in American fiction, art, and cinema, with a view toward situating the genre within urban middle-class culture in the late 19th- and 20th-century United States. Authors to be considered include Twain, Harte, Crane, Austin, Cather, Doctorow, Reed, Leonard, and L'Amour. Films: *Destry Rides Again*, *Stagecoach*, *Rio Bravo*, *The Seven Samurai*, *Fistful of Dollars*, *Dirty Harry*, *The Man from Laramie*, *Paint your Wagon*, *Act of Violence*, among others. Enrollment limited to 20. D. NABERS.

1600. Undergraduate Independent Study in the Enlightenment and the Rise of National Literatures and Cultures
Tutorial instruction oriented toward a literary research topic.

1610. American Poetry II: Modernism
Study of modernist American poetry. Readings include Pound, Eliot, Stevens, Williams, H.D., Moore, Hughes, and others. M. K. BLASING.

1650. Modernist Fiction
Readings in British and American fiction and culture in the early 20th century, with particular attention to the relationships between modernist literary experiment and contemporary questions about empire, race, the changing status of women, and the grounds of literary authority. Writers may include Conrad, H.D., Joyce, Larsen, Lawrence, Rhys, Toomer, Woolf. Two lectures and one discussion meeting weekly. E. T. KATZ.

1710. Special Topics in Modern and Contemporary Literatures and Cultures

1710A. "Extravagant" Texts: Advanced Studies in Asian American Literatures
Examines Asian American writings that are difficult, complex, and/or experimental—those, in Kingston's phrase, "extravagant." Explores the issue of what is at stake—politically and aesthetically—in writing that explicitly challenges the generic conventions with which much Asian American literature is linked: autobiography, the Bildungsroman, ethnography, realism, and sentimentalism. D.Y. KIM.

1710B. American Vertigo: How the World Sees the U.S.
Why does America exercise such an extraordinary attraction for foreign writers? And why, moreover, is the America that appears in those writings so often unrecognizable? This class examines the representation of American life from DeTocqueville to Henry-Levy, looking at work by Amis, Antonioni, Adorno, Nabokov, Kincaid, and others. Two lectures and one discussion meeting weekly. S. BURROWS.

1710C. Race and Nation in American Literature
From the heyday of literary realism through the rise of modernism, race definitively shaped the national literature of the U.S. This course will consider representations of
racial identities in relation to key historical and aesthetic developments within these two periods. Authors include Mark Twain, Frances Harper, Charles Chesnutt, Stephen Crane, William Faulkner, and John Fante. R. D. MURRAY.

1710D. Anglo-American Nonfiction: Sages, Satirists & New Journalists
After examining the relations between fiction and nonfiction, the class will consider the work of Tom Wolfe, Joan Didion, Annie Dillard, and others within contexts created by essayists (Montaigne), satirists (Swift), and 19th-century sages (Carlyle, Thoreau, Nightingale, and Ruskin). The class will become acquainted with various nonfictional forms including prose satire, the meditative essay, sage-writing, autobiography, and travel literature. G. P. LANDOW.

1710E. Reading Race in Black and Yellow: Comparative Studies in Twentieth-Century African American and Asian American Fiction
Focusing on pairs of African American and Asian American works that address parallel concerns, we explore the continuities and discontinuities between these literary traditions. Authors we examine may include: James Weldon Johnson and Winnifred Eaton, Richard Wright and Carlos Bulosan, Chang-rae Lee and Toni Morrison, Karen Tei Yamashita and Caryl Phillips. D. Y. KIM.

1710F. Tribe, Nation, and Race in African Fiction
How do major African novelists represent the interplay of tribe, nation, and race in African societies? This course will introduce students to key themes and contexts of African literature in English. We will read the work of the writers for the historical sources and conceptual implications of these categories in modern Africa. Writers include Achebe, Emecheta, Farah, Ngugi, and Vera. O. GEORGE.

1710G. Faulkner
In examining Faulkner's major works from the early stream-of-consciousness novels through the history-driven and race-inflected texts of the 30s and 40s, this course will evaluate Faulkner's practice as a writer working both in and against Southern culture, and as Modernist writing within an international context. Issues include narrative experimentation, race, class, gender, and the evolution of Faulkner's work.

1710H. Black Internationalism and African American Literature
The notion that African Americans are an extension of a global racial community has been a fixture of black politics and culture for more than a century. In this course, we will consider how the concept of global racial alliance has shaped black political resistance, literary practice, and critical theory. R. D. MURRAY.

1710I. Harlem Renaissance: The Politics of Culture
The Harlem Renaissance was a remarkable flowering of culture in post-war New York as well as a social movement that advanced political agendas for the nation. This course takes up the relationship between literature and politics by exploring such matters as the urbanization of black America, the representation of the black poor, the influence of white patronage, and the rise of primitivism. Writers may include Hughes, Hurston, Larsen, Fisher, Locke, and McKay. R. D. MURRAY.

1710J. Modern African Literature
Many African writers produce their works in one European language or another. Often, these works are more widely read in Europe and North America than on the African continent itself. This course will use these facts as starting points to explore key themes, antecedents, and intellectual contexts of contemporary African writing. We will examine fiction, drama, poetry, critical prose, and visual materials. Writings
by Achebe, Farah, Ngugi, Soyinka, Vera, Wicomb. Films by Davidson, Kouyaté, Teno. O. GEORGE.

1710K. Plain Folk: Literature and the Problem of Poverty
Explores poverty as a political and aesthetic problem for the American novelist. Examines the ways that writers have imagined the poor as dangerous others, agents of urban decay, bearers of folk culture, and engines of class revolt. Also considers these literary texts in relation to historical debates about economic inequality. Writers may include Crane, Faulkner, Wright, Steinbeck, and Hurston. R. D. MURRAY.

An advanced survey that examines how 20th-century American novels construct the nation as "imagined community" and as "fictive ethnicity." We focus on the central role that conceptions of race--as well as those of gender and sexuality--play in the novelistic visions of America projected by such authors as Ralph Ellison, William Faulkner, Jessica Hagedorn, and Chang-rae Lee. D. Y. KIM.

1710N. Photography and the American Novel
Traces the impact made by the emerging medium of photography on American fiction from its very beginnings until the present. Our focus will be on the varying strategies adopted by novelists in response to the representational challenges posed by photography. Writers include Hawthorne, Nabokov, Faulkner, Hurston, Citron, Eugenides, and Barthes. Students should register for ENGL 1710N S01 and may be assigned to conference sections by the instructor during the first week of class. S. BURROWS.

1710O. The Dead and the Living
Readings in literature, theory, psychoanalysis, philosophy and law examine how the relation between the dead and the living shapes the concerns of modernist narrative and thought. Topics include "Living with the Dead," "Haunting and Knowing," "Writing Lives," "Dreaming and Waking," and "Picturing the Dead." Readings include Joyce, Conrad, Woolf, Forster, and Greene as well as Freud, Lacan, Benjamin, and Barthes. R. REICHMAN.

1710P. The Literature and Culture of Black Power Reconsidered
This course reexamines the Black Power movement as a signal development in American literature and culture. We will read classics from the period with a view toward reassessing the nuances and complexities of their form and politics. At the same time, we will recover less familiar texts that complicate conventional understandings of what defines this movement. Authors include Malcolm X, Huey P. Newton, Angela Davis, Eldridge Cleaver, John Edgar Wideman, Ernest Gaines, and Amiri Baraka. R. D. MURRAY.

1710S. Writing War
Examines the challenges that war poses to representation, and particularly to language and literary expression in the modern era. We will focus primarily on the First and Second World Wars, exploring the specific pressures war puts on novels and poetry, as well as on history, psychology, and ethics. Works by Sassoon, Owen, Barbusse, Brittain, Woolf, Rebeccca West, Graham Greene, Pat Barker, Marc Bloch.

1710U. What Was Postmodern Literature?
How compatible is the idea of the postmodern with the idea of a historical period? This course looks at recent British and American literature through the optic of postmodern
theory, discussing how the theoretical problematization of both history and politics has an impact upon the very possibility of fiction. Readings include Doctorow, Pynchon, Amis, Jameson, Lyotard, Baudrillard. Students will be assigned to conference sections by the instructor during the first week of class. T. R. BEWES.

1710W. Literary Impressionism
An examination of the role of the "literary impressionists" Henry James, Joseph Conrad, and Ford Madox Ford in the transformation of the novel from realism to modernism. Central themes will include their narrative methods for dramatizing consciousness and the political and ethical implications of impressionism.

1760. Seminars in Modern and Contemporary Literatures and Cultures

1760A. Joyce and Woolf
Intensive study of two of the most innovative and influential modern British novelists, with an emphasis on the relation between their formal experiments and their political engagements. Enrollment limited to 20. P. ARMSTRONG.

1760B. Contemporary African American Literature and the End(s) of Identity
African American writers and intellectuals have begun to question the wisdom of defining black identity in terms that overemphasize the shared racial and cultural heritage of black people. Course assesses a range of literary and scholarly writing that engages these concerns. Explores such topics as the growing class division among African Americans, the effects of integration, the decline of nationalism, and the visibility of sexual minorities. Likely authors include Johnson, Morrison, Wideman, Beatty, and Senna. Enrollment limited. R. D. MURRAY.

1760C. Body and Event in Contemporary Fiction
Discusses the recent turn to the body and mortality in contemporary fiction, and considers the proposition that episodes of dismemberment in contemporary fiction stand in for the dismantlement of the literary text itself. Readings include Selby, Ellis, Cooper, Acker, Frame, Deleuze, Butler, Blanchot. Enrollment limited to seniors, juniors, and sophomores. Banner registrations after classes begin require instructor approval.

1760D. Race and Detection: American Crime Narratives
We examine American crime narratives, focusing on their representations of race, class, gender, and sexuality. Writers studied may include James M. Cain, Raymond Chandler, William Faulkner, Sue Grafton, Chester Himes, Walter Mosley, and Mark Twain.

1760E. Who's Afraid of Virginia Woolf?
This course asks how and why Virginia Woolf haunts our culture, approaching her status as a cultural icon through her novels, essays, diaries and letters. We will explore her work in the contexts of history, modernism, and literary influences, and will examine the dimensions of Woolf's afterlife--a posthumous dynamic that shapes issues in art, politics, and gender. R. REICHMAN.

1760F. City, Culture, and Literature in the Early Twentieth Century
How did changes in the city shape early 20th-century literature? How does the literature of this period--whether avant-garde or documentary, progressive or conservative--shape the way we imagine the city? Topics may include urban spectacle, mobility and segregation, the neighborhood and the crowd. Authors include
Dos Passos, Eliot, Larsen, Orwell, Woolf, Wright. Prerequisite: two previous literature courses. Priority to English and Urban Studies concentrators. E. T. KATZ.

1760G Contemporary British and American Poetry

1760I "Terrible Beauty": Literature and the Terrorist Imaginary
Why does terrorism fascinate literary writers in the modern period? Is terrorism the figure of something that is unrepresentable in fiction, or is it a type of direct political action that fiction writers aspire to? Can literature's humanistic role of allaying terror survive an age of spectacular politics? How susceptible is terrorism to "aestheticization"? Texts will include works by Conrad, Flannery O'Connor, Naipaul, Dennis Cooper, Frantz Fanon, and Ngugiwa Thiong'o. Enrollment limited to seniors, juniors, and sophomores. Banner registrations after classes begin require instructor approval.

1760J Pynchon and His Precursors
A study not of how Thomas Pynchon's work has influenced American literature, but of how his novels have influenced the way we read writers who came before him. We will read V and Gravity's Rainbow, as well as work by Borges, Highsmith, Ellison, Nabokov, Fitzgerald, Kafka, and Rilke. Limited to 20 senior and junior concentrators in English and Comparative Literature. Others admitted by permission only.

1760K Reading New York
We will explore narratives of New York City, both fictional and nonfictional, from the early 20th century to the present. Topics to be addressed include immigration, segregation and mobility, cosmopolitanism and the neighborhood, celebrity and postmodernism. Authors may include John Dos Passos, Ann Petry, E.B. White, Jane Jacobs, Jay McInerny, Rem Koolhaas. Registration limited to English and Urban Studies concentrators. Students from other concentrations should attend class on the first day and will be admitted if space is available. Enrollment limited. Not open to first-year students.

1760L Bloomsbury and Modernism
This course will explore the contribution of the so-called "Bloomsbury Group" to the development of modernism in Britain. The focus will be on the central literary figures (Virginia Woolf, E. M. Forster, T. S. Eliot), but attention will also be paid to the visual arts (especially Roger Fry and Post-Impressionism) and social criticism (Lytton Strachey, Leonard Woolf, and John Maynard Keynes). A major question will be how the controversies swirling around Bloomsbury exemplify important debates about modernism. Enrollment limited. Not open to first-year students. P. ARMSTRONG.

1760N Henry James
James is a pivotal figure in the history of the novel. His explorations of the workings of consciousness and conventions in representation transformed realism and announced the preoccupation of modernism with interpretation, signs, and narrative experimentation. An intensive study of his most important novels from Daisy Miller to The Golden Bowl. P. ARMSTRONG

1760O American Orientalism
Examines Orientalism as central motif and thematic concern for American writers from Emerson to DuBois to Kingston. Issues to be addressed include the distinctions between U.S., European, and Afro-Orientalisms; how intra-Asian differences (i.e.,
China-Japan, East/South Asia) shape conceptions of the Orient; how whiteness and blackness are constructed via yellowness; the relationship between Orientalism and racism; how "nativist" Asian American literary texts, on the one hand, and diasporic texts, on the other, negotiate the legacy of Orientalism. Enrollment limited.

1760P. "Extravagant" Texts: Advanced Studies in Asian American Literature
We examine Asian American writings that are difficult, complex, and/or experimental: texts that are, in Maxine Hong Kingston's phrase, "extravagant." By looking at works that explicitly challenge the generic conventions with which much Asian American literature is usually linked--autobiography, the Bildungsroman, ethnography, realism, and sentimentalism--we try to arrive at a more expansive sense of what the ends of Asian American cultural politics might be. Enrollment limited.

1760Q. James Joyce and the Modern Novel
How did James Joyce's narrative experiments change the novel as a genre? In addition to studying Joyce's major works (Dubliners, Portrait of the Artist, and Ulysses), we will read novels by important contemporaries and successors such as Virginia Woolf, William Faulkner, Samuel Beckett, Salman Rushdie, Vladimir Nabokov, and Thomas Pynchon. Readings will include representative and influential samples of the Joyce criticism and well as theoretical statements about modernism and post-modernism. Banner registrations after classes begin require instructor approval. Enrollment limited. P. ARMSTRONG.

1760R. The Roaring Twenties
The 1920s crystallized much of what we consider modern in 20th-century U. S. culture. This course reads literature of the decade in the context of a broader culture, including film and advertising, to analyze the period's central features: the rise of mass culture and of public relations, changes in women's position, consumerism, car culture, nativism and race relations. Writers include Fitzgerald, Hemingway, Larsen, Toomer, Parker. First-year students and students who have taken ENGL 0650K may not register for this course. Enrollment limited. E. T. KATZ.

1760S. Law and Literature: From Response to Responsibility
Explores modernism as it is shaped by the normative and ethical concerns of a rapidly changing world through literary works, legal writing, and legal opinions. Examines the conceptual, psychological and rhetorical connections between literature and law, and considers how both disciplines shape the imagination but also aim to elicit response and responsibility. Authors include Walter Benjamin, Joseph Conrad, Virginia Woolf, Rebecca West, Chinua Achebe; legal texts include Blackstone, Holmes, Bentham, Cover and a number of legal opinions. Enrollment limited to 20 juniors and seniors.

1760T. Literary Africa
Explores the sense in which the word "Africa" has come to carry a range of disparate moral, epistemological, and political connotations in literary and related discourses. We will study 19th century autobiographical and travel writing by black African agents of Christian missionary organizations (Ajayi Crowther, Birch Freeman, Philip Quaque, Joseph Wright); critical essays by contemporary scholars of postcolonial cultures (Appiah, Bhabha, Mudimbe, Peel, Pratt); and imaginative literature by African writers (Achebe, Soyinka, Ngugi, Marechera, Vera). Enrollment limited. Not open to first-year students.
1760V. *Lying, Cheating, and Stealing*
Explores literature's treatment of transgressions large and small, with particular attention to the way in which modernist narratives expose, obstruct, condone, or condemn acts of wrongdoing. What is the relationship between a misdeed and its retelling? Does writing right the story of a wrong? Readings from Rousseau, Graham Greene, Oscar Wilde, Jean Genet, Lauren Slater, Nietzsche, Freud, as well as film, television, and select readings from law. Enrollment limited.

Focuses on the complex relationship between the genre of the novel and nationalist rhetorics in the modern U.S. Gives particular attention to how literary discourses of nationalism articulate with those of race, gender, and sexuality.

1761C. *Race, Writing, Manhood: Rhetorics of the “Authentic” in 20th-Century African and Asian American Literature*
Explores the interrelatedness of racial, sexual, and literary identity in works by U.S. black and Asian male writers. Particular interest given to how the issue of homosocial desire frames literary accounts of racial authenticity. Writers and theorists studied may include James Baldwin, Frank Chin, Ralph Ellison, Frantz Fanon, David Henry Hwang, D. Y. Kim.

176IL. *Reading the Black Masses in Literature and Critical Practice*
African American literary and critical practice in the twentieth century was definitively shaped by claims about the linkages between literature and mass politics. We will unpack the continuities and divides that constituted such assertions. Historical nodal points in our investigations will include racial uplift, the Harlem Renaissance, the Black Power Movement, and the post-identity debates.

1761M. *Asian American Travel Narratives*
Examines mobility and movement as key motifs in Asian American fiction. The course will focus on Asian American literary texts that are structured around travel, both in relation to the United States and to Asia. Our approach will draw from Americanist and Asian Americanist cultural theories about narratives of mobility and from postcolonial theories about travel writing. Enrollment limited.

1761N. *Natural and Supernatural: Issues in the Study of Science and Religion*
Religion has been studied in a number of fields (anthropology, classics, history, philosophy, psychology, sociology) as a complex of human/cultural phenomena to be examined and explained naturalistically or, as it is said, "scientifically." The course focuses on a set of key classic and contemporary texts in this tradition and on the issues they raise for current understandings of science, religion and the relations--historical, intellectual, cultural and political--between them. Enrollment limited to 20 juniors, seniors, and graduate students. B. H. Smith.

1761O. *"Everything that is must be destroyed": American Modernism*
This class will attempt to discover whether there is such a thing as American modernism, examining the connections between works and movements as different as Gertrude Stein's highly experimental *Three Lives*, the Harlem Renaissance (Larsen, Hurston), American Gothic (Anderson, Faulkner), social realism (Wharton, Wright), the cosmopolitan fiction of Fitzgerald and Hemingway, and the proto-postmodern work of Barnes and West. Enrollment limited.
1761P. Yeats, Pound, Eliot

1800. Undergraduate Independent Study in Modern and Contemporary Literatures and Cultures
Tutorial instruction oriented toward a literary research topic.

1900. Special Topics and Seminars in Critical and Cultural Theory

1900A. “Literature” and the Ideology of the Aesthetic
Theoretical and historical analysis of the idea of "literature" as writing that has the status of art, in relation to the emergence and elaboration of discourses of the "aesthetic." Readings in 18th- and 19th-century German and British sources (Kant, Schiller, Hegel, Nietzsche; Coleridge, Shelley, Arnold, Wilde) and in 20th-century literary and aesthetic theory (Benjamin, Adorno, Barthes, Foucault, Derrida, Williams, Eagleton). Enrollment limited to 20. Priority given to English concentrators. All other students must obtain instructor's permission. W. Keach.

1900D. Literature and Politics
Literature as a changing historical formation that often represents and is always shaped by the practices of organizing, asserting, and controlling power in society. Sustained focus on writings by Raymond Williams, Leon Trotsky, Michel Foucault, Edward Said, Gayatri Spivak, and Terry Eagleton, and on literary texts read from the perspectives of these six theorists (possibly Shakespeare, Milton, Marvell, Swift, Dickens, Gaskell, the Brontës, Victor Serge, Anna Akhmatova).

1900E. Aesthetics and Politics
Considers the shifting relationship between art and politics beginning with the formation of aesthetics in the Enlightenment and continuing through such 20th-century historical moments as Naziism, modernism, impressionism, socialist realism, postmodernism, and such thinkers as Kant, Hegel, Marx, Adorno, Lyotard, Cixous, Deleuze.

1900F. Interpretation
This course will introduce students to some of the most important issues in the theory of interpretation and explore their implications for critical practice. Topics will include the circularity of interpretation, the availability and reliability of tests for validity, the causes and consequences of interpretive conflict, and the historicity of understanding. Readings will include major theoretical statements on these issues as well as exemplary critical texts.

1900I. Critical Methodologies: Contemporary Literary Theory
A survey of theories of literature from the early 20th century to the present, with particular attention to relations between "literary theory" and the broader phenomena of cultural studies and Critical Theory writ large. We will examine the New Critics; structuralism, post-structuralism and new historicism; cultural theory, including psychoanalysis, marxism, and aesthetic theory. Topics will include literariness and textuality, the reader and subjectivity, narrative and mimesis, and the reemergence of form in contemporary literary studies. Enrollment limited to 20. Not open to first-year students.

1900L. The Problem of American Literature
Considers questions such as: what are the distinctive qualities (if any) of American literature, and how do the various writers from diverse cultural settings fit into a single
literary tradition called "American" (or do they fit in)? In order to examine the assumptions and implications of studying literature as a national phenomenon, focuses reading on various critical and theoretical texts.

1900M. Twentieth-Century Reconceptions of Knowledge and Science
Significant critiques of classic and prevailing (rationalist, realist, positivist) ideas of scientific truth, method, objectivity, and progress and the development of alternative (constructivist, pragmatist, historicist, sociological) accounts; the dynamics of knowledge; the relation between scientific and other cultural practices. Readings include works by Fleck, Popper, Kuhn, Foucault, Rorty, and Latour. Prerequisite: college-level work in critical theory, science, or philosophy.

1900O. Contemporary Feminist Literary Theory
An advanced survey of 20th-century feminist literary theory with an emphasis on U.S., British, and French traditions. Topics include canon formation, “resisting readers,” and the category of “women’s writing,” as well as the relation of feminist criticism to problematics such as critical race theory, poststructuralism, psychoanalysis, and postcolonialism. E. F. ROONEY.

1900P. History of Criticism from Plato to Postmodernism
A survey of the major theorists of literature in the western tradition, from the Greeks to the contemporary period. Recurrent issues will include the definition of literary value, the distinctiveness of the aesthetic experience, and the moral and social uses of literature. Enrollment limited. P. ARMSTRONG.

1900Q. Women In/And the Novel
An introduction to the novel through feminist theory, considering social and historical reasons why women read, wrote, and figured in novels, from the 18th century to the 20th. Novels by Defoe, Austen, George Eliot, Rhys, Woolf; readings in feminist theory and criticism. Priority will be given to concentrators in English and Gender Studies. Others will be admitted only with permission of the instructor. Enrollment limited. C. KAHN.

1900R. Queer Relations: Aesthetics and Sexuality
A study of the relationship between aesthetic thought and sexuality in a variety of literary and cinematic works. We will supplement our readings with ventures into queer theory, emphasizing how art is related to identity, community, race, gender, and ethics. Authors include Wilde, Pater, James, Winterson, Cole, Guibert, Foucault, Bersani, Edelman. Films by Julien and Jarman.

1910. Special Topics in Literatures and Cultures in English

1910A. Dreamworlds: Utopia from Plato to the Present
Can acts of writing change the world? This course looks at a number of famous utopias and dystopias from classical time to the modern period and analyzes how the genre's literary experiments transform reading into a political act. Works by Plato, More, Montaigne, Shakespeare, Swift, H.G. Wells, and Le Guin. Films will include Blade Runner and Pleasantville.

1910B. Great Books and Good Movies
Since the first silent pictures, the film industry has turned to "great books." This course uses films based on "great books" to examine differences between the genres. Frequent screenings; reading and screen journals; critical essays and screenplays. Films/texts include Sense and Sensibility, Great Expectations, Beloved, and The English Patient.
1990. Senior Honors Thesis in Nonfiction Writing
Independent writing project under the direction of a faculty member. Permission should be obtained from the Honors Director for Nonfiction Writing. Enrollment limited to English concentrators whose application to the Honors in Nonfiction Writing program have been accepted.

1991. Senior Honors Thesis in Literatures and Cultures in English
Seminar and workshops led by the Advisor of Honors in Literatures. Introduces students to sustained literary-critical research and writing skills necessary to successful completion of the senior thesis. Particular attention to efficient ways of developing literary-critical projects, as well as evaluating, incorporating, and documenting secondary sources. Enrollment limited to English concentrators whose applications to the Honors in Literatures program have been accepted. Permission should be obtained from the Honors Advisor for Literatures and Cultures in English.

1992. Senior Honors Thesis in Literatures and Cultures in English
Independent research and writing under the direction of a faculty member. Permission should be obtained from the Honors Advisor for Literatures and Cultures in English. Open to senior English concentrators pursuing Honors in Literatures and Cultures in English. Instructor permission required.

Primarily for Graduates
2360. Graduate Seminars in Medieval and Early Modern Literatures and Cultures

2360B. Before Holinshed: The English Brut Chronicle Tradition
Holinshed’s 16th-century history drew from 400 years of manuscript chronicles, most in verse, which founded the “modern” history of England on a Trojan/Celtic ancient Britain. We will read the medieval versions of these historical narratives from Geoffrey of Monmouth, Wace, and Layamon to the popular 15th-century Middle English prose Brut. Critical engagements with manuscript/print cultures and the “Brut” narrative as a vocabulary for nationalism. E. J. Bryan.

2360C. Beowulf
This course will consist of a careful reading and analysis of Beowulf in its original language. In addition to developing language competence, we will also discuss the poem through comparison to other Old English poems and Scandinavian analogues. Themes will include the manuscript context, heroism, gender, sacrifice, lamentation and elegy, the monstrous, material culture, and contemporary theoretical approaches to the poem. Prerequisite: 2000-level Introduction to Old English or its equivalent.

2360D. Early Modern Drama
An intensive introduction, for specialists and others, to the great classics and some less-known gems of a stellar period in English drama. Plays by Marlowe, Middleton, Webster, Jonson, and Ford, among others. Topics: the popular theatre and its audience; urban culture; English nationhood; boy actors and the representation of gender and sexuality; play texts in print culture.

2360F. Introduction to Medieval Studies
Equips students with critical, linguistic, and historical knowledge to interpret Middle English texts (1066-1500). Primary texts by Chaucer and others, to be read in contexts of current critical debates (on topics including textuality, sexuality, and political formations) and medieval conceptual systems (including dream theory, alchemy, arts of memory). Priority to graduate students; no prior Middle English required.
2360G. *Medieval Manuscripts: Paleography and Interpretation*
How to read and understand a medieval manuscript text. Methodologies include paleography, codicology, editorial theory. Hands-on analysis and interpretation of specific Middle English texts in their manuscript medium (in microfilm, facsimile, digital representation, and when accessible, actual manuscripts). For students already acquainted with Old English and/or Middle English; Latin helpful. Textual projects in other medieval languages possible with instructor’s consent. E. J. BRYAN.

2360H. *Race and Place in Renaissance Literature*
Reads early modern English drama, poetry, and prose depicting the migration of groups to foreign places (England, the Indies, the Americas) to consider how such writing defines the connection between space and identity. We will consider how this literature values environment as against blood, soil against seed, as determinants of identity capable of marking people as “strange,” “alien,” or “natural.” Authors will include Marlowe, Shakespeare, Fletcher, Massinger, Drayton, Jonson, and Bacon. This course is limited to graduate students. All others will be admitted only with permission of the instructor.

2360I. *Renaissance Embodiments*
Considers Renaissance representations of self in pre-modern terms—that is, inseparable from the physical conditions of climate and region. How did early modern culture draw the line between culture and nature? Where do these theories connect with or depart from modern paradigms of self in such authors as Elyot, Shakespeare, Calvin, Luther, Burton, Donne, Montaigne, Jonson, and Browne?

2360K. *The Renaissance and Modernity*
Modernism restages 17th-century cultural and political revolution and restoration. An examination of the problem of style and modernity, looking at practices in poetic and prose style and at the emergence of the term "modernity" at the moment of high modernism and after.

2360N. *The Pearl Manuscript in Context*
Close translation of the Middle English alliterative poems in British Library Manuscript Cotton Nero A.x, *Pearl, Cleanness, Patience*, and *Sir Gawain and the Green Knight*, with attention to their medieval theological, generic, and codicological contexts. E. J. BRYAN.

2360O. *Irony and Satire*
Works of irony and satire (from the Civil Wars to the death of Swift) allow an investigation of current issues in the study of Civil War, Restoration, and Early 18th-C. texts, including revisionist history, the public sphere, Anglo-Irish relations, print culture, mercantilism, and gender construction. M. A. RABB.

2400. *Graduate Independent Study in Medieval and Early Modern Literatures and Cultures*
May be repeated for credit. Instructor's permission required.

2560. *Graduate Seminars in the Enlightenment and the Rise of National Literatures and Cultures*

2560A. *American Exotics*
From the beginning of colonization all the way up to the American Revolution, America is consistently figured as a remote and alien place. We will explore the figurative transformation of "America" by examining the use of images of the
"remote" and "exotic" in British American colonial writing, including poems, plays, maps, travel narratives and natural histories.

2560C. Early American Studies
A critical introduction for graduate students to the scholarly field of early American studies, from the colonial era to the late 19th century. P. Gould.

2560E. Liberalism and American Culture
A graduate seminar in the relation between liberal culture and literary history. It examines the emergence of liberalism and its historical transformations, placing special emphasis upon cultural formations of individual rights, agency, and economic "freedom." Includes writings by Jefferson, Emerson, Fanny Fern, Frederick Douglass, and Ralph Ellison.

2560G. Romantic Orientalism
Representations of the “Orient” in British and transatlantic literary culture during the “Romantic” period (c. 1770-c. 1830). Connections between cultural representation and both assertions of and challenges to British colonial and imperial power. Theoretical, historical and political analysis by Said, Barrell, and others; poetry by Coleridge, Southey, Byron, P.B. Shelley; prose by Sydney Owenson, Charlotte Dacre, Thomas DeQuincey. W. Keach.

2560H. Romanticism and the Ideology of the Aesthetic
Historical development of discourses of the "aesthetic" as they relate to the problem of "romanticism" as the name of a distinctive era in British and European literature and culture. Ideas about the autonomy of art in the period of the French and the Industrial Revolutions. Readings in Baumburgten, Kant, and Hegel; in Coleridge, W. Wordsworth, P. B. Shelley, and Keats.

2560L. The Victorian Novel
An intensive seminar on the Victorian novel. The aim will be historically contextualized, theoretically informed interpretations of some leading examples of this complex literary form. Will focus on the role of the (British) novel, as distinct from the (American) short story, in the rise of mass culture, and on recent formalist, stylistic, and historical approaches to the Victorian novel as a literary form. K. McLaughlin.

2560N. American Literature and the Corporation
An examination of 19th-century American literature in the context of the rapid growth of corporate forms in American economic, political, and social life from the mid-1830s through the turn of the century. How does literature participate in the debate this process of incorporation occasioned, and in what ways was it shaped by the process of incorporation occasioned, and in what ways was it shaped by the process? Readings include Hawthorne, Melville, Harper, Grant, Alcott, Crane, and Chestnut.

2560Q. Victorian Fictions of Consciousness
Victorian novels, Brontë through James, with an emphasis on the ways in which novels engage 19th-century theories of mind and psychology, looking at such central concepts as memory, will, sensation, and perception. Examines the importance of form and the subgenres of Victorian fiction (Bildungsroman, sensation novel, multiplot novel) in the construction of concepts of selfhood and consciousness. Attention also to the place of consciousness in Victorian and 20th-century theories of the novel. This course will also serve as an introduction to working on topics in science and literature.
2560R. Romantic Dispossession: Subjectivity and Agency
This course examines the diverse arguments made by writers of the Romantic era concerning nonidentity, and focuses on the kinds of ethical, political, and aesthetic considerations that arise once identity is forfeited and dispossession is perceived as either a matter of self-discipline, the negative result of sympathy, a characteristic of literary culture, or a sign of melancholic loss. This course is limited to graduate students. Undergraduate seniors will be admitted only with the permission of the instructor.

2560T. The Realist Imagination
A study of American literary realism. We will situate realism in the context of the realist turn in American artistic, political, legal, and economic enterprise from the Civil War to World War II, and measure the realist novel's relations to alternative aesthetic ideologies such as transcendentalism, regionalism, naturalism, and modernism. Authors to be considered include Emerson, DeForest, Grant, Twain, Cable, Chesnutt, Dreiser, Wharton, Cather, Anderson, Dos Passos, Faulkner, and Hurston. Enrollment limited.

2560U. Romanticism and the Ruins of Empire
Representations of the ruins of ancient empires (Babylonian, Assyrian, Roman) in relation to British and French imperialism during the period we call "Romanticism."

2560V. Transatlantic Studies
This course offers a theoretical and historical examination of "transatlantic" models of literary analysis as an alternative to traditionally national ones. It will look at a recent criticism theorizing the field, including both literary and historical scholarship. Primary readings will be from Rowson, Equiano, Franklin, Emerson, and Twain, among others.

2560W. The Figure of the Artist in the Nineteenth Century
This course considers the changing representations of the artist in the 19th century, as prophet, intellectual, professional, critic, genius, madman, aesthete, and social celebrity. Readings will focus on 19th-century novels, with select essays, reviews, and other nonfiction prose. Authors include George Eliot, Charles Dickens, Anthony Trollope, Arnold Bennett, George Gissing, H. G. Wells, George Bernard Shaw, Oscar Wilde.

2560X. The Eighteenth-Century Novel
The seminar considers major texts, theories, and concepts that have accounted for the emergence of the novel as a dominant modern literary form. Probable 'long' 18th-century texts are Behn's Love Letters, Defoe's Roxana, Richardson's Clarissa, Fielding's Tom Jones, and Sterne's Tristram Shandy. Related reading includes work by Watt, Bakhtin, Lukacs, Shklovsky, Alter, Bowers, and McKeon.

2600. Graduate Independent Study in the Enlightenment and the Rise of National Literatures and Cultures

2760. Graduate Seminars in Modern and Contemporary Literatures and Cultures

2760A. American Modernist Poetry and Poetics
Study of the poetry and prose of Eliot, Pound, Stevens, Williams, H.D., Moore, and Hughes, with additional readings in criticism and theories of modernism. Enrollment limited to graduate students. M. K. BLASING.
2760B. City, Culture, and Literature in the Early Twentieth Century
Examines the way the city structures early 20th-century culture and history. Through novels, poetry, and cultural criticism, considers a range of topics that include the relation between the city, consciousness, and ideology; the effects of changing urban immigration; and the effects of mobility. Authors include Simmel, Benjamin, Harvey, Williams, Rotella, James, Woolf, Wright, and Eliot.

2760D. Contemporary African American Literature and the End(s) of Identity
Investigates the controversies surrounding the claim that the late 20th century marks the end of nationalist and essentialist paradigms in the scripting of black identity. Readings from a range of literary and theoretical works dealing with this intricate problem, including Stuart Hall, Hortense Spillers, Reginald McKnight, Trey Ellis, Octavia Butler, and Paul Beatty. R. D. Murray.

2760E. Law and Literature: From Response to Responsibility
Explores competing scholarly paradigms for considering modernism as it is shaped by the normative and ethical concerns of legal discourse. Seminar examines how legal and literary subjects are each informed by similar categories: the juridical, the imaginative, the ethical, and the historical. Authors include Arendt, Benjamin, Woolf, Conrad, Camus, West; legal texts include Holmes, Bentham, Cover and legal opinions. R. Reichman.

2760F. Metaphoric Expression: Emerson, James, Stein
According to William Carlos Williams, metaphoric vision continually blinds Americans to the actual conditions of their world. In an attempt to answer this charge, we will read these three densely metaphorical writers against their varied historical backgrounds, hoping in the process to better understand the role played by figurative language in the shaping of American society, culture, and identity.

2760G. Modernist Fiction and Theories of Modernism
Examines a range of modernist fiction—including work by Conrad, Dos Passos, H.D., Joyce, Larsen, Rhys, Toomer, Woolf—alongside selected theories of modernism. Considers approaches ranging from theories of reification and the aesthetic to more recent considerations of modernism's relation to gender, nation, race, empire, and professionalism. This course is limited to graduate students. E. T. Katz.

In this seminar, we will examine a number of important 20th-century U.S. novels for the ways in which they conjure the nation both as "imagined community" and "fictive ethnicity." Particular focus will be given to how the category of national identity becomes intertwined issues of race, gender, sexuality, and region as well as with ideologies of the aesthetic.

2760I. Possession and Dispossession in the Modern Novel
Examines modernist sentimentality as it is figured in notions of property. By exploring the legal and literary relationship between owning and being, we will consider how writers such as Forster, Woolf, Joyce, and Lawrence use property to conceive of human relationships—and by extension, social justice—in dramatically new ways.

2760K. Postcolonial Theory and Africanist Discourse
Explores central questions in current Anglo-American postcolonial theory, and examines how related questions emerge with specific inflections in writings by Africanist philosophers, historians, and creative writers. Issues include: varied connotations of the very idea of "Africa"; ideology and subjectivity; constructivism
and essentialism; nationalism and globalization; aesthetics and politics. Texts by Amilcar Cabral, Frantz Fanon, Stuart Hall, Paulin Hountondji, Fredric Jameson, Ernesto Laclau, Ngugi wa Thiong’o, Wole Soyinka, Gayatri Spivak, Yvonne Vera. Enrollment limited to graduate students. Undergraduate seniors may be admitted with instructor’s permission.

2760L. Literature and Photography
Since the invention of photography in 1839, novelists have often claimed the camera as an important model for their work. We will endeavor to investigate this claim, asking in the process what the links between modernism and the visual arts have to tell us about the nature of fictional representation. Readings to include a number of theoretical discussions of photography. S. BURROWS.

2760M. Postcoloniality in Theory and Literature
Introduces students to the intellectual current that has come to be called "postcolonial theory" in contemporary criticism. We read influential theoretical writings alongside literary texts by postcolonial writers and critics. We thus combine theoretical with literary texts in order to explore intersections or disjunctions between idioms, genres, and philosophical investments on the subject of "postcoloniality." Issues include: subjectivity, nationalism, globalization, the idea of literature. Texts by: Coetzee, Fanon, Gordimer, Naipaul, Said, Spivak, and Walcott. Enrollment limited to graduate students. Others require instructor’s permission.

2760N. The Politics of Modernism
An exploration of the controversies that have surrounded the political implications of modernist form. Topics will include the Brecht-Lukacs debate, surrealism and the politics of the avant-garde, the so-called "great divide" between innovative and popular art, and the relation of modernism to postmodernism. In addition to examining important theoretical statements, we will test their arguments against selected literary examples.

2760O. Shame, Colonialism, Ethics
This course constructs a dialogue between debates on post-Holocaust aesthetics ("Is poetry possible after Auschwitz?") and the central questions of postcolonial theory ("Can the Subaltern Speak?"), and considers the ethical and aesthetic salience of shame. It is organized around three writers whose work suggests that the novel form itself might require decolonization: Naipaul, Coetzee and Caryl Phillips. T. R. BEWES.

2760P. The Fifties in Color: Race, Empire, and U.S. Cold War Culture
Examines U.S. cultural texts of the ’50s in relation to both domestic race politics and foreign policy concerns. Explores issues of assimilation, conflict, containment, development, and integration in a transnational as well as a national framework. Writers we study may include Bellow, Ellison, Himes, Kerouac, Roth, and Okada. This course is limited to graduate students. D. Y. KIM.

2760R. Realism and the American Novel
An inquiry into the form, purpose, longevity, and afterlife of American realism. In what way did it differ from its British counterpart? In what ways was it different from naturalism, modernism, and romanticism? What was its aesthetic and political legacy? How has it been read by critics? Writers to include Melville, Dreiser, Norris, James, Chestnut, Wharton, Jewett, and Wright. S. BURROWS.
2760T. Postmodernism and Literary Form
Intended for graduate students interested in the relationship between socio-historical conditions and literary form, and for those interested in thinking beyond a narrowly periodized notion of the postmodern. Beginning with Lukács's *The Theory of the Novel*, considers the problematic of literary representation as it emerges in the modern age. Readings include Beckett, Nabokov, Burroughs, Amis, Rushdie, McEwan, Lyotard, and Moretti.

2760U. Reading the Black Masses in Literature and Critical Practice
For more than a century, African American literature and criticism have been definitively shaped by claims about the linked fate of the black masses and the world of letters. These contested assertions provide occasions for rethinking the traditional ends of black literary production. Class conflict, the waning of black nationalism, and diasporic identity politics, are among the topics examined under this rubric. Likely literary writers include Washington, Larsen, Ellison, Brooks, and Wideman. Enrollment limited to 18 graduate students.

2760V. Neo-Victorianism: Rewriting the Long Nineteenth Century
This seminar examines recent novelists rewriting canonical 19th-century texts by Dickens and others, playing with matters of postcoloniality and gender. *Jack Maggs*, for example, answers the questions, “Can the subaltern speak?” and “Does the empire write back?” while *Fingersmith* offers a lesbian version of the Victorian sensation novel. *Patchwork Girl* rewrites *Frankenstein*, stitching together fiction, gender, and identity.

2800. Graduate Independent Study in Modern and Contemporary Literatures and Cultures
May be repeated for credit. Instructor's permission required.

2900. Advanced Topics in Critical and Cultural Theory

2900A. Contemporary Feminist Theory: Feminist Address
Recent feminist theory addresses identity politics and the critique of the subject; problematics of race, class and gender; the challenge of queer theory; the demand for materialist analysis. We consider these topics in light of the problematics of address. What are the forms of feminist address? How are they received or refused? Who are the subjects of contemporary feminisms? E. F. Rooney.

2900C. Theories of Literature: From Classical Antiquity to Postmodernity
Investigates theories of literature in two self-conscious historical epochs: classical antiquity, represented by figures such as Plato, Aristotle, and Horace, and by practices such as marginal notation of texts, literary commentaries, and performance techniques; and the 20th century, represented by figures such as Adorno, Barthes, and Bakhtin, with special attention to the intersections between philosophy and literature and poststructuralist conceptions of textuality.

2900D. Walter Benjamin and Modern Theory
Intensive study of Walter Benjamin's essays on modern culture and literature (in particular Goethe, Baudelaire, Proust, and Kafka). Explores the consequences of his thinking for problems in contemporary literary and cultural theory. German and/or French helpful but not required.

2900E. Deleuze: Literature and Aesthetics
How does Deleuze help us read modern culture? This course will focus on Deleuze's writings on literature, painting and cinema as a point of entry to the work of one of the most original and intriguing thinkers of the late 20th century. We will look at the
reasons for Deleuze's fascination with Anglo-American literature, and discuss the extent to which Deleuze's model of literary analysis breaks with -- while remaining fundamentally indebted to -- Marxism and psychoanalysis. Other readers include Melville, Kafka, T. E. Lawrence, as well as films by Antonioni, Godard and Sembene. Enrollment limited.

2900F. Form and Content
Readings in aesthetics, literary theory, structuralism-poststructuralism, and cultural studies that address the form/content distinction in one of its many avatars. Topics will include the sign, thematics, formlessness, formalism and historicism, tenors and vehicles, structure, and defamiliarization, among others. Previous work in literary or cultural theory strongly recommended. Enrollment limited.

2900G. History and Form
An exploration of the relation between historical and formalist approaches to literary interpretation, from the New Critics to the so-called "New Formalism." What is the role of form in historically and politically oriented criticism (examples will be taken from Marxism, the New Historicism, feminism, cultural studies, and post-colonial theory)? What happens to history when form takes center stage (for example, in structuralism and deconstruction)? Is it possible (and desirable) to avoid a pendulum swing between the poles of historicism and formalism and to mediate the conflicting claims of history and form? Or is a focus on one at the expense of the other the necessary cost of an incisive interpretive strategy? In addition to theoretical readings that exemplify the conflict between history and form, attention will be paid to the history of reception of one or more literary works in order to articulate the practical implications of their opposition and interdependence.

2900H. Queer Passivity
A study of the concept of passivity in queer theory, literature, and film. Subjects will include AIDS and temporality; the senses and dissolution; ascesis and chastity; pornography and sovereignty. We will explore post-structuralist theories and continental philosophies (Agamben, Cavarero, Deleuze, Derrida, Marion, Nancy) that resonate with the kind of queer receptivity that will be the object of study.

2950. Seminar in Pedagogy and Composition Theory
An experimental and exploratory investigation into writing as a preparation for teaching college-level writing. Reviews the history of writing about writing, from Plato to current discussions on composition theory. Against this background, examines various processes of reading and writing. Emphasizes the practice of writing, including syllabus design. Priority given to students in the English Ph.D. program. Undergraduates admitted only with permission of instructor. L. K. STANLEY.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.
Environmental Studies

Virtually every substantial environmental problem requires for its solution an understanding of both physical and social dimensions. Therefore, an environmental studies concentration at Brown encompasses work in the physical, biological, and social sciences as well as some exposure to ethics and values. All of these must make scientific information and disciplinary skills available for problem-solving in the real world. The Center for Environmental Studies at Brown University has a broad range of faculty with complimentary expertise ranging from environmental policy and public health to the functioning of ecosystems and sustainable buildings. Because of this interdisciplinarity, an environmental studies concentration is particularly appropriate for a liberal arts education.

The environmental studies and environmental science concentrations provide guidance to design interdisciplinary programs to address environmental issues of interest to the student: no two take exactly the same courses. All students will take basic courses in environmental studies, and the natural and social sciences, and will conduct independent research leading to the preparation of an original senior thesis or capstone experience.

Honors is awarded to students whose course work in environmental science or environmental studies has demonstrated superior quality and culminated in an Honor's Thesis of distinction. Each year the Center awards prizes to graduating seniors who have made an outstanding contribution to environmental science or environmental studies at Brown, based on the quality of their academic work and their service.

The Environmental Studies faculty represent a range of interests and expertise, with most sharing appointments with other academic units: Phil Brown (Sociology), Kathryn DeMaster, Steven Hamburg (Ecology and Evolutionary Biology), Timothy Herbert (Geological Sciences), Caroline Karp, Heather Leslie (Ecology and Evolutionary Biology), John Mustard (Geological Sciences), Sriniketh Nagavarapu (Economics), Stephen Porder (Ecology and Evolutionary Biology), Jeremy Rich, Timmons Roberts (Sociology), Dov Sax (Ecology and Evolutionary Biology), Johanna Schmitt (Ecology and Evolutionary Biology), Kurt Teichert, Harold Ward (Emeritus, Chemistry).

For information concerning the Environmental Studies Concentration, contact Caroline_Karp@brown.edu, Sriniketh_Nagavarapu@brown.edu, or J_Timmons_Roberts@brown.edu. For information concerning the Environmental Science Concentration, contact Heather_Leslie@brown.edu, Stephen_Porder@brown.edu, or Jeremy_Rich@brown.edu.

For more information, go to http://envstudies.brown.edu/ or visit the Center for Environmental Studies, Box 1943, Urban Environmental Laboratory, 135 Angell Street.

Undergraduate Program

For a complete description of the standard concentration programs leading to the A.B. and Sc.B. degrees, please visit:

http://www.brown.edu/Administration/Registrar/concentration.html

Graduate Programs

The Master of Arts Program in Environmental Studies is designed to help students understand and contribute to the solutions to environmental problems at multiple scales. During the first semester, each candidate will be assigned a mentor with whom the candidate will develop a plan of study. In their second semester, each student will develop
a thesis proposal which students research that summer and work on almost exclusively in
their second year. Each program of study will be designed to fit the background, interest
and intentions of the candidate and to meet the goals of an interdisciplinary, integrated
understanding of environmental processes and issues.

Normally, the program of study will consist of the following:
1. Eight courses appropriate to the student’s plan of study, including ENVS 1350 or
1410, and 2010. Each student will be expected to have already, or to gain, a basic
proficiency in economic analysis, ecological principles, and policy processes.
2. A thesis demonstrating an advanced knowledge of some aspect of environmental
science or of environmental policy, and integrating science and policy as necessary to
analyze and propose action on an issue of environmental significance, approved by the
thesis supervisor and two readers. Successful completion of at least two semesters of
thesis research (ENVS 2980–2981) is required as part of the eight-course requirement.

Finding Environmental Courses at Brown

The study of human interactions with natural resources and the environment encompasses
many disciplines. Outstanding courses are offered in departments that might not be
immediately obvious to academic advisors or students. The Center for Environmental
Studies and the Environmental Change Initiative have compiled a listing to help advisors and
students find relevant courses in the areas that most excite them.

Courses form the natural sciences, social sciences and humanities are broken down into introductory, intermediate and advanced levels. To access this course list, from
http://envstudies.brown.edu, choose "Finding Environmental Courses at Brown."
Courses of Instruction

Primarily for Undergraduates

0070. First-Year Seminar

Introduces environmental studies, surveys contemporary environmental problems, and explores arguments for and against regulating human activities, with an emphasis on environmental problem-solving. Interactions between science and technology, political institutions, individual behavior, and the value structures underlying environmental choices are explored. Primarily for first- and second-year students. One required 90-minute section each week. Sections and field trips to be arranged. K. DEMASTER.


Challenges students to address the economics and logistics of implementing strategies to conserve resources and reduce the negative impacts of the built environment. The goal is to learn the rationale, process and technical aspects of the practice of environmental stewardship. Topics include sustainable design, institutional change, and corporate environmental responsibility. Students collaborate in interdisciplinary teams on applied projects. Permission by instructor by application process prior to enrollment in the class. K. TEICHERT.

0410. Environmental Stewardship

Introduces environmental studies, surveys contemporary environmental problems, and explores arguments for and against regulating human activities, with an emphasis on environmental problem-solving. Interactions between science and technology, political institutions, individual behavior, and the value structures underlying environmental choices are explored. Primarily for first- and second-year students. One required 90-minute section each week. Sections and field trips to be arranged. K. DEMASTER.

0455. Coastal Ecology and Conservation

This intermediate-level course will enable students to master fundamental ecological concepts and to understand how this knowledge can be used to inform coastal conservation and management. Case studies from New England and elsewhere and field trips to rocky shores, salt marshes and other coastal ecosystems will enable students to develop scientific skills and experience the challenges of coastal conservation science. Suitable for students with at least some biology background; the course is directed particularly towards sophomores. Enrollment limited to 15, and written permission required. Email instructor (Heather_Leslie@brown.edu) to receive course application (due May 1). Admitted students will be able to register for the course in September. H. LESLIE and M. BERTNESS.

0490. Environmental Science in a Changing World

Introduces students to environmental science and the challenges we face in studying an ever-changing earth system. We will explore what is known, and not known, about how ecosystems respond to perturbations. This understanding is crucial, because natural systems provide vital services (water and air filtration, climate stabilization, food supply, erosion and flood control) that can not be easily or inexpensively replicated. Special emphasis will be placed on climate and land use change, the mechanization of agriculture, and invasive species. We will use these topics as springboards to explore the utility of the scientific method, the role science can play in policy decisions, and the environmental challenges that face industrial society over the coming century. S. PORDER.

0500. Quantitative Research Methods: Creating, Analyzing, and Displaying Data

A hands-on-non-mathematical approach to the creation and statistical analysis of quantitative data in the social and life sciences. Emphasizes data exploration through visualization. Provides a solid footing in basic techniques, an intuitive overview of more advanced multivariate approaches, and introduction to a range of methods (experiments, natural experiments, survey and sampling techniques, questionnaire design). THE STAFF.

0510. Problems in International Environmental Policy

Introduces global environmental problems, such as climate change, biodiversity loss, depletion of freshwater resources, the hole in the ozone layer, and the international transport of hazardous waste as pressing political concerns in the international arena. Provides a
practical introduction to the major actors in international environmental politics (nation states, international organizations, scientists, non-governmental organizations, and business actors) and presents an overview of the key theoretical traditions used to analyze the drivers and politics of international environmental issues. Open enrollment. A background in environmental issues, as evidenced by taking ENVS 0110 or an equivalent course, is strongly recommended. C. KARP.

0520. *Wild Literature in the Urban Landscape*
Combines deep study of ecological poetry, fiction, essays and other writing with service to schools in the community through exploration of local ecological challenges through both creative and more discursive expressions. The field-work or community component to this course will involve students in conducting workshops that combine literature and ecology in order to better elucidate and understand local issues related to, for one example, eco-industrial histories associated with Gorham Silver in Providence and the current state of Masphpaug Pond on the Reservoir Triangle, where a public high school, Alvarez, now sits on contaminated soil. Enrollment limited to 22 undergraduates. S/NC. R. BENJAMIN.

0700. *Topics Seminars*

*0700A. New England Environmental History*
Explore the environmental history of New England from the arrival of people circa 10,000 years ago to the present day. Topics include Native American and colonial environmental interactions and 20th century environmental transformations. From abandoned textile mills to Northern forests, understanding the history of a place can help us plan for its future. Written permission required. THE STAFF.

For Undergraduates and Graduates

1350. *Environmental Economics and Policy*
Economic analysis of environmental issues, with an emphasis on the implications for designing appropriate policy measures. Topics include: the valuation of environmental goods; the basic theory of economic markets, market failure, and the sources of any failure; private and government solutions to market failure; the role of uncertainty in policy-making; and open trade environments and trans-boundary pollution, on a national and global scale. Applications to issues such as climate change, land use, air and water pollution, and alternative energy. Prerequisite: ECON 1110. S. NAGAVARAPU.

1355. *Environmental Issues in Development Economics*
Examines environmental issues in developing countries, including air and water pollution, land use change, energy use, and the extraction of natural resources. Builds on ENVS 1350 by: delving more deeply into microeconomic theory, linking household/firm decision-making on environmental issues to choices in labor, land, and product markets; and emphasizing basic empirical techniques, using recent research to illustrate the roles of econometric analysis and economic theory in diagnosing and confronting problems at the nexus of the environment, poverty, and economic development. Suggested background: ECON 1630, and ENVS 1350 or ECON 1480. Prerequisites: ECON 1110, ECON 1620, and MATH 0100. S. NAGAVARAPU.

1360. *Modeling Global Environmental Issues*
In-depth, interdisciplinary study of a global environmental issue, such as climate change, through the development and use of quantitative models. Environmental sciences, economics, demography, and policy studies are integrated in readings, lectures, and substantial modeling activities. Prerequisites: MATH 0090, 0100 or equivalent; introductory environmental science course such as ENVS 0110, GEOL 0220, or BIOL 0200; or permission of the instructor. THE STAFF.
1400. Sustainable Design in the Built Environment
Provides students with an in-depth understanding of sustainability, as it relates to planning, engineering, architecture, landscape architecture and green buildings. Students conduct economic and environmental analyses to examine planning, design and building problems and opportunities holistically. Interdisciplinary teams work on applied design projects. Pre-requisites: ENVS 0410, or equivalent by permission of instructor. K. TEICHERT.

1410. Environmental Law and Policy
Examines the formation and implementation of environmental policy in the United States, including the contributions of law, economics, science, and politics. Detailed understanding of the policy-making process—including market-enlisting and other regulatory strategies, the role of agencies, environmental justice, risk analysis, and new decision-making paradigms—is developed through lectures, class discussion, and small group exercises that focus on contemporary environmental problems and provide hands-on policy making experience. C. A. KARP.

1450. Ecosystem Analysis
Develops ability to measure and characterize important biological and physical parameters of terrestrial ecosystems. Weekly field trips to explore measurement techniques and develop testable questions and/or hypotheses about different forested ecosystems. Qualitative and quantitative writing exercises explore how to describe the patterns and processes associated with the ecosystems visited. One Saturday field trip to central Massachusetts and one weekend field trip to New Hampshire are required. A background in environmental issues, as evidenced by taking BIOL 0420, is strongly recommended. S. P. HAMBURG.

1455. Marine Conservation Science and Policy
Students will develop an interdisciplinary understanding of ocean ecosystems and how human communities are connected to them socially, economically, and ecologically. Integration of the scientific and human dimensions of marine conservation will be achieved through analysis of the current status, trends, and threats to ocean ecosystems; the range of individual-based and institutional solutions to mediate these threats; and case studies. Suggested prerequisites include ENVS 0110 or equivalent, or ENVS 0455, or ENVS 0490, or BIOL 0420 or written permission of the instructor. Participating students -- primarily advanced juniors, seniors and graduate students -- are expected to have background in at least one related field (e.g., biology, geosciences, sociology, economics, or political science) beyond the intermediate level. H. LESLIE.

1460. Microbial Diversity and the Environment
This is a lecture and discussion based course that focuses on the role of microbes in biological, geological, and environmental processes. This includes: introductory concepts, origins of life, bacterial evolution, role in climate change, metabolic diversity of biogeochemical cycles, microbial communities and interactions, habitat specific examples, and applications in the environment and human health. Recommended background courses: BIOL 0200, CHEM 0330 and an intermediate science course (e.g., BIOL 0280, GEOL 0240, or ENVS 0490). J. RICH.

Instruction of ENVS 1490, 1491, 1492 and 1493 takes place at the Marine Biological Laboratory in Woods Hole, Massachusetts. Environmental Science and Studies students have the option of receiving credit for a semester in residence at the MBL, which is located in a national mecca of marine research, on Cape Cod, an 80 minute drive from Providence.

1490. SES-Independent Study/Science Writing
The culmination of the Semester in Environmental Sciences at the Marine Biological Laboratory is an independent research project that builds on the topics covered in the aquatic and terrestrial ecosystem analysis core courses. In addition students participate in a seminar
designed to help improve their ability to tell a lay reader about science. Enrollment is limited to students in this program. Instructor permission required.

1491. SES-Terrestrial Ecosystem Analysis  
Team-taught course examining the structure of terrestrial ecosystems fundamental biogeochemical processes, physiological ecology, impacts of environmental change on the landscape; the application of basic principles of ecosystem ecology to investigating contemporary environmental problems. Part of the Semester in Environmental Science at the Marine Biological Laboratory; enrollment is limited to students in this program. Instructor permission required.

1492. SES-Aquatic Ecosystem Analysis  
Team-taught course examining the structure of freshwater, estuarine and marine ecosystems; impacts of environmental change on the landscape at local regional and global scales; the application of basic principles of ecosystem ecology to investigating contemporary environmental problems such as coastal eutrophication, fisheries exploitation. Part of the Semester in Environmental Science at the Marine Biological Laboratory; enrollment is limited to students in this program. Instructor permission required.

1493. SES-Environmental Science Elective  
Two environmental science electives are offered each fall semester as part of the Semester in Environmental Science at the Marine Biological Laboratory, including: aquatic chemistry, mathematical modeling of ecological systems and microbial ecology. Enrollment is limited to students in this program.

1510. Environmental Theory and Philosophy  
Each student develops his or her own concept of "socially better." The task is to understand conceptions of "socially better" belonging to various authors and others in the class, to put one's own concept in context with the readings and class discussion, and explain why that concept is sensible and should be taken seriously by others. Prerequisite: ENVS 1350 or permission of the instructor. THE STAFF

1530. From Locke to Deep Ecology: Property Rights and Environmental Policy  
Examines the changing relationship between public and private rights in land, water, and wildlife. Considers alternative land tenure and property rights regimes, and the effect of changing attitudes toward "property in nature" on environmental policy and law. Enrollment limited. Written permission required. C. A. KARP.

When we look at Nature, what do we see? And how is that vision informed by our cultural worldview and social history? Furthermore, how does the way we view Nature affect the way we interact with it? This course explores these questions by examining the way that human societies socially and culturally construct "the environment." It also probes some of the intersections of the environment and myriad humanistic studies—including the lenses of environmental literature and history, environmental film, poetry, indigenous storytelling, and art history. K. DEMASTER.

1560. Sustenance and Sustainability: Exploring the Nexus of Agro-Food Systems, Society, the Environment  
Explores the intersections of agriculture, society, and the environment. Since the advent of human agriculture approximately 10,000 years ago, human societies and cultures have been shaping and remaking the environment to produce food in myriad contexts. Employing an interdisciplinary perspective, this course explores the relationships—social, cultural, environmental, and economic—that surround the cultivation, processing, distribution, marketing, preparation, and consumption of food. We will examine the way that contemporary agricultural practices interact with and contribute to a diversity of environmental problems.
Likewise, we will explore ways that alternative agricultural practices—including organic production, food re-localization movements, and community-supported agriculture (to name a few)—may offer routes toward both human sustenance and sustainability in the face of global environmental crises. K. DeMaster.

1565, *Sustenance and Sovereignty: Food Justice and Global Agricultural Revolutions*
This course explores ideas of "food sovereignty" and "food justice," examining the potential for these concepts, in the face of the widespread inequities that characterize the current dominant agro-food system, to foster more just, sustainable agricultural institutions. Course discussions will be guided by the question: how can human societies create a more ecologically, socially, and economically sustainable agriculture, in ways that foster justice and respect for diverse cultures and practices? Topically we will explore issues agricultural labor practices, genetic resources, access to healthy and culturally appropriate foods, land tenure, global trade policies, and corporate domination of supply chains, among others. Prerequisite: ENVS 1560, or instructor permission. Enrollment limited to 25. K. DeMaster.

1700, *Senior Seminars*

1700A. *Cultural Competence and Ethics*
For students who will conduct research/education in community settings: for community/public health, environmental health, sociology, international development, environmental studies, and other fields. Focuses on ethical theories of research, methods of community engagement, participatory research designs, robust technical methods, IRB training and community data issues, education, and research dissemination. Students will learn the theory and practice of community-based, participatory research (CBPR) and cultural competence, particularly with selected cultural groups. Qualitative methods and research ethical understandings are critical to effective community research and education interventions. Ethical theories (principle, virtue ethics, communitarian, postmodern and cross-cultural perspectives) can be applied to improve research designs/methods. A review of qualitative research methods also demonstrates community/culturally-appropriate research practices. The course is open to undergraduate and graduate students. D. Quigley.

1700B. *Water Resources Science, Policy, and Management*
Introduction to qualitative principles of water resource dynamics and application of those principles to water scarcity and quality management. Topics include: global hydrologic cycle, water balance concept, surface and groundwater hydrology, aquatic biogeochemistry. Also intersectoral and jurisdictional allocation decision-making, balancing supply and demand, water system privatization. Prerequisites: one of the following: ENVS 0110, 0490, 0510, BIOL 0420, GEOL 0220, or written permission. The Staff.

1700C. *Quantitative Research Methods: Creating, Analyzing, and Displaying Data*
Introduction to the creation and analysis of quantitative data. Introduces a range of methods for obtaining data (experiments, natural experiments, surveys, and questionnaire design). Provides solid footing in basic descriptive statistics, introduction to statistical inference, and intuitive overview of more advanced multivariate approaches. Emphasizes applied data exploration and visualization. The Staff.

1710, *Environmental Health and Policy*
Examines scientific and public policy conflicts over how to address environmental factors impacting human health. Students develop a basic knowledge of risk assessment, including
hazard identification; exposure assessment and fate and transport of environmental toxics; risk management and communication; principles of data interpretation and application to environmental policy-making. Prerequisite: ENVS 0110 or permission of the instructor. Sections to be arranged based on TA's class schedule. THE STAFF.

Provides an overview of environmental justice history, theory and definitions. Students will review quantitative, qualitative, and theoretical approaches for understanding the origins and persistence of environmental discrimination. Examines the regulatory, institutional, structural, political, and economic forces that underlie patterns of race and class-based discrimination and their implications for environmental health among diverse communities. Case examples of environmental justice organizing will inform students of positive efforts by people of color in protecting their communities. D. QUIGLEY.

1800. Land-use Change in the Developing World
This seminar links Brown students with the Watson International Scholars of the Environmental Program that brings mid-career environmental professionals to the Brown campus for a semester. The course focuses on land-use change and understanding the forces that drive change using multi-disciplinary perspectives. It takes the hands on knowledge of the Watson Scholars and combines it with a detailed examination of western perspectives of the drivers of land-use change. The seminar will explore the degree to which the scientific literature and the experience of practitioners are in harmony or in conflict, and how these two perspectives form each other. Rapid changes in land use, particularly in developing countries, have profound impacts on environmental, economic and social sustainability. There is an opportunity and funding for students to spend the following summer working with Watson Scholars in their home country on land-use projects of mutual interest. S. HAMBURG.

1920. Analysis and Resolution of Environmental Problems/Case Studies
A hands-on workshop course in which students work in teams on applied projects addressing complex environmental issues at the local, state, national or global levels. Students work with community groups, government agencies and firms to form research questions, design and conduct studies, and to disseminate results. Potential topics include urban adaptation to climate change, hazardous facility siting and cleanup, land use and watershed protection, wetlands protection, and justice elements of energy and climate policy. Required for ES concentrators in Junior year. Prerequisite: ENVS 0110. Enrollment limited to Juniors and Seniors or by permission of instructor. J. T. ROBERTS.

1965. Environmental Change Seminar
This senior seminar will enable students to place their research in the context of environmentally relevant policy and practice. Development of an environmentally-focused senior thesis or other independent research project is a prerequisite. Students will lead sessions focused on the science and policy elements of their independent research projects, and hone vital professional skills. Students are required to attend related seminars by outside speakers, to be held on select Thursdays at noon, as part of the Center for Environmental Studies seminar series. The course is required of all students who receive a Brown Environmental Fellows Grant (http://www.brown.edu/Research/ECI/activities/bef.html), and is open to others doing environmentally relevant projects. Enrollment limited to 15 seniors, and by application in Fall 2010 only. Instructor permission required; contact Heather_Leslie@brown.edu for more information.

Individual analysis of environmental issues. Instructor override required prior to registration.
Primarily for Graduates

2010. Special Topics in Environmental Studies
A mandatory seminar for graduate students in environmental studies. This course develops group problem-solving skills by addressing a current local, national or global environmental issue. We will work on problem definition, identifying options for addressing the problems, and crafting potential solutions. In all stages we work closely with non-profit groups, government agencies, or firms, who have the capacity to implement solutions. J. T. Roberts.

2680. Ecosystem Modeling for Non-Programmers
Emphasizes hands-on experience building ecosystem models. Students build about 8 models in an intensive three-week class in January at the Marine Biological Laboratory, then build their own model as a term project over the Spring semester. Term projects will be in the form of a manuscript formatted for publication in Ecology. Prerequisites: Differential Calculus, Integral Calculus, basic grasp of Ecology and Biogeochemistry. Enrollment limited. Written permission required. Rastetter.

2700. Graduate Seminars

2700A. Gender and Environment
Examines the historical roots and contemporary social movements of gender roles in environmental policy-making and protection, using both 'Northern' and 'Southern' scholarship. Case studies will be global in nature, but primarily focus on regions and localities in South Asia and Sub-Saharan Africa. In addition to the analysis of multinational institutions such as the United Nations, the World Bank, and the IMF, community-based organizations and local resistance movements will be studied in order to fully deconstruct the current status of 'conservation and livelihoods' from a gender perspective.

2980. Reading and Research
First semester of thesis research during which a thesis proposal is prepared. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor override required prior to registration.

2981. Reading and Research
Second semester of thesis research. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Instructor override required prior to registration.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Ethnic Studies

Ethnic studies at Brown is multidisciplinary and comparative, occurring in many departments throughout the University, encompassing relevant knowledge and methodology from the humanities, sciences, and social sciences.

An undergraduate concentration in ethnic studies was established in 1997. Sponsored by the Center for the Study of Race and Ethnicity in America, the interdisciplinary and comparative concentration examines the construction of race and ethnicity in social, cultural, historical, political, and economic contexts.
For additional information about the Center for the Study of Race and Ethnicity in America, please visit: http://www.brown.edu/Departments/Race_Ethnicity/

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html

Courses of Instruction

Primarily for Undergraduates

0090. Freshman Seminar in Ethnic Studies
A seminar designed for students interested in Ethnic Studies who are in their first year of study at Brown. No special background is required. All students are welcome. In order to preserve an intimate environment for dialogue, and to promote active participation of all students, enrollment will be limited.

0090A. The Border/La Frontera
Reserved for First Year students. Enrollment limited to: 20. M. J. GARCIA.

0270. Introduction to U.S. Latinas/os History
This class will focus on the of people of Latin American descent (Latians/os) living in the region known today as the United States. Our focus will include watershed moments as well as important themes including land dispossession, immigration, segregation and discrimination, community and identity formation, and racialization. No prerequisites are required. M. J. GARCIA.

0300. Ethnic Writing
This course will explore the idea of "ethnic writing" in both theory and practice. Students will examine how writers draw upon race and ethnicity (not always their own) to produce creative works and will then put these ideas in practice in their own writing, including but not limited to fiction, poetry, memoir, and inter-genre work. Limited to 17. S/NC.

0500. Introduction to American/Ethnic Studies
Considers the U.S. as a society whose unifying identity is rooted in ethnic and racial diversity. Explores the historical and contemporary experiences of racial and ethnic groups in this country and analyzes different forms of representation of those experiences, as well as representations of the racial and ethnic stratification in the U.S. imagination. M. J. GARCIA.

0790. Topics in Ethnic Studies
Enrollment limited to 20.

0790A. Latina/o Literature
This course will introduce students to a broad array of Latina/o literature—fiction, poetry, drama, and graphic novels. While there is a long tradition of Latina/o literature in the United States, we will focus primarily on a period from 1970 to the present. Aimed to familiarize students with debates in the field, the readings will also include critical essays. Enrollment limited to: 20. Written permission required. R. E. RODRIGUEZ.

0790B. Native Americans and the Media
This course explores the ways in which Indigenous Americans have been constructed in the White American imagination and through self-representation from Frontier phase of American history, through contemporary images in American popular culture.
and media. Through films created about, and later by, Native people we will explore
the evolution of the image of Native American in America culture.

For Undergraduates and Graduates

This is an academic and reflective practicum on the politics and processes of social justice
organizing. Students will learn about the historical and political evolution of organizing,
the connection between organizing and ideology/vision, concrete tools and tactics used in
the strategies of social justice organizing, and elements of running non-profit organizations.
This course will require, equally, academic vigor, personal leadership and involvement,
and introspective analysis. Students will be required to intern at a local organization in
Providence, and reflect on their involvement utilizing the theories and discussions gained
through the classroom. This course will also explore connections between local, national,
and international movement-building. In keeping with this course's commitment to real-
life organizing examples and experience, course instructors and guest speakers are them-
selves experienced organizers and Executive Directors of social change organizations.
This will be a small class with preference given to students with some experience in com-
munity, student/youth, and/or labor organizing. Permission of instructors required: con-
tact sara@daretowin.org or koheiishihara@gmail.com.

1870. *Seminars in Ethnic Studies*
Enrollment limited to 20. Written permission required.

1870A. *Ethnic Los Angeles*
This course will focus on the historical and contemporary struggles of people of color
in Los Angeles, California, throughout the twentieth century. We will take an
interdisciplinary approach, examining films, literature, and history pertaining to the
city. There are no prerequisites. Enrollment limited to: 20.

1870B. *Latino/a Communities Seminar*
This seminar's first goal is to introduce students to the social and economic issues that
affect contemporary Latino communities. The second goal is to train the students in
empirical fieldwork research methods in Ethnic Studies. The seminar searches for
ways to link the academy and communities through empirical research that addresses
the needs and demands of Latino/a urban communities.

1870C. *Native North Americans in the Media: Representations and Self
Representations in Film*
How have Native North American peoples been represented and self-represented in
film from the early 1900s to today? Filmmaking is employed to explore the
construction and stereotyping of Indigenous peoples of North America in American
popular culture, as well as the recent (re)construction of Native identities by American
Indian peoples. Specific topics including identity, race, gender, violence, religion and
spirituality, cultural appropriation, and Native humor frame the analysis and
comparison of American popular and Native representations of Native Americans.
The course centers on the screening and discussion of selected movies, complemented
by academic and non-academic literature in the form of books, articles, reviews, and
other media materials. Completion of introductory courses on Native American
peoples and cultures is strongly recommended.

1870D. *Chicana/o Fiction*
This course is a survey of Chicana/o fiction from the 1950s to the present. We will be
reading novels as well as stories, with the occasional inclusion of poetry. Our literary
texts will be supplemented with secondary sources--history, literary criticism, cultural studies, and the like. The course will also ask students to consider the relationship between Chicana/o literature and other writing in the Americas.

1870E. *Queer Latina/o Literature and Theory*
Enrollment limited to 20.

1870F. *Eating Cultures*
Enrollment limited to 20.

1870G. *Reading Race: Advanced Seminar in Critical Race Theory*
Enrollment limited to 20.

1890. *Topics in Ethnic Studies*

1890A. *Seminar on Latino Politics in the United States*
Advanced seminar on the politics of Latino communities in the United States. Considers the history of Latino politics; participation, partisanship and office-holding; immigration and citizenship; social movements; public policy; gender and race; and pan-ethnic identity. Advanced undergraduate and graduate students. Includes optional community research project. Some familiarity with Latino studies, U.S. politics, Latin American politics, or ethnic studies would be helpful.

1900. *Senior Seminar in Ethnic Studies*
Seminar for senior ethnic studies concentrators. Exposes students to critical issues in the study of race and ethnicity. Students are encouraged to develop a major essay or thesis on race and ethnicity.

1900A. *Alien Nation: US Immigration in Comparative Perspectives*
Latina/o immigration to the United States has reshaped the meaning of "America" over the last hundred years. We will study Latina/os in comparison to other immigrants and examine how US immigration policy has created a nation partly composed of "alien" residents--some citizens, others not--who have constructed alternative notions of belonging.

1900C. *Contemporary Latino/a Education in the United States*
Latino/as are now the second largest group of students in United States schools and, in aggregate, among the most troubled as measured by drop-out rates and grade-level retentions. Yet Latino/a students also perform well in some settings. This course reviews contemporary Latino/a education, focusing on the multiple educational contexts Latino/as encounter, including how non-Latino/a educators regard Latino/a students.

1900D. *Latino Communities Seminar*
Enrollment limited to: 20.

1900F. *Theory, Creativity, Activism*
This class will bring together much of the literature and discussions conducted throughout your education as an Ethnic Studies major and prepare you for the application of Ethnic Studies in your post-graduate life. I have chosen to emphasize three themes that have been dominant in your Ethnic Studies curriculum: Theory, Creativity, and Activism. We will begin by critically exploring the democratic principles and imperial practices that underlie the "American system" and the political formation of The Third World. Our discussions and readings will include an examination of the contributions and limitations of multiculturalism, postmodernism, anti-colonialism and feminism, and the relevance of (ethnic) "experience" in
interpreting and addressing the problems we face as a planetary civil society. The majority of the class will be dedicated to the praxis of Ethnic Studies as a creative and political force within our world today. We will read fiction and non-fiction and view films that articulate the complexities of life in North America and beyond.

1900G. *Race and Immigration in the Americas*
Enrollment limited to: 20.

1900H. *What is Ethnic Studies?*

1910. *Independent Study*

1920. *Senior Thesis*

**Center for Fluid Mechanics, Turbulence and Computation**

Established in 1986, the Center for Fluid Mechanics, Turbulence and Computation was founded to promote research at Brown University in fluid mechanics, the study of turbulent flows and transition phenomena, the use of scientific computation in fluid mechanics research, and topics of related scientific interest. Participating members of the center include faculty from the Division of Applied Mathematics, the Division of Engineering as well as faculty from other departments. The center provides a forum for the development of new research topics and the sharing of research experience. Present areas of research range from micro-scale and nano-scale flow systems, multi-scale modeling of complex fluids, micro-transport and dynamic self-assembly, to biomedical and biological applications in arterial blood flow and the swimming of micro-organisms, as well as established areas such as multiphase flow and turbulence. The center attracts each year distinguished visiting scientists and provides a strong program for postdoctoral research, through sponsored research.

Current information on activities and research may be found at the Center’s website at http://www.cfm.brown.edu.

**French Studies**

Professors Ahearn, Bensmaïa (Chair), Bossy*, Durand (Emerita), Golopentia, Majewski (Emeritus), Ridgely (Emeritus), Saint-Amand,† Seifert, Wimmers (Emerita, Research Professor); Associate Professors Krause, Schultz; Assistant Professor Ravindranathan; Senior Lecturers Waryn, Wiart; Lecturer Kervennic.

**Undergraduate Program**

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html.

* On leave 2006–07
† On leave Sem II 2010-2011
Graduate Programs

Master of Arts. Work for the master’s degree may be wholly in French Studies or may include one or more courses in such related fields as a second literature, comparative literature, linguistics, history, philosophy or art. A candidate is expected to read, speak, and write French and to have an adequate knowledge of French literature. Demonstration of proficiency in reading either German or, normally, another Romance language will be required.

Doctor of Philosophy. The general requirements for the doctorate are outlined below:

1. Command of the French language, spoken and written, and knowledge of its structure and potentialities for expression. Candidates in French must demonstrate proficiency in reading one foreign language other than French.
2. An understanding of the origins, development, and structure of the French language and its connection with related languages. FREN 1020, Histoire de la langue française, is required of all candidates.
3. Knowledge of French and Francophone literature, consisting of wide acquaintance with the chief movements and writers and a thorough knowledge of selected major authors and works, including their historical and intellectual environment.
4. A limited number of approved graduate courses in a field closely related to the major interest of the candidate may be included in the doctoral program. Such courses will usually be chosen from comparative literature, a second literature, or modern culture and media, but study in related fields may be approved on presentation of sufficient evidence of its relevance to the intellectual purposes of the candidate.
5. Teaching experience under supervision. A knowledge of Latin is strongly recommended, and will be required in certain research fields. FREN 2900 (Teaching Methods) is required of all candidates.

For more information see the French Studies departmental website: http://www.brown.edu/Departments/French/index.html

Courses of Instruction

Primarily for Undergraduates

0100-0200. Basic French
A two-semester course. Four meetings a week for oral practice. One hour of work outside of class is expected every day (grammar/writing, oral practice, reading). An accelerated track enables qualified students to go directly to FREN 0500 after FREN 0200. Enrollment limited to: 18. THE STAFF.

0220. Reading French in the Arts and Sciences
Designed to develop the reading competence in French for graduate students (or advanced undergraduates with permission of the instructor). Fundamentals of grammar and syntax are emphasized as well as reading skills in the fields of individual students. Successful completion should satisfy the foreign language requirement for graduate students in other departments. (Consult the relevant department.) No prerequisites. Not for graduate-level credit. Written permission required for undergraduates. THE STAFF.

0300. Intermediate French I
A semi-intensive elementary review with emphasis on all four skills (listening, speaking, reading and writing). Class activities include drills, small group activities, and skits. Class materials include an audio CD, videos, a French film, short stories, and various other au-
divisions, departments, centers, programs, and institutes / 425

thentic documents. Prerequisite: FREN 0200 or placement (Previous experience with French is required to take this class). Four meetings per week plus a 50-minute conversation section with TAs. The STAFF.

0400. Intermediate French II
Continuation of FREN 0300 but may be taken separately. A four-skill language course that stresses oral interaction in class (three meetings per week plus one 50-minute conversation section). Materials include audio activities, film, and a novel. Short compositions with systematic grammar practice. Prerequisite: FREN 0300, FREN 0200 with written permission, or placement. The STAFF.

0500. Writing and Speaking French I
A four-skill language course that stresses oral interaction in class. Thematic units will focus on songs, poems, a short novel (E-E Schmitt), two graphic novels (Sattouf, Larcenet), films and a detective novel by Fred Vargas. Activities include a creative project using Comic Life, and a systematic grammar review. Prerequisite: FREN 0400, FREN 0200 with written permission, or placement. The STAFF.

0520. Introduction to the Literary Experience
Pre-requisite: FREN 0400; equivalent to FREN 0500 in language sequence. Language course in which discussions and writing exercises are based on readings in French and Francophone literature and film, focusing on geographic displacement and the relationship between place and identity. With grammar review and short papers. Texts include: Baudelaire, Maupassant, Eberhardt, van Cauwelaert, Ernaux. The STAFF.

0600. Writing and Speaking French II
Prerequisite for study in French-speaking countries. Class time is devoted mainly to conversation and discussion practice. Writing instruction and assignments focus on essays, commentaries, and to a lesser degree, on story writing. Apart from reading assignments for discussion (press articles and literary excerpts), students select two novels to read. Prerequisite: FREN 0500 or placement. The STAFF.

0720. First Year Seminar
Enrollment limited to 20 first-year students. Written permission required.

0750. Literature and Social Thought

0760. Intensive Introduction to Literature and Literary Methods

For Undergraduates and Graduates

1000. Masterpieces of French Literature from the Middle Ages through the Seventeenth Century

1010. Masterpieces of French Literature from the Eighteenth Century to the Present

1020. Early French Language and Literature

1030. Studies in French Literature of the Renaissance

1040. Studies in French Literature of the Seventeenth Century

1050. Studies in French Literature of the Eighteenth Century

1060. Studies in French Literature of the Nineteenth Century

1070. Studies in French Literature of the Twentieth Century

1100. Medieval French-Speaking Cultures

1110. Studies in the French Novel

1120. Studies in the French Theater
1130. Studies in French Poetry
1150. Studies in French Cinema
1210. Studies in Major French Writers
An intensive analysis of the works of a single important literary figure.
1310. Special Topics in French Studies I
1320. Special Topics in French Studies II
1330. Studies in French Literature in English Translation
Readings of French literature in translation. Offerings may include a survey covering texts
from the Renaissance to the present, or may be focused on a particular period, genre, or top-
ic.
1410. French Culture and Civilization
1420. French Society Today
1430. Research Seminar: Franco-American as a New England Minority Culture
After an intensive week of training, students choose a specific topic of research and work
independently during the rest of the course. They meet with the instructor and present par-
tial results of their research in the weekly seminar. Projects include collecting oral history
in Woonsocket; research on (and in) Franco-American institutions located in the vicinity;
and studies on Franco-American history, onomastics, literature, film, and press. While not
required for all of the projects, a basic knowledge of French is strongly recommended. Con-
ducted in English.
1510. Advanced Written and Oral French
Follows FREN 0600 in the sequence of language courses. Development of oral and written
skills via presentations, debates, conversation, and discussions on a variety of topics. May
be repeated 3 times for credit. STAFF.
1610. Advanced Written French
Written permission required.
1710. Topics in Francophone Studies I
1720. Topics in Francophone Studies II
1900. Senior Seminar
1990. Senior Thesis
Independent study in an area of special interest to the student, with close guidance of a
member of the staff, and leading to a major paper. Required of candidates for honors, and
recommended for all senior concentrators.

Primarily for Graduates
2030. Quêtes et dépaysements, 1100-1400
How medieval authors treated cross-cultural encounters. How they interpreted contacts
with other societies or worlds -- with an eye to helping their patrons politically, influencing
their audiences, and pleasing them all. Texts from several vernaculars: early French, Anglo-
Norman, Franco-Venetian, Occitan. Works by troubadours, Chrétien de Troyes, Marie de
France, Jean Bodel, Villehardouin, Marco Polo and Froissart, among others.
2040. Studies in Medieval French Literature
2110. Studies in French Literature of the Renaissance
2130. Studies in French Literature of the Seventeenth Century
2150. Studies in French Literature of the Eighteenth Century
2170. Studies in French Literature of the Nineteenth Century
2190. Studies in French Literature of the Twentieth Century
2600. Studies in French Critical Theory
2610. Seminar in French Literature
2620. Seminar in French Studies
2900. Theory and Methods of Foreign Language Teaching
Introduction to the theoretical and practical aspects of foreign language learning and teaching. Specific topics include theories of language acquisition, an overview of teaching practices and the principles underlying them, selection and evaluation of textbooks, teaching materials, and learner variables. Students observe beginning language courses and do micro-teaching. Taught in English. Undergraduates may enroll with instructor’s permission. S/NC.

2970. Preliminary Examination Preparation
For graduate students who have completed their course work and are preparing for a preliminary examination. No course credit.

2980. Reading and Research
Work with individual students in connection with special readings, problems of research, or preparation of theses.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Gender and Sexuality Studies

Undergraduate Program
For a complete description of the standard concentration program leading to the A.B. degree, please visit http://www.brown.edu/Administration/Registrar/concentration.html.

The courses listed below are sponsored by the Gender and Sexuality Studies Program. Additional courses are cross-listed from other departments and vary annually. For a list of current courses, please consult the Gender and Sexuality Studies Program website. http://www.pembrokecenter.org/

Courses of Instruction
Primarily for Undergraduates

0090. First Year Seminars
These seminars for first year students provide an introduction to the study of gender and sexuality in social, cultural, political, economic or scientific contexts. Enrollment limited to 20 first year students.

0090A. From Pamela to Bridget Jones: Writing Women in Diaries and Letters
We have a cultural preoccupation with confession that's proliferating with reality television and the popularity of blogs, but what are the literary precedents for this form and how do we understand the development of a confessional genre in fiction?
Explores fictional uses of diaries and letters, asking questions about voice and its appropriation, decorum and madness in relation to constructions of gender, race, class, and sexual identity. Writers include Richardson, Jacobs, Plath, Woolfe, Lorde, Alvarez and Fielding. Enrollment limited to 20 first-year students. FYS

0090B. Bodies Out of Bounds
In this seminar we will examine what happens to bodies - and the world around them - when they refuse to stay within "normal" boundaries. We will focus our readings on literature from the early modern period to the present, and use film and contemporary cultural theory for comparison and context. Readings range from Dekker and Middleton's play The Roaring Girl to Octavia Butler's Dawn Trilogy; films include Ma Vie en Rose. Enrollment limited to 20 first-year students. FYS

0090C. Reproductive Health: Science and Politics
Reproductive health issues such as contraception, abortion, sexually transmitted infections and gay and lesbian health are some of the most controversial and politically charged issues in the US today. After an introduction to the interpretation of medical literature we will explore scientific, political, religious and cultural aspects of these important public policy issues. Successful national and international programs will be discussed. Although all views are welcome, it is expected that students will be respectful of other's opinions and will incorporate the best available scientific data into their conclusions. Enrollment limited to 20 first year students. FYS

0100. Introduction to Feminist Theory
An historical and cross-cultural introduction to the various strands of feminist theory. The course will cover a range of theoretical frameworks, examine the connections and discomforts between theory and activism, and explore the impact of feminist theories on contemporary thought. STAFF.

0120. Introduction to Gender and Sexuality Studies
Explores the interdisciplinary fields of Gender and Sexuality Studies, considering the relation between formations of gender and those of sexuality across a range of historical and disciplinary contexts. Considers how both sexuality and gender are shaped in relation to race and ethnicity, economic inequality, and the postcolonial legacy. STAFF.

For Undergraduates and Graduates

1810, 1820. Independent Study and Research
Independent reading and research for upper-level students under the direction of a faculty member.

1960. Special Topics in Gender Studies

1960B. Health and Healing in American History
Surveys the history of American medicine in its social and political contexts, including changing understandings of disease, treatment practices, and medical institutions. Focuses on how gender and race have informed how patients and healers have made sense out of pain and disease.

1960C. Gender, Sexuality, and Science
Examines how American and European science has naturalized differences in the human body and gendered the natural world from the seventeenth through the twenty-first centuries. Will consider historical changes in the scientific study of sex, gender, race, and sexuality, as well as the participation of men and women in scientific work.
1960D. **Feminist Theory/Feminist Activism**
Some complain that feminist theory is "too academic", that it has no ties to social justice or activism. On the other hand, there are those in the academy who accuse gender/women's studies of not being sufficiently academic, of not being intellectually rigorous. With those two stereotypes in mind, we will read a variety of feminist theorists, some generally thought of as "academic", and some generally seen as "activist". Can academic theory be useful to political and social activists? Can activism inform academic theorizing? Prerequisite: one theory course, one gender and sexuality studies course, or permission of instructor.

1960E. **Advanced Feminist Theory**
Feminism and Poststructuralism are two major theoretical approaches to the understanding of society, politics, and culture. What do they have in common? Where do they part company? We'll examine their views on agency, the subject, language, and materiality; and their engagements in the "cultural wars." Readings include Butler, Deleuze, Derrida, Irigaray, Kristeva.

Independent research under the direction of a faculty member, leading to a thesis. Required of honors candidates.

1990. **Senior Seminar**
A research seminar focussing on the research and writing of the participants. Required of concentrators; open to other advanced students by permission.

Primarily for Graduates

An advanced research seminar in feminist theory and gender studies. Presentations made by Brown faculty, Pembroke Center fellows, visiting scholars, and students. Offered in conjunction with the Pembroke Seminar. Enrollment limited. Written permission required. S/NC.

  A. **The Question of Identity in Psychoanalysis**
  B. **Visions of Nature: Constructing the Cultural Other**
  C. **Markets and Bodies in Transnational Perspective**

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**Geological Sciences**

Professors Cooper, Fischer, Forsyth, Head, Herbert (Chair), Hermance, Hirth, Mustard, Parmentier, Pieters, Prell, Schultz, J. Tullis; Associate Professors Clemens, Goldsby, Gromet, Huang, Liang; Assistant Professors Hastings, Parman, Russell, Saal, Whiteside, Wyatt; Professors Emeritus Hess, Matthews, Rutherford, T. Tullis, Webb

Students in the geological sciences develop a comprehensive grasp of principles as well as an ability to think critically and creatively. Formal instruction places an emphasis on fundamental principles, processes, and recent developments, using lecture, seminar, laboratory, colloquium, and field trip formats. Undergraduates as well as graduate students have opportunities to carry out research in current fields of interest.

The principal research fields of the department are geochemistry, mineral physics, igneous petrology; geophysics, structural geology, tectonophysics; environmental science, hydrology; paleoceanography, paleoclimatology, sedimentology; and planetary
geosciences. Emphasis in these different areas varies, but includes experimental, theoretical, and observational approaches as well as applications to field problems. Field studies of specific problems are encouraged rather than field mapping for its own sake. Interdisciplinary study with other departments and divisions is encouraged.

The Geo-Chem and the Lincoln Field Buildings provide excellent office space and laboratory facilities for a wide range of geological, geochemical, geophysical, and planetary research. Facilities in the MacMillan Building include laboratories and lecture rooms, primarily for undergraduate courses and research projects.

The geological sciences section of the Sciences Library includes complete sets of the principal American and foreign periodicals, publications of the U. S. Geological Survey, state and foreign geological survey publications, and general reference books. A complete set of published topographic and geologic maps for the United States is also available.

The Brown Regional Planetary Data Center is located in the Lincoln Field Building. This center, one of seven such facilities in the country, is operated as a cooperative effort by the National Aeronautics and Space Administration (NASA) and Brown University. It contains an extensive collection of photographic prints and rapid access images of planetary bodies. These data include recent images obtained by the U.S. and Soviet space programs of Mercury, the Moon, Mars, Jupiter, Saturn, Venus, and the satellites and rings of Jupiter and Saturn. The Rhode Island Space Grant in the Lincoln Field Building offers a variety of programs and undergraduate scholarships designed to increase scientific literacy through outreach activities in area schools and to the general public.

Undergraduate Programs

The department offers four standard degree programs, each of which leads to a bachelor of arts or bachelor of science degree. The basic concentration in Geological Sciences is complemented by three interdisciplinary concentrations: Geology-Biology, Geology-Chemistry, and Geology-Physics/Math. Courses in any of the four geoscience areas may be appropriate for a geology focus in Environmental Sciences. The Geology-Biology option places more specific emphasis on the interaction of biology and geology, and is recommended for students who wish to gain a better understanding of the origin and development of life as interpreted from the geologic record, the evolution of climate and environments, and global climate change, biogeochemistry. The Geology-Chemistry and Geology-Physics/Math options provide increased emphasis upon chemical and physical processes and phenomena occurring on and within the Earth. These options are recommended for students who wish to apply chemical and physical principles toward an understanding of Earth history and Earth processes. The Environmental Sciences (geology focus) option is also available for students who wish to address the impacts of society on the environment or of the environment on society. The fit of each of these options to career objectives should be discussed with the student’s undergraduate advisor. For each of these programs, specific courses required are listed with the four geology concentrations and with the Sc.B. in Environmental Sciences under the Environmental Studies program. To suit individual backgrounds and goals, students may enroll in one or more independent research courses to pursue topics of special interest not covered in depth by normal course offerings.

Students planning to continue with graduate level study in the geological sciences are advised to complete a Senior Research Thesis, and seriously consider taking at least two semesters each of Mathematics and Physics and one semester of Chemistry. Students planning to specialize in paleontology or environmental geosciences should take at least one year of Biology.
Introductory Courses: GEOL 0160 (First-Year Seminars) are for first-year students. They provide an introduction to Earth, planetary and environmental science through in-depth exploration of topics at the forefront of scientific research and their application to society. GEOL 0220, 0230, and 0240 are introductory courses that provide a foundation for more advanced offerings. Specific prerequisites are indicated in individual course descriptions. Introductory courses designed for students interested in a liberal arts exposure to the sciences include GEOL 0010, 0050, and 0070.

For a complete description of the following standard geoscience concentration programs leading to the bachelor’s degree, please visit:

http://www.brown.edu/Administration/Registrar/concentration.html

- Geological Sciences
- Geology-Biology
- Geology-Chemistry
- Geology-Physics/Mathematics

Any of the above geoscience programs is suitable for students interested in environmental science; students may also work with geology faculty as part of the Environmental Science concentration program (listed as Sc.B. under Environmental Studies).

Honors: Honors work in the geological sciences involves completion of a written senior thesis evaluated by three members of the staff, an oral presentation of the results, and a superior record in the concentration.

Graduate Programs

The graduate program in Geological Sciences is intended for students of exceptional ability and interest. Admission to graduate study is usually limited to candidates for the doctoral degree, and is normally accompanied by the award of a teaching or research assistantship or a University Fellowship. Assistants are expected to devote approximately 20 hours per week to their teaching or research duties. Summer research fellowships are available to graduate students in good standing. The graduate enrollment is limited to approximately fifty students to ensure proper research facilities and close contact between the students and the faculty. Because of the interdisciplinary nature of the Geological Sciences, candidates are encouraged to apply from undergraduate backgrounds including biology, chemistry, mathematics, physics, and engineering, as well as geology.

The degrees awarded by the department include A.M., Sc.M., and Ph.D.

Master of Arts

The requirements include a minimum of 8 courses of which no more than 2 can be independent research courses (GEOL 2980).

Master of Science

The requirements include a minimum of 8 courses of which no more than 2 can be independent research courses (GEOL 2980), and demonstrated ability to pursue independent research. This may be demonstrated by the submission of a written master’s thesis, a scientific publication, or a formal written summary of activities and accomplishments in research courses. There is no formal language requirement.
Doctor of Philosophy

There are no formal course requirements for the Ph.D. degree. Students with the approval of their research advisory committee devise an appropriate program of study in their major and minor areas. For a student entering with a bachelor’s degree this will normally result in a program of 10 to 14 courses, not including thesis research. Students are encouraged to take courses in other departments where appropriate.

A student is required to pass the preliminary examination to establish his or her candidacy for the Ph.D. degree. This examination is generally taken at the end of the fifth semester for those entering with a bachelor’s degree and by the end of the fourth semester for those entering with a master’s degree. For the purposes of this examination, it is presumed that the candidate will be able to display a broad knowledge of scientific disciplines related to his or her research area. In order to accomplish this, it is recommended that students take a reasonable breadth of courses in most of the major areas. Students entering with a minimal Earth science background will normally remedy this deficiency during the first two years of graduate work.

The department tries to be flexible in its graduate program, placing the responsibility for the graduate students’ education on the students themselves. Course work is supplemented by seminars and colloquia given by visitors and members of the department, and by field trips. Certain departmental requirements can be waived if the individual can justify the educational value of the suggested changes in a petition to the department Graduate Program Representative. Opportunities exist within the department and university for a wide variety of teaching experiences and training.

Research programs within the department are divided into five main themes: (1) structure and dynamics of the solid Earth and planets; (2) Earth system history and the changing global environment; (3) planetary geoscience and the nature of planetary surfaces, interiors, and processes; (4) properties and processes of Earth and planetary materials; (5) environmental science including hydrology, estuarine processes, and environmental remote sensing. Cooperative research and integrated teaching programs exist within these groups; a student’s research and course program may lie mainly within one of these groups or it may overlap two or three groups.

Environmental science studies can also be completed through the joint Ph.D. program which unites Brown faculty with the Marine Biological Laboratory (MBL) in Woods Hole, MA.

The Geophysics and Structural Geology group investigates the structure and dynamics of the solid Earth and planets. Current projects in geophysics include: seismological field studies of crust and mantle structure combined with dynamic modeling of the continental lithosphere and subduction zones; computer modeling studies of convection and seismic wave propagation within the Earth and other planets; seagoing investigations of the tectonics of mid-ocean ridges using magnetic and gravity anomalies, ocean-bottom seismometers, multibeam bathymetry and side-scan sonar. Structural geology studies of deformation processes take place on scales from individual mineral grains to whole mountain ranges. Current research includes: mechanics of faulting, and prediction and focal mechanism of earthquakes; experimental determination of deformation mechanisms and strength of rocks and minerals at crustal and upper mantle conditions. (See also environmental geophysics research covered in Environmental Science below.)

The Earth System History group uses geological, biological, meteorological, oceanographic, and archeological studies to investigate global changes in the climate, lakes, oceans, and biosphere. Research emphasizes integration of quantitative reconstruction and modeling of past climates. Current projects include: testing of global
climate and biome models; dynamics of Indian Ocean monsoon and upwelling systems; orbital forcing on climate variations from Cretaceous through Pleistocene times; dynamics of vegetation changes in response to Late Quaternary climate changes; controls on carbonate budget of the deep sea during the Cenozoic; modeling of continental margin sediment accumulations in response to sea level changes; alkenone estimates of past ocean temperatures. (See also Environmental Science below.)

The Planetary Geosciences group investigates the structure, composition, and evolution of planets, satellites, and meteorite parent bodies using a combination of photogeology, laboratory experiments, geologic analogs, remote sensing approaches, spectroscopic techniques, physical modeling, and theoretical analysis. Investigations also include Earth processes and field studies, environmental change, and placing Earth in the context of planetary evolution. Interdisciplinary and comparative studies include: nature and origin of tectonic features on Venus, Mars, the Moon and icy satellites; models of volcanic processes in contrasting planetary settings; effects of impacts on the atmosphere and lithosphere of Earth, Venus, and Mars; relationship of geochemical and geophysical processes to crustal evolution of planets, moons, and asteroids; experimental, theoretical, and geological studies of impact cratering; rates and styles ofgradation on Mars through time; assessment of multiring basin formation on early geological evolution of planetary bodies; spatial and temporal dynamics of environmental change on the Earth in the context of physical and societal forcing functions (see also Environmental Science below).

Research on the properties and processes of Earth and planetary materials is conducted by members of the Geochemistry/Mineralogy/Petrology group and involves experimental determination of basic physicochemical data for geological materials and applications to fundamental problems of magma genesis, volcanism, and plate motions on Earth and other planets. Current research includes: experimental studies of fluid-melt-crystal equilibria with application to magmatic processes; theoretical studies of silicate melts; isotopic and field studies bearing on the tectonic evolution of orogenic belts; experimental studies of mechanisms and kinetics of diffusion and related solid-state processes in minerals, with applications to thermal history of igneous and metamorphic rocks.

Research in the Environmental Sciences includes environmental remote sensing, hydrology, environmental geophysics, estuarine processes, and global climate change. Quantitative modeling of remote sensing data is being used to study environmental change and the impacts of anthropogenic stress. Focus study areas include semiarid ecosystems as well as spatial and temporal dynamics of estuaries, where problems such as the impacts of thermal effluent, timing and nature of algal and phytoplankton blooms are being studied. Watershed hydrology involves the integration of computer models with ground truth field studies of watersheds in the Northeast, and includes questions such as what is the active role that groundwater plays in short term and long term stream flow generation. Global climate initiatives include testing the ability of global climate models to reconstruct past marine and terrestrial environments, and estimation and evaluation of tropical sea surface temperature variability.

Strong departmental ties exist with Brown’s Applied Math, Biology, Chemistry, Engineering, Environmental Studies and Physics departments and divisions. The joint program with the Marine Biological Laboratory (MBL) at Woods Hole offers unique research and educational opportunities. Various cooperative programs give students access to courses and facilities at the Lamont-Doherty Geological Observatory at Columbia University, URI Graduate School of Oceanography, Woods Hole Oceanographic Institution, The Oak Ridge National Laboratory New Scientist Program, and Russian and European space research institutions. Students have access to the Brown/NASA-sponsored
Northeast Regional Planetary Data Center and the National Space Grant College and Fellowship Program.

For additional information please visit the department’s website at: http://www.geo.brown.edu/

Courses of Instruction

Primarily for Undergraduates

0010. *Face of the Earth*
Study of Earth's surface (e.g., mountains, rivers, shorelines) and processes which have created and modify it (e.g., glaciation, floods, volcanism, plate tectonics, earthquakes). The goals are to increase appreciation and enjoyment of our natural surroundings and provide a better understanding of environmental problems, natural resources, land use, and geologic hazards. Four labs, plus a field trip. For nonscience concentrators (science concentrators should take GEOL 0220). Enrollment limited to 100. L. P. GROMET.

0050. *Mars, Moon, and the Earth*
Space exploration has revealed an astonishing array of surface features on the planets and their satellites. Why are atmospheres on the planets different from Earth’s atmosphere? Do other planets represent our past or future environment? Is there life on other planets? The planets and their histories are compared to gain insight and a new perspective on planet Earth. J. W. HEAD.

0070. *Introduction to Oceanography*
Examines the ocean’s role in global (and local) change, emphasizing the ocean as an evolving, dynamically balanced ecosystem. Focus on physical/chemical/biological systems’ interconnections needed to understand the natural variability of the ocean on various time and space scales, from El Niño to global warming. Three lectures, one section meeting weekly; written exercises on oceanographic problems; two field trips to study estuarine and coastal processes. THE STAFF.

0160. *First-Year Seminar*
These seminars for first-year students provide an introduction to Earth, planetary and environmental science through in-depth exploration of topics at the forefront of scientific research and their application to society. Sections provide a highly interactive learning environment and emphasize critical reasoning, research methods, interdisciplinary connections, and effective oral and written communication. No prerequisites. Enrollment limited to 20 first-year students.

0220. *Physical Processes in Geology*
Introduction to the form and origin of interior and surface features of Earth, with emphasis on understanding the physical processes that produced them. Topics include interior processes (plate tectonics, mountain building, volcanism, earthquakes, and flow of solid rocks) and surface processes (atmospheric and oceanic circulation, flow of rivers, glaciers, and groundwater). Four laboratory and two field trips arranged. Intended for science concentrators or those wishing in-depth treatment. J. TULLIS and K. M. FISCHER.

0230. *Geochemistry: Earth and Planetary Materials and Processes*
Introduction to the chemical and mineralogical nature of the Earth, Moon, and meteorites, and the role of chemical processes in their evolution. Topics include: composition of rock-forming minerals; origin of crustal and mantle rocks; stable and radiogenic isotopes; models of nucleosynthesis, planet formation and differentiation. Weekly laboratory and two field trips. Intended for science concentrators. Prerequisites: basic chemistry and GEOL 0010 or 0050 or 0220, or instructor permission. L. P. GROMET and R. F. COOPER.
0240. *Earth: Evolution of a Habitable Planet*
Introduces Earth's surface environment evolution-climate, chemistry, and physical make-up. Uses Earth's carbon cycle to understand solar, tectonic, and biological cycles' interactions. Examines the origin of the sedimentary record, dating of the geological record, chemistry and life on early Earth, and the nature of feedbacks that maintain the "habitable" range on Earth. Two field trips; five laboratories arranged. Prerequisite: GEOL 0220 or 0230, or instructor permission. T. D. HERBERT.

0250. *Computational Approaches to Modelling and Quantitative Analysis in Natural Sciences: An Introduction*
Application of numerical analysis to mathematical modelling in the natural sciences including topics such as ground water and glacier flow, earthquakes, climate models, phase equilibrium, and population dynamics. Numerical methods will include the solution of linear algebraic systems of equations, numerical integration, solution of differential equations, time series analysis, statistical data analysis tools. Development of computer programming skills in the Matlab programming environment. Prerequisites: MATH 0090, 0100, or equivalents. E. M. PARMENTIER.

0310. *Fossil Record*
Integrated view of the history of life: biogeochemical cycles, biodiversity, evolution by natural selection, ecology, and physiology along a multiplicity of scales from the microbial to the planetary, as recorded in the fossil record. Attention is given to how biotic systems, in contrast to just physical systems, have changed through time maintaining the chemical and thermodynamic non-equilibrium state of the Earth's surface. Two lectures per week; several labs including dissections for paleobiological comparisons and one field trip to fossil localities and museum collections in Connecticut and Massachusetts. Prerequisites: GEOL 0220 or 0230 or 0240; BIOL 0200, or instructor permission. J. H. WHITESIDE.

0580. *Foundations of Physical Hydrology*
Qualitative introduction to the dynamics of watersheds and groundwater flow from an intuitive perspective. Lays the foundations for understanding the physical mechanisms by which water is transported throughout a hydrologic system. Provides background for future studies, but is primarily designed to enable informed citizens to thoughtfully critique water management practices and public policy. Pre-college math and physics background is expected. J. F. HERMANCE.

0810. *Planetary Geology*
Geology of solid planets. Focuses on a mission to Mars through an understanding of processes that shape planetary surfaces. Terrestrial analogs, conceptual models, and laboratory simulations are used as reality checks. Integration of these processes through time reveals the geologic evolution of the planets. Three lectures and one discussion session per week. Prerequisite: GEOL 0010 or 0050, or 0220, or instructor permission. P. H. SCHULTZ.

For Undergraduates and Graduates

1100. *Global Physical/Descriptive Oceanography*
Examines physical characteristics, processes, and dynamics of the global ocean to understand circulation patterns and how they relate to ocean chemistry and large scale climate change. Assignments address origin and distribution of water masses, heat and water budgets, thermohaline and wind-driven circulation systems, dynamics of the oceanic conveyor belt, and El Niños. Offered alternate years. Written permission required. W. L. PRELL.

1110. *Estuarine Oceanography*
Examines physical, chemical, and biological characteristics of local estuaries using field measurements, analysis of field data, and interpretation of processes; field investigation re-
results will be prepared as a cooperative class report. Topics include: tidal and circulation processes, salinity and freshwater fluxes, watershed pollutants, estuary flushing rates, and estuary ecosystems. Primarily for students with experience in the sciences. MATH 0090, 0100, or equivalent, recommended. W. L. PRELL.

1120. Paleoceanography
An examination of the Cenozoic history of the world ocean with attention to the processes which have acted to change its circulation, climate, geometry, and biology. Develops a strategy to use marine sediments and microfossils to identify and understand past variations in the oceans. Class projects analyze and interpret various types of paleoceanographic data. Laboratory arranged. Offered alternate years.

1130. Ocean Biogeochemical Cycles
A quantitative treatment of the cycling of biologically important elements in the world ocean. Special attention paid to the carbon system in the ocean and the role that organisms, in conjunction with ocean circulation, play in regulating the carbon dioxide content of the atmosphere through exchange with the surface ocean. For science concentrators. Prerequisite: CHEM 0330 or equivalent, or permission of the instructor. T. D. HERBERT.

1150. Limnology: The Study of Lakes
This course will provide an interdisciplinary overview of the physics, chemistry, biology, and geology of lakes. Areas of emphasis will include the origin of lake basins, water circulation patterns, heat and water budgets, biogeochemical processes, lake ecosystems, and the stratigraphic record of lakes. We will also discuss human and climatic impacts on lakes. Prerequisites: GEOL 0070, 0240, or ENVS 0490; or instructor permission. J. M. RUSSELL.

1240. Stratigraphy and Sedimentation
Introduction to depositional environments and processes responsible for formation of sedimentary rocks. Major sedimentary environments in the Recent are discussed, general models are proposed, and stratigraphic sequences in older sediments are examined in the light of these models. The Phanerozoic stratigraphic record is examined from the perspective of Earth system history. Laboratory arranged. Prerequisites: GEOL 0220 or 0240, or instructor permission. GEOL 0310, 1410 are also recommended. J. M. RUSSELL.

1320. Introduction to Geographic Information Systems for Environmental Applications
Introduction to the concepts of geospatial analysis and digital mapping. The principles of spatial data structures, coordinate systems, and database design are covered. Related work in image databases also discussed. Extensive hands-on training in ESRI-based geographic information system software will be provided. Focal point of class is the completion of student-selected research project employing GIS methods. L. CARLSON.

1330. Global Environmental Remote Sensing
Introduction to physical principles of remote sensing across electromagnetic spectrum and application to the study of Earth's systems (oceans, atmosphere, and land). Topics: interaction of light with materials, imaging principles and interpretation, methods of data analysis. Laboratory work in digital image analysis, classification, and multi-temporal studies. One field trip to Block Island. Recommended preparation courses: MATH 0090, 0100; PHYS 0060; and background courses in natural sciences. J. F. MUSTARD.

1350. Weather and Climate
This course provides students with an understanding of the processes that drive weather patterns, the general circulation of the atmosphere, and climate on earth. Weather phenomena occur on short time scales, and form the basis for understanding climate, the study of changes over longer time scales. Topics of the course include: composition and thermal structure of the atmosphere; sources of energy driving atmospheric processes; weather forecasting; the importance of the hydrological cycle, atmospheric moisture, precipitation
and how clouds develop; the forces that create winds, and warm and cold fronts; the forces that create severe weather, such as hurricanes and tornadoes; the influence of humans on the atmosphere; the greenhouse effect; factors that influence climate, climate variability and climate change. MATH 0090, 0100; PHYS 0050, or equivalent recommended. M. HASTINGS.

1370. Environmental Geochemistry
The course will examine the biogeochemical cycling, fate and transport of chemicals in the atmospheric and aquatic environments. Topics such as chemical weathering, natural water pollution and remediation, acid deposition, global warming and air pollution will be examined through natural eco-system examples from rivers, lakes, estuaries, and ocean. Field trips and laboratory arranged. Prerequisites: CHEM 0100 or 0330, or written permission. Y. HUANG.

1380. Environmental Stable Isotopes
Introduction to the concepts, analytical methods, theory and environmental applications of stable H, O, C, N and S isotopes. Emphasis will be placed on theory and applications of light isotopes in paleo-climate studies, environmental hydrogeology and biogeochemistry. Prerequisites: CHEM 0100, GEOL 0220 or 0230, or written permission. Y. HUANG.

1410. Mineralogy
Introduction to mineralogical processes on Earth's surface and its interior. Topics include crystallography, crystal chemistry, nucleation, crystal growth, biomineralization, environmental mineralogy, and mantle mineralogy. Laboratory study devoted to optical identification of rock-forming minerals. GEOL 0230, CHEM 0100, 0330, or equivalent recommended. Y. LIANG.

1420. Petrology
Introduction to the origin of igneous and metamorphic rocks. Emphasis on principles and understanding rather than facts and memorization. Principles are used to extract information concealed in the rocks about their formation, processes, sources and evolution with time. Laboratory work focuses on rock hand samples and microscopic textures. Field trips, laboratory arranged. Prerequisites: GEOL 1410; or instructor permission. A. SAAL.

1450. Structural Geology
Introduction to the geometry, processes and mechanics of rocks deformed by fracture, faulting and ductile solid state flow, on scales from microscopic to mountain ranges. Labs involve geologic maps and cross sections, 3D visualization of structures, study of deformed rocks and model experiments. Field trips and labs arranged. Prerequisites: GEOL 0220 or instructor permission. J. TULLIS.

1560. Global Tectonics
Plate tectonic theory and the evolution of continents and the seafloor. Emphasis on the structure and tectonics of western U.S., considering geological, geophysical, and geochemical constraints as well as direct geodetic observations of plate motions from GPS measurements. Three or more of GEOL 0220, 0230, 1240, 1410, 1420, 1450 and 1610 are recommended. D. FORSYTH.

1580. Quantitative Elements of Physical Hydrology
A comprehensive introduction for science, engineering, mathematics and environmental studies students to all aspects of the physical hydrology of precipitation, surface runoff and groundwater flow. Three lecture/discussion sessions will emphasize the quantitative elements of predictive physical models. Extensive class discussion will assess the practical application of specific models. Group collaboration encouraged. One recitation period/week. Lab. No exams. Prerequisites: APMA 0340, or PHYS 0470, or ENGN 0510, or instructor permission. J. F. HERMANCE.
1600. Environmental and Engineering Geophysics
A hands-on introduction to non-invasive geophysical methods applied to subsurface investigations of soil and bedrock conditions, groundwater, geotechnical engineering, forensics, archaeology, and other environmental applications. Students will use ground penetrating radar, seismic, gravity resistivity, electromagnetic and magnetic methods in the field one afternoon a week to investigate relevant environmental and geotechnical problems. A background in geology is not expected. Prerequisites: APMA 0340 and PHYS 0470, or ENGN 0510, or instructor permission. STAFF.

1610. Solid Earth Geophysics
A survey of basic geophysical techniques for determining the structure and dynamics of Earth's interior. Topics include: global structure from seismic waves; gravity, magnetic field, and shape of the Earth; thermal processes within the Earth; structure of continental and oceanic lithosphere. Recommended courses: GEOL 0220, PHYS 0470, APMA 0330. D. W. FORSYTH.

1620. Continuum Physics of the Solid Earth
Physics of the Earth with emphasis on fundamental physical principles and mathematical tools. Topics include application of: conductive and convective heat transfer to cooling of the Earth; potential theory to interpretation of gravity anomalies; solid mechanics to deformation of Earth's lithosphere; fluid mechanics to flow in the Earth's interior and in porous media. Recommended courses: GEOL 0220; APMA 0340; PHYS 0470 or ENGN 0510, or instructor permission. E. M. PARMENTIER.

1650. Earthquake Seismology
Topics include: location of earthquakes in space and time; measures of size and intensity of shaking; body waves, surface waves, and free oscillations; structure of the interior of the earth from wave propagation; earthquake faulting and relationship to tectonic processes. Recommended course: GEOL 0161. Offered in alternate years. D. W. FORSYTH and K. M. FISCHER.

Geologic applications of remotely sensed information derived from interaction of electromagnetic radiation (X-ray, gamma-ray, visible, near-IR, mid-IR, radar) with geologic materials. Applications emphasize remote geochemical analyses for both terrestrial and extra-terrestrial environments. Several spectroscopy and image processing labs. GEOL 0230, PHYS 0060, or equivalent recommended. C. M. PIETERS.

1810. Physics of Planetary Evolution
Evolution of planetary bodies based on geological and geophysical evidence derived from planetary exploration of the solar system. Includes the study of physical processes responsible for volcanism and deformation on the surface as well as the state and structure of the interior of planets. Recommended three or more of GEOL 0050; PHYS 0030, 0040, 0050, or 0060; MATH 0090, 0100. Offered alternate years. E. M. PARMENTIER.

1950. Special Topics in Geological Sciences
Written permission required.

1960. Special Topics in Geological Sciences
Written permission required.

One semester is required for seniors in Sc.B. and honors program. Course work includes preparation of a thesis. Enrollment is restricted to undergraduates only.
Primarily for Graduates

2300. Mathematical Models in the Geological Sciences
Review of matrix algebra and basic univariate statistics. Theory and practical applications of multivariate statistical models applicable to large arrays of data. Multivariate regression and correlation procedures; principal component analysis, cluster analysis, and dissimilarity measures. Familiarity with Chemistry at the high school level is expected. Prerequisite: GEOL 0010, or GEOL 0050, or GEOL 0220. Offered alternate years. The Staff.

2330. Advanced Remote Sensing and Geographical Information Systems
Strategies and the physical principles behind the quantitative extraction of geophysical and biophysical measurements from remotely sensed data. Advanced methods of digital image processing and data integration. Introduction to Geographical Imaging Systems (GIS) and methods of integrating remotely sensed data into a GIS framework. Recommended preparation courses: GEOL 1330 or 1710; MATH 0100; PHYS 0060 or instructor permission. J. F. Mustard.

2350. Quaternary Climatology Seminar
Discussion of current problems in paleoclimatology and global climate change. Students analyze the primary literature, and do original analyses of their own on published data. Topics include: theories of ice ages, millennial-scale climate variability, the influence of greenhouse gases and radiative forcing on climate, and historical and future climate changes. Prerequisites: graduate student status; or GEOL 0240, 0310, and 1240, or instructor permission. J. R. Russell.

2410. Kinetics of Geochemical Processes
Emphasizes kinetic theories and their geological applications. Topics include: rate laws of chemical reaction, rates of chemical weathering; fundamentals of diffusion, nucleation, crystal growth, and dissolution; transport theory. Prerequisite: GEOL 2460 or equivalent, or instructor permission. R. F. Cooper and Y. Liang.

2430. Igneous Petrology
Study of mineral equilibria in igneous rocks in relation to theoretical and experimental studies in silicate systems. Principles of the origin and evolution of igneous rocks in space and time. Offered alternate years. The Staff.

2460. Phase Equilibria
Principles of thermodynamics and phase equilibria in unary, binary, ternary, and multicomponent systems using analytical and graphical methods. Other topics include: solution theory, equations of state, and thermodynamics of surfaces. The Staff.

2520. Numerical Geodynamics
Use numerical methods for the solution of continuum physics problems arising in geophysics and structural geology. Skills for basic theoretical formulations and algorithms implementing finite element, finite difference, and boundary element methods are developed. Course uses lectures and a computer project applying the methods and concepts to a significant research problem. Recommended: APMA 0330, 0340; ENGN 1750 Offered alternate years. E. M. Parmentier.

2630. Interpretation Theory in Geophysics
Use basic statistical theory and its matrix algebra representation and modern approaches for the optimum design of experiments, constructing model solutions to measurements, and describing nonuniqueness in models, with particular emphasis on generalized linear-inverse techniques. Introduction to stochastic processes and prediction. Recommended courses: GEOL 1600 or 1610; MATH 0290, 0520, or APMA 0330, 0340, and computer programming skills. Offered alternate years. D. W. Forsyth.
2650. Advanced Seismology
The theory of modern seismology will be applied to imaging of Earth structure (from local to global scales) and determination of earthquake source models. Topics include elastic wave propagation, representation theorems, seismic tomography, moment tensors, source-time functions, and models of fault rupture. Prerequisites: GEOL 1650 or written permission. Offered alternate years. K. M. Fischer.

2730. Isotope Geochemistry
A survey course emphasizing fundamental principles in isotope geochemistry, including nuclear systematics, nucleosynthesis, geochronological and stable isotope systems, and the application of radiogenic and stable isotopic tracers to geological problems. Prerequisites: GEOL 1410 and 1420, or instructor permission. A. Saal and L. P. Gromet.

2800. The Chemistry and Mineralogy of Mars
Examination of the chemical and mineralogical composition of Mars as revealed from meteorites and spacecraft missions. Example topics include: SNC meteorites, origin and evolution of the crust, alteration processes, remote near- and thermal-infrared observations, remote gamma-ray and neutron measurements, and petrology of surface materials. Recommended courses: GEOL 1410, 1420, 1710, or equivalent. M. Wyatt.

2810. Planetary Science Seminar
Focus on several areas of new research and current topics not necessarily covered in the core curriculum but of interest and importance to planetary scientists. Emphasis on critical evaluation of ideas, approach, results, and implications. Example topics include extra-solar-system planets, sample return issues, unanswered questions about Mercury, Pluto, etc. Prerequisites: GEOL 1410 or 1420 or 1710. Staff.

2840. Asteroids and Meteorites
Compositional and petrographic characteristics of meteorites are examined along with the physical and compositional diversity of asteroids and other small bodies of the solar system. Possible links between specific types of asteroids and meteorite groups will be evaluated in the context of early solar system evolution. Data from spacecraft encounters with asteroids will be critically reviewed. C. M. Pieters.

2850. Regolith Processes
Particulate material (regoliths) and soils develop on every planetary surface. Physical and chemical alteration of the uppermost surface results from interwoven active processes of specific environments. Understanding these processes and products is central to interpreting data returned from planetary surfaces. Regoliths reflect surface history over a variety of time scales. Several planetary environments are examined in detail. Prerequisites: GEOL 1410, 1710, 2880, or instructor permission. C. M. Pieters.

2860. Planetary Volcanology
An examination of volcanism using observations of features and deposits on planetary bodies, comparing them to predictions from the theory of magma ascent and emplacement. Attention to the influence of different variables (e.g. gravity, composition, temperature, pressure, and atmospheric effects). The history of planetary volcanism, its relation to thermal evolution, and comparative planetary volcanology are also addressed. Offered alternate years. J. W. Head.

2870. Planetary Evolution
Characteristics of one or more planetary bodies are examined to illustrate critical geological problems related to planetary formation and evolution. This year emphasis is on the Moon. The surface and interior will be examined, as well as global composition and spacecraft data. Recommended courses: GEOL 1420, 1450, and 1710. C. M. Pieters.
2880. *Planetary Cratering*
Impact cratering affects nearly every solid-body object in the solar system. A major impact can produce relief comparable to the highest terrestrial mountains in just a few minutes. Course assesses the impact cratering process and record in different planetary environments, at different scales, and at different times. Offered alternate years. P. H. SCHULTZ.

2910. *Special Topics in Geological Sciences*
Written permission required.

2920. *Special Topics in Geological Sciences*
Written permission required.

2980. *Research in Geological Sciences*
Enrollment is restricted to graduate students only.

2990. *Thesis Preparation*
For graduate students who have met the tuition requirements and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

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**Center for Geometric Computing**

The Center for Geometric Computing, founded in the summer of 1995, consists of members of the faculty of the Department of Computer Science and their students. The center was initially established to enhance the visibility of a major research effort funded by the Army Research Office and the National Science Foundation.

Over the years, the center has expanded its core geometric computing research focus into new strategic directions with significant potential for technological and economic impact, including computer security, information assurance, digital signatures, wireless computing, and metrology. Funding for research in the above areas is currently provided by DARPA and NSF.

Members of the center are Professor Roberto Tamassia (director) and Professor Franco P. Preparata (past director). The center frequently hosts internationally known visitors participating in joint projects.

The main objective of the center is to facilitate the transfer of technology from basic research in computational geometry to several applied areas.

For additional information please visit the Center’s website at:
http://www.cs.brown.edu/cgc/cgc-brown.html

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**German Studies**

Professors Bartov, Bernstein, Crossgrove (Emeritus), Goodman (Emerita), Love (Emeritus), McLaughlin (Chair), Poore, Smith (Emeritus); Associate Professor Sng; Senior Lecturer Sokolosky.

**Undergraduate Program**

For a complete description of the standard concentration program leading to the A.B. degree, please see the Department website:
http://www.brown.edu/Departments/German_Studies/ or
http://www.brown.edu/Administration/Registrar/concentration.html.
Graduate Program

For a complete description of the program leading to the Ph. D. see http://www.brown.edu/Departments/German_Studies/.

Courses of Instruction

Primarily for Undergraduates

0100-0200. Beginning German
A course in the language and cultures of German-speaking countries. Four hours per week plus regular computer and listening comprehension work. At the end of the year, students will be able to communicate successfully about everyday topics. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in GRMN 0200 covers the entire year and is recorded as the final grade for both semesters. J. SOKOLOSKY and STAFF.

0110. Intensive Beginning German
Students who wish to complete the GRMM 0100–0200 sequence in one semester may do so by enrolling in GRMN 0110 for two semester course credits. There are six hours per week in small drill sections conducted by fluent undergraduate teaching apprentices. Another three hours of class will be conducted by the faculty instructor. Enrollment limited. Written permission required. Double credit.

0300. Intermediate German I
Focuses on deepening students' understanding of modern German culture by reading texts and viewing films pertinent to Germany today. Intended to provide a thorough review of German grammar and help students develop their writing, reading, listening, and speaking skills. Frequent writing assignments. Four hours per week. Prerequisite: GRMN 0200 or permission. J. SOKOLOSKY and STAFF.

0400. Intermediate German II
An intermediate German course that stresses improvement of the four language skills: listening, writing, reading, and speaking. Some grammar review as needed. Frequent written assignments. Topics include German art and literature. Students read short stories, novels and work with iPods. Four hours per week. Prerequisite: GRMN 0300 or permission. J. SOKOLOSKY and STAFF.

0450. Intensive Intermediate German
Open to students participating in Brown in Berlin or Tübingen, this is an intensive intermediate course which meets 20 hours per week for one month in Berlin. Students work on all four language skills through daily reading, writing and speaking assignments. The course introduces students to contemporary German literature, culture and politics. Prerequisite: GRMN 0300 or equivalent. May not be taken for credit by students who have completed GRMN 0400. THE STAFF.

0500. Advanced German I
While continuing to work on all four language skills students gain more intensive knowledge of topics in twentieth-century German culture. Prerequisite: GRMN 0400 or permission.

0500A. Cold War Germany and the Aftermath
The year 1990 unifies Germany and divides two decades in German history. The course investigates how self identification and the experience of present times were depicted in German literature and film in East and West in the 80s and 90s. Oral and
written skills in German are furthered while deepening participants' understanding of Germany's cultural and social situation. In German. Prerequisite: GRMN 0400 or permission.

0500B. From Zero Hour to the Wende
An exploration of postwar German culture through the study of literary and film texts. Oral and written skills in German are furthered while deepening participants' understanding of the prehistory of contemporary Germany. In German. Prerequisite: GRMN 0400 or permission.

0500E. The Presence of the Past: German Literature and Film (1945-present day)
Exploration of ways in which the German past, through cultural materials, including literature and film, played a role in the construction and deconstruction of the Berlin Wall, the two Germanys, and contemporary Germany. German oral/written skills are furthered while deepening participants' understanding of present-day Germany. In German. Prerequisite: GRMN 0400 or permission.

0600. Advanced German II
While continuing to work on all four language skills students gain familiarity with fundamental concepts in German cultural history. Prerequisite: GRMN 0500 or permission.

0600B. Was ist Deutsch?
In this course we will examine some of the ideas and myths used over the centuries to unify Germans and give them a sense of their heritage and distinctiveness: concepts like 'das Reich' or 'Bildung', figures like 'Barbarossa' or 'der deutsche Michel.' In some cases we may find the same words ('Freiheit' or 'Gesellschaft') have very different connotations. Conducted in German. Prerequisite: GRMN 0500 or permission.

0750. First Year Seminars
Enrollment limited to 20 first year students. For current topics, please see the department’s website: http://www.brown.edu/Departments/German_Studies. FYS

0750A. Faust and the Faust Legend
Variations on the Faust theme focus on the role of knowledge in modern society. How do we define what we know? How do we accommodate knowledge with belief? What are the limits of human knowledge and can they satisfy us? Texts from the Reformation to the present: Marlowe, Calderon, Goethe, Turgenev, Mann, Bulgakov, Kerouac, Havel. In English. Enrollment limited to 20 first year students. FYS

0750B. Tales of Vampirism and the Uncanny
This course pits the German inability to mourn against the American dream of the eternal return of adolescence and thus compares cultural mainfestations of horror and haunting. The psychoanalytic foundations of vampirism are discussed to enable students to go beyond mere fandom and engage these texts on a more sophisticated level. In English.

0750C. Crime Fiction: The Global Hyper-Genre
Twenty-five percent of all new literary books worldwide are crime fiction. As a means of a society to reflect upon itself, crime fiction reflects how certain cultures deal with the dialectics of threatening and securing civic order, how they depict mentalities, traditions, topographies, or cultural chance. In English.

0900. Introduction to German Studies
Introduction to the literature and culture of German-speaking countries. In English.
0900B. Great Works from Germany
Cultural and historical analysis of some of the most significant German texts from the past two centuries. Writers: Lessing, Thomas Mann, Günter Grass, Christa Wolf. Philosophers: Kant, Marx, Nietzsche, Freud. Sections: Enlightenment and its limits, liberation and oppression, and love and death. Students will give one presentation in class and write a final essay. In English.

0900C. Introduction to German Literature
This survey course will give a historical overview of the main periods and genres of literature in German from the eighteenth to the early twentieth century. We will also consider how literature relates and contributes to the cultural, intellectual, and political history of Germany. In English.

0990. German Literature in Translation
Introduction to the literature and culture of German-speaking countries. In English. For current topics, please see the department’s website: http://www.brown.edu/Departments/German_Studies.

0990A. The German Novel in the 19th and 20th Century, Part I
0990B. The German Novel in the 19th and 20th Century, Part II
The modern and postmodern German novel provides some of the most intriguing reading in the history of Western culture. From 19th century realism to 20th century postmodernism, these authors have commented on political events, provided historical hindsight, analyzed the German psyche, and initiated literary innovations that would have a profound impact on world literature and captivate readers worldwide. Works by Fontane, Kafka, Hesse, Mann, Grass, and Sebald, among others. In English. LILE

For Undergraduates and Graduates

1090. Advanced Written and Spoken German
Designed to increase the range, fluency, and accuracy of idiomatic expression through written and oral practice. Students shall acquire familiarity with various textual styles and genres, and reproduce these styles and genres in a variety of media. Required proficiency level: GRMN 0600 or permission.

1320. Classical German Literature
Introduction to the German literature of the eighteenth century. In German or English. For current topics, please see the department’s website: http://www.brown.edu/Departments/German_Studies.

1320D. Goethe
Selected readings of Goethe's theater plays, novels, and poetry. Explores the meaning of reading Goethe today, at the 250th anniversary of his year of birth, and investigates the activities around the celebration of this anniversary. Time permitting, we consider versions of Goethe's texts in film and other media. In German. Prerequisite: GRMN0600 or permission.

1320E. Classical German Literature: Goethe und die Klassik
The anthropology and aesthetics of Weimar Classicism. Readings of major works by Johann Wolfgang Goethe and Friedrich Schiller, with discussion of selected texts by Herder, Humboldt, and Kant. In German. Prerequisite: GRMN0600 or permission.

1320F. Eighteenth Century German Aesthetics
A survey of important aesthetic writings from the period, including some texts of Winkelmann, Lessing, Schiller, Goethe, and Hamann. Major questions to be treated
include the role of imitation, the concept of form, the relationship between the
beautiful and the good, and formation of aesthetic judgments. Course will conclude
with selections from Kant’s *Critique of Judgment*. In English.

1320G. *Drama and Religion*
Lessing used the stage as his "pulpit" when forbidden to publish in religious disputes.
Some dramatists addressed particular religious views in tragedies or satiric comedies;
others staged religious themes more generally or in metaphysical imagery. We
examine the variety, nature and context of these stagings in texts by major German
authors: L. Gottsched, Gellert, Lessing, Schiller, Goethe, Kleist, and Hölderlin. In
English, with a German section (TBA) for those able and interested.

1330. *The Individual in the Age of Industry*
Introduction to the German literature of the nineteenth century. In German or English. For
current topics, please see the department’s website: http://www.brown.edu/Depart-
ments/German_Studies.

1330A. *The Individual in the Age of Industry*
This seminar discusses the second part of the 19th century, which is distinguished by
nation building, industrial revolution, advance of science, realism and belief in
progress but also nihilism and cultural pessimism. We investigate how the new age of
pragmatism and the “technological sublime” is reflected in short stories by major
German writers such as Adalbert Stifter, Karl Gutzkow, Theodor Storm, Gottfried
Keller, Wilhelm Raabe, Theodor Fontane, Arno Holz and Gerhart Hauptmann. In
German. Prerequisite: GRMN0600 or permission.

1340. *The Modern Period*
Introduction to the German literature of the twentieth and twenty-first century. In German
or English. For current topics, please see the department’s website: http://www.brown.edu/Depart-
ments/German_Studies.

1340A. *Crime and Punishment- Introduction to German Mystery Texts and Films*
This course provides an exploration of German crime, detective and mystery texts and
films ranging from the early 19th century to contemporary fiction. In addition to
exercising hermeneutic skills, this course aims at improving proficiency in oral and
reading comprehension, as well as speaking and writing skills, with an emphasis on
vocabulary expansion, advanced Grammar review and stylistic development. This
course is recommended for students interested in a combined introduction to literature
and high-level language learning. Prerequisite: GRMN0600 or permission.

1340B. *Guilt Management: Postwar German Culture*
The central theme of postwar German Culture, from the so-called "Zero-Hour" in
1945 to postunification, was dealing with the Nazi past. We discuss how writers,
filmmakers, and critics tried to establish a public discourse on guilt. Films and
readings by Mitscherlich, Syberberg, Reitz, Müller, Grass, Christa Wolf, Sichrovsky,
Biller, Chaim Noll, and others. In German. Prerequisite: GRMN0600 or permission.

1340C. *Jahrhundertwende 1900*
Modernism and its discontents in German literature around 1900. Examines
naturalism, Jugendstil, Dada, and early expressionism. Poetry, fiction, and drama by
Nietzsche, Th. Mann, Stefan George, Rilke, Kafka, Wedekind, Hofmannsthal,
Schnitzler, Hauptmann, and others. Operas by Wagner and R. Strauss. In German.
Prerequisite: GRMN0600 or permission.
1340D. Modern German Prose, 1978-1998
Since the end of the 1970s, East and West German prose has tended to concentrate more on everyday life than on the overbearing questions of memory that were so central to immediate postwar authors. The changing function of literature in Germany is explored by reading representative prose fiction by major authors such as Becker, Delius, Hein, Strauss, and Walser. In German. Prerequisite: GRMN0600 or permission.

1340I. Turn of the Century
The most important issues in literature around 1900 will be discussed: the critique of language, media, psychoanalysis, urbanization, technical progress, the construction of the subject and a growing sense of isolation. Texts by Hofmannsthal, Rike, Schnitzler, Robert Walser, Georg Simmel, Freud, Nietzsche, Hermann Bahr and others. In German. Prerequisite: GRMN0600 or permission.

1340J. The Works of Franz Kafka
We will read a selection of texts by Kafka (including short stories, a novel, and journal entries) in order to explore his importance for the aesthetics of modernity. Topics include: representation of the law, literature and religion, the role of the paternal, and guilt. Frequent short papers based on close reading of texts, and a longer final paper. In German. Prerequisite: GRMN0600 or permission.

1340K. Unmittelbar nach 1945: Literatur und Film in Deutschland
Often called "Zero Hour," the period immediately following the end of the Second World War was one of turmoil and uncertainty in Germany. An enormous cultural production sprang up under extremely difficult conditions. Texts and films by Heinrich Böll, Wolfgang Borchert, Alfred Andersch, Wolfgang Staudte, Helmut Käutner, and others. In German. Prerequisite: GRMN0600 or permission.

1340L. The Modern Period
Explores the fascinating flowering of modernity in Germany, including the period around 1900 (adolescent Angst and the new Broadway version), Weimar culture (revolution, women's emancipation), Nazi culture, and exile literature in socio-historical context; including examples from film, art, and popular culture. Authors may include: Wedekind, Brecht, Kafka, T. Mann, Toller, Keun. In German. Prerequisite: GRMN 0600 or equivalent.

1440. Studies in Literary Genre
Introduction to particular genres in German literature. In German or English. For current topics, please see the department's website: [http://www.brown.edu/Departments/German_Studies](http://www.brown.edu/Departments/German_Studies).

1440A. Dada-Performance and Digital-Interactivity
This course investigates the invention of performance art in German Dada and its legacy and further development in contemporary interactive art in digital media. Both phenomena are discussed with respect to their aesthetic, philosophical, and social roots and intentions. In German. Prerequisite: GRMN0600 or permission.

1440E. Märchen
Fairy tales in German are usually associated with the Grimm brothers, but there is a rich tradition of popular (Volksmärchen) and literary (Kunstmärchen) fairy tales going back further and continuing into the present. We read a representative sample, consider typical features of the genre, and discuss the role of Märchen in shaping ideology. In German. Prerequisite: GRMN0600 or permission.
1440H. Projections of America
Since its discovery, 'America' has served as a projection screen for a variety of images of the 'New World': as utopia, as harbinger of modernity, and as the origin of political, economic, and cultural imperialism. Readings of the changing and shifting image of America in German literary and journalistic texts from the 18th century to the present (Lenau, Goethe, Heine, Sealsfield, May, Frisch, and others). In German. Prerequisite: GRMN0600 or permission.

1440L. Lyric Poetry: From Goethe to Heine
A survey of German lyric poetry during what Heine calls "die Kunstperiode." Focus on rhetoric of the lyric: apostrophe, prosopopeia, metaphor, metonymy and allegory. Close reading, frequent writing assignments. Reading in German, class discussion in English.

1440N. Kunstaerchen: the Literary Fairytale in the Nineteenth Century
"Das Kunstaerchen" or literary fairy-tale occupies a central place in the literature of late romanticism. Focusing on major examples from writers such as Tieck, Eichendorff, and Brentano, we will examine how the content and the representational structure of these texts contribute to debates on categories like the "natural," the "fantastic," and the "moral." In German. Prerequisite: GRMN0600 or permission.

1440O. Modern German Drama
Explores the fascinating modern German dramatic tradition from the 19th century to the present, emphasizing plays that are still a part of the stage repertory today and authors that have exerted a strong international influence. Authors may include: Büchner, Wedekind, Brecht, Toller, Dürrenmatt, Frisch, Weiss, Heiner Müller. In German. Prerequisite: GRMN0600 or permission.

1440P. Heroes, Failures and Other Peculiar Characters - The German Novel from Goethe to Kafka
Readings in the tradition of the German novel, including Bildungsroman, Realism and modernist fiction. Consideration especially of failed heroes and the failure of the novel genre. Authors include Goethe, Hölderlin, Novalis, Stifter, Fontane, Musil, and Kafka. Readings and class discussions in English.

1450. Seminars in German Literature
Specialized topics in German Literature. In German or English. May be repeated once for credit. For current topics, please see the department's website: http://www.brown.edu/Departments/German_Studies.

1450F. 20 Years After: The End of GDR and German Reunification
The fall of the Berlin wall heralded the German reunification rather than the reformation of the GDR as an example of "democratic socialism." The 20th anniversary gives reason to discuss the development of Germany since 1990. Readings of Volker Braun, Christa Wolf, Thomas Brussig, Ingo Schulze, Clemens Meyer, Yade Kara. Films: Goodbye Lenin, Das Leben der anderen, Willenbrock. Issues discussed: Cold War, Perestroika, Reunification, East-/West-German identity, Migration and Globalization. In German. Prerequisite: GRMN0600 or permission.

1450G. Love and Death
The course will examine the theme of love and death in four texts from around 1800: Lessing's *Emilia Galotti*, Goethe's *Werther*, Kleist's *Penthesilea* and Büchner's *Woyzeck*. We will focus on historical changes in the understanding and theory of emotions. In German. Prerequisite: GRMN0600 or permission.
1640.  *German Film*
Topics in the history of German film and film theory. In German or English. For current topics, please see the department's website:  http://www.brown.edu/Departments/German_Studies.

1640C.  *German National Cinema from 1917 to 1989, and Cold War Germany's in Film*
Examines three phases of German national cinema in competition with Hollywood's early dominance of film production, from the founding of the UFA in 1917 through National Socialist Cinema, the "New German Cinema," and the cinema of East Germany. Explores representations of Germany during the Cold War, 1949-1989, a mythical Germany cast as the locus of "world evil." Weekly screenings. In English.

1660.  *Studies in German Culture*
Interdisciplinary approaches to German culture. In German or English. For current topics, please see the department’s website:  http://www.brown.edu/Departments/German_Studies.

1660B.  *Berlin: A City Strives to Reinvent Itself*
Contemporary Berlin buzzes with energy, yet this metropolis is characterized by the legacy of fascism and divided government. The city as cultural space will be interrogated in interdisciplinary ways. Topics range from Weimar culture and Nazi architecture to the Cold War and German reunification. In English with possible extra session for students who have completed GRMN 0400 or higher.

1660C.  *German Culture in the Nazi Era*
Explore the variety and the contexts of German cultural production during the Nazi era. We will examine party sanctioned mass-mediated culture in the Third Reich including literature, film, theater, and public spectacle; as well as "unofficial" cultural productions including exile literature, literature of "inner emigration," "degenerate" art, and concentration camp poetry. The course will inquire into the effects of the political ministration of culture in the Nazi era, asking to what degree continuities in cultural production were sustained after 1933, and investigating the hallmarks and the legacies of a distinctive "Nazi culture." Previous course work in German history and/or the Holocaust recommended but not required. In English.

1660G.  *Kafka*
This course will analyze both the uncanny and comical aspects of Kafka's writings. It offers an exercise in literary analysis discussing methodological approaches as diverse as literary theory, media studies, and cultural studies. It also presents an overview of one of the twentieth century's most haunting writers who in many ways determined for our postmodern mind what we call "literature". In German. Prerequisite: GRMN0600 or permission.

1660H.  *Literary Discourse of Minority Cultures in Germany*
During the last thirty years or so, strong minority cultures have emerged in Germany. Writers from diverse cultural backgrounds have given voice to the problems and challenges of living among a dominant German culture that only reluctantly started to listen to their concerns. Authors discussed include Schami, Ören, Atabay, Dischereit, Monikova, Müller, and others. Focuses on questions of cultural and ethnic identity as expressed in and through literary texts. In German. Prerequisite: GRMN0600 or permission.
1660I. Literature and Other Media
When looking at literature and other media, the question is not, whether one will be replaced by the other, but rather, what one medium can do that the other cannot do so well or at all. Study of twentieth-century Media Theory Made in Germany with special emphasis on the relationships of literature to audio-visual media. Readings by Brecht, Benjamin, Adorno, Enzensberger, Kittler, Hörisch and others. In English.

1660R. Freud
Introduction to Freud's theories of the unconscious and its manifestations, Freud's thinking on culture and aesthetics, his theory of sexuality, his view of religion, and of fascism. In English.

1660S. Mord und Medien. Krimis im intermedialen Vergleich
The genre of the mystery novel has proven exceedingly productive in German speaking countries. At the same time, the new and the newest media have discovered the mystery genre as one of the most appealing narrative structures in contemporary culture. Readings of mystery narratives in book form, on television, on CD-ROM, and on the Internet. In German. Prerequisite: GRMN0600 or permission.

1660T. Germans/Jews, Deutsche (und) Juden
From emancipation to anti-Semitism and from the 'Golden Age' to the Shoah, Jewish life in Germany has experienced extremes comparable to no other cultural exchange. Widespread philo-Semitism and the official taboo on anti-Jewish sentiments indicate that the relationship between Jewish and non-Jewish Germans today remains one of mutual nonunderstanding and distrust. Texts by Lessing, Mendelssohn, Heine, Kafka, and others. In English.

1660U. What was Socialism? From Marx to “Goodbye Lenin”
The international socialist movement was born in Germany, and many of Germany’s most important cultural figures were attracted to its striving for social justice. But socialism seems to have come to a tragic end. Course includes theoreticians such as Marx, and Luxemburg, writers such as Heine and Brecht, and a focus on East German culture (film, art, literature) and its aftermath since the fall of the Berlin Wall. In English.

1660V. Nietzsche
This course will provide an introduction into Nietzsche’s thinking. Discussion of the major works from The Birth of Tragedy and Beyond Good and Evil to Thus Spoke Zarathustra. No pre-requisites. In English.

1660W. Early German Film and Film Theory
We will study the interference/interface of cinema and theory in the 20th century. Includes analysis of classical German films and texts by critics such as Eisenstein, Balazs, Vertov, Arnheim, Kracauer, Benjamin. In English.

1900. Senior Seminar
Advanced students of German culture will pursue their own interests pertaining to a designated topic related to the humanities in general. Common readings, general discussions and individual class presentations will facilitate the development of individual projects. In German and English. Required for concentrators, written permission required for others.

1900A. The Weimar Republic (1918-1933)
Advanced students of German culture will pursue their own interests in researching this fascinating period in German culture and political history. Common readings, general discussions, and individual class presentations will facilitate the development
of individual projects. Covered areas include literature, art, music, film, politics, etc. Required for concentrators, written permission required for others. In German and English.

1900B. Sites of Memory
The seminar explores the connection between representation and management of space and memory in the German context. Readings drawn from literary works, philosophy, public discourse about monuments and memorials, and so on. Assignments include individual presentations and final research project. Required for concentrators, open to others with instructor's permission. In English and German.

1900C. Cultural Industry and the Aesthetics of the Spectacle
This course explores mass culture and distraction as conceptualized by the Frankfurt School. Readings and discussions will engage with the emergence of distraction as a specific category of experience; the function of entertainment in the culture industries of Nazi Germany; the critique of mass culture in post war Germany, and the reformulation of spectacle and distraction in Culture Studies and postmodern discourse. Readings: Schiller, Adorno, Benjamin, Kracauer, Debord, Baudrillard, Postman, Virilio, Norbert Bolz. In German.

1970. Independent Study
Independent study on a particular topic related to German culture. In German or English. At the discretion of the instructor. THE STAFF.

1990. Senior Conference
Special work or preparation of an honors thesis under the direction of a faculty member. Primarily for Graduates

2320. Literature of the Eighteenth Century
Graduate work in German literature of the 18th century. In German or English. For current topics, please see the department’s website: http://www.brown.edu/Departments/German_Studies.

2320A. 1700
Comparing language (rhetoric, style), literature (poetry, drama, novel), and other cultural phenomena (theater, dictionaries, emblem books, professionalization), we will consider shifts in cultural paradigms from the early modern to the modern period. Grimmelshausen and Gellert; Gryphius and Gottsched; Optiz and Haller. Readings in German. Discussion in German or English.

2320B. The Works of Heinrich Kleist
Kleist's writings continue to pose interpretive and theoretical riddles for the modern reader nearly 200 years after their composition. We will read a selection of his major texts (dramatic, narrative, and journalistic) alongside some modern American and German criticism, covering methodological approaches such as deconstruction, psychoanalysis, and discourse analysis. Readings in German, with discussion in English.

2320C. Enlightened Laughter
We follow the development of German comedy and theory of comedy and laughter from the late Baroque to the Enlightenment, comparing comedies and theoretical texts with foreign examples. What kind of laughter is appropriate for a bourgeois stage? A German stage? Why is laughing important? What kind? Texts by Weise, Prehauser, the Gottscheds, Gellert, J. A. Schlegel, Lessing, also Molière, Destouches, Farquahar,
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Graffigny. German texts read in German. Prerequisite: Graduate standing or permission.

2330. Literature of the Nineteenth Century
Graduate work in topics in German literature of the nineteenth century. In German or English. For current topics, please see the department’s website: http://www.brown.edu/Departments/German_Studies.

2330A. Vision and Narration in the 19th Century
Explores the relationship between vision and techniques of linguistic representation in selected literary texts from late romanticism to the fin-de-siecle. Special attention will be paid to the idea of "realistic" representation and to problems that afflict both seeing and speaking in the texts. Authors include Kleist, Stifter, Storm, Keller, Hofmannsthal, Rilke, and Musil. Readings in German, discussions in English. Open to seniors with instructor's permission.

2340. Studies in German Culture: The Modern Period
Graduate Work in topics in German literature of the twentieth and twentieth-first centuries. In German or English. For current topics, please see the department’s website: http://www.brown.edu/Departments/German_Studies.

2340A. German Literature 1968-1989
Discussion of major trends in literature in German: New Subjectivity, postmodernism, feminist literature, the role of mythology, post-histoire. Authors to be discussed include Botho Strauss, Elfriede Jelinek, Thomas Bernhard, W.G. Sebald, among others. In German.

2340B. Poetik der AutorInnen
This course will examine postwar literary aesthetics as put forth in the so-called "Poetikvorlesungen" which several universities in German-speaking countries have instituted since 1959. These lectures have featured important contemporary authors thinking about their work - from poetic practices and aesthetic theories to biographic considerations and the technicalities of writing literature in today's world. In German.

2460. Modern German Literature
Graduate work in German literature of the 20th and 21st centuries. In German or English. For current topics, please see the department’s website: http://www.brown.edu/Departments/German_Studies.

2460A. German Literature 1945 - 1967
Examines the literature and the literary debates in postwar Germany, East and West. Authors to be discussed include those of the Gruppe 47 and those excluded from the group in the West; Brecht, Seghers, Becher and the new generation in the East. Emphasis on cultural politics and the role of literature in postwar German society (the work of mourning, political restauration).

2460C. Literature of the German Democratic Republic
Against the background of the history of socialism in Germany, an intensive study of GDR authors and East German authors since reunification, with opportunities to explore other areas such as film and art. Authors may include: Brecht, Müller, C. Wolf, Reimann, Hein, Braun, Tellkamp. Readings in German, discussion in English or German.
2460D. *Thomas Mann: Die Romane*
In this course, we will read and discuss Thomas Mann's novels, from Buddenbrooks (1900) to Bekenntnisse des Hochstaplers Felix Krull (1954). Emphasis on narratological analysis and historical contextualization. In German.

2660. *Interdisciplinary Studies*
Graduate work in interdisciplinary aspects of German Studies. In German or English. For current topics, please see the department’s website: [http://www.brown.edu/Departments/German_Studies](http://www.brown.edu/Departments/German_Studies).

2660A. *On the Sublime*
Survey of major theories of the sublime from antiquity to modern times, with emphasis on German, British, and French texts from the 18th to 20th centuries. Authors to be read include Longinus, Immanuel Kant, Edmund Burke, Jean-Francois Lyotard, and Neil Hertz. Readings and discussions in English, with optional readings in the original languages provided. Open to seniors with instructor’s permission.

2660C. *Socialism and the Intellectuals*
The international socialist movement was born in Germany, and many of Germany's most important intellectuals were attracted to its striving for social justice. Against the background of 19th century politics and theory, the course focuses on the Weimar Republic, the cultural politics of the German Democratic Republic and the New Left in the Federal Republic, and developments since reunification. Authors may include Heine, Marx, Hauptmann, Brecht, Müller, C. Wolf. Readings in German, discussions in English and/or German.

2900. *Theory and Methods of Foreign Language Teaching*
S/NC.

2930. *Special Topics in German Studies*

2970. *Preliminary Examination Preparation*
For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing for a preliminary examination. No course credit. THE STAFF.

2980. *Reading and Research*

2990. *Thesis Preparation*
For graduate students who have met the tuition requirement and are paying the Registration Fee to continue active enrollment while preparing a thesis. No course credit. THE STAFF.

**Center for Gerontology and Health Care Research**

The Center for Gerontology and Health Care Research (within the Medical School) is a nationally prominent research center that focuses on the diverse health and social service needs of elderly and other persons with chronic illness. It is the central coordinating force for interdisciplinary education and research in aging and long term care within the University. The center’s primary mission is to improve health and health care of older persons by advancing the fields of gerontology and health services research. The goal of these efforts is to enhance the quality of life of elderly and other persons with chronic illness. The research focus is both basic and applied, drawing upon the social sciences as well as clinical disciplines. Contact Richard Besdine, M.D., Director (401) 863-3211.
For additional information please visit the Center’s website: http://www.chcr.brown.edu/

Hispanic Studies

Professors Bou (Chairperson), Merrim, Ortega, Vaquero; Assistant Professor Mazzucchelli; Senior Lecturers Bauer, Schuhmacher, Smith; Lecturer Sobral

The Department of Hispanic Studies offers regular courses and opportunities for group and individually directed study in the language, literature, civilization and culture of Spain and Latin America. There are degree programs leading to the A.B. and Ph.D. Currently, the department does not admit students to pursue an A.M. degree independently of the Ph.D.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree please visit http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

Master of Arts

Work for the master’s degree may be wholly in Hispanic literature or may include one or more courses in such related fields as a second literature, linguistics, history, philosophy, or art. A candidate is expected to read, speak and write Spanish and have an adequate knowledge of the corresponding literature. In addition, the candidate must demonstrate a reading knowledge of French.

Requirements: Eight courses beyond the A.B. degree. A course in literary theory. A major paper (30 pages).

Doctor of Philosophy

Additional requirements for the doctorate, beyond those for the A.M., are outlined below:
1. Command of the Spanish language, spoken and written. Reading knowledge of German or Latin. In certain fields of specialization, a knowledge of Portuguese or another Romance language may be substituted.
2. An understanding of the development and/or the linguistic basis of the Spanish language.
3. Knowledge of Hispanic literature, consisting of wide acquaintance with the chief movements and writers and a thorough knowledge of selected major authors and works, including their historical and intellectual environment.
4. The program may include individually directed reading and research courses. Approved graduate courses in a field closely related to the major interest of the candidate may also be included. Such courses will usually be chosen from a second literature or linguistics, but studies in another related field may be approved on presentation of sufficient evidence of its relevance to the intellectual purposes of the candidate.
5. Eight semester courses beyond those offered for the A.M.
7. It is expected that every graduate student will serve at least 2 years as a teaching assistant and will have attended a course of instruction in teaching methods.

For additional information about the Department of Hispanic Studies please visit: http://www.brown.edu/Departments/Hispanic_Studies/

Courses of Instruction

Catalan

Primarily for Undergraduates

0100. Introduction to Catalan
This course introduces students to Catalan culture and boosts their oral and writing skills through a wide range of resources: Internet, television, radio, cinema, and music.

0200. Catalan Language and Culture
An intermediate course which introduces students to Catalan culture and allows them to review and extend their knowledge of all basic patterns (e.g. grammar, vocabulary, phonetics, sociocultural norms) of the language. Students will develop their oral and written skills by describing, narrating, and presenting arguments. They will work with texts and audio-visual material that will provide them with a deeper understanding of Catalan literature, culture, and contemporary society.

Classes will be conducted in Catalan. Therefore a basic knowledge of Catalan literature is a prerequisite or students may request the instructor's permission to take the course.

0300. Introduction to Catalan Culture
The course will begin with an introduction to Catalan grammar. After students have a basic command of the language, they will be encouraged to read a wide range of texts written in Catalan related to many different topics. The texts have been selected not only for their linguistic value, but also because of the cultural aspects they introduce. The course will include activities designed to teach students about Catalonia, its culture and its traditions. For example, students will have the opportunity to listen to songs, watch films, news reports, etc.

All texts will be provided by the professor and handed out in class. Students are welcome to bring to class any Catalan text of their interest.

Classes will be conducted in Catalan as much as possible. Therefore, some knowledge of another Latin language is required.

Hispanic Studies

Primarily for Undergraduates

0100. Basic Spanish
This fast-paced beginning course provides a solid foundation in the development of communicative skills in Spanish (speaking, listening comprehension, reading and writing) as well as some insight on the cultures of the Spanish-speaking world. Individual work outside of class prepares students for in-class activities focused on authentic communication.

Placement: students who have never taken Spanish before, or have scored below 390 in SAT II, or below 200 in the Brown Placement Exam. Students who have taken Spanish before and those with an AP score of 3 or below must take the Brown Placement Exam. Stu-
dents should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website.

Enrollment limited to 18. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

0200. Basic Spanish
A continuation of HISP 0100. This course continues to focus on acquisition of communicative skills (speaking, listening comprehension, reading and writing) as well as cultural awareness. With successful completion of the course students will be able to understand simple texts, carry on short spontaneous conversations involving everyday topics (such as modern day life and its pressures, health, art and culture, nature and the environment, relationships) and write simple texts with good command of grammar and sentence structure. Prerequisite: HISP 0100 or placement: SAT II scores between 400 and 450; Brown Placement Exam scores between 201 and 323. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website.

Enrollment limited to 18. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

0300. Intermediate Spanish I
This course continues to develop and strengthen students' proficiency in the Spanish language, as well as to help them increase their cultural understanding. It seeks to develop both fluency and accuracy and to teach students to express, interpret, and negotiate meaning in context. Through the exploration of themes such as the individual and the community, health issues, traveling, multiculturalism and human rights, students focus on communication and learn to appreciate cultural differences. Pre-requisite: HISP 0200 or placement: SAT II scores between 460 and 510, or Brown Placement Exam scores between 324 and 373. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website.

Enrollment limited to 18. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

0310. Spanish for Social Service Applications
Provides unique language skills for students interested in health care, social service, and community action. It develops speaking skills and cultural awareness through discussions, readings, interviews, oral presentations, and internships. Topics include case management, substance abuse, HIV and STD prevention, sexual abuse, domestic violence, mental health issues, anger management, and medical treatment. Some advanced grammar points reviewed. Prerequisite: 2-3 semesters of college Spanish, placement in HISP 0300 or 0400.

0400. Intermediate Spanish II
This course offers an exploration of the Spanish language and Hispanic cultures through a variety of thematic foci: the world of work, the arts, globalization and technology, leisure, and celebrations. It focuses on vocabulary building, the examination of some of the more difficult points of grammar, and moving students towards a more sophisticated level of comprehension and expression. Students work with readings, including literary texts; songs; film; and the visual arts. Prerequisite: HISP 0300 or placement: SAT II scores between 520 and 590 or Brown Placement Exam scores between 374 and 423. Students with an AP score of 3 or below must take the Brown Placement Exam. Students should check
Placement and Course Description in the Undergraduate Program section of the Hispanic Studies Website.

Enrollment limited to 18. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

0500. Advanced Spanish I
Offers comprehensive work in listening, speaking, reading, and writing, with targeted grammar review. Students work with a variety of readings (literature, newspaper articles, etc.) and with art forms such as music and film, in order to develop oral and written expression and to explore issues relevant to the Hispanic world. Students explore topics of their own interest through student-led activities and presentations. Prerequisite: HISP0400 or placement: SAT II scores between 600 and 660, Brown Placement Exam scores between 424 and 490, or AP score of 4 in language or literature. Please check Hispanic Studies website (Undergraduate Programs) for course descriptions and placement information.

Enrollment limited to 18. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

0600. Advanced Spanish II
Offers continued, advanced-level work in speaking, listening, reading, and writing skills, with focused review of challenging aspects of Spanish grammar. Course materials include films, music, art works, and a variety of written texts (articles, stories, plays, a novella, etc.) chosen to promote class discussion and in-depth written analysis. There will be individual and group activities, including in-class presentations and creative writing projects. Prerequisite: HISP0500 or placement: SATII scores between 670 and 740, Brown Placement Exam scores between 491 and 550, or AP score of 5 in language. Please check Hispanic Studies website (Undergraduate Programs) for course descriptions and placement information.

Enrollment limited to 15. Pre-enrolled students must attend the first four days of class to maintain their pre-registered status and notify the instructor in advance if they must miss any day before the 4th class when the composition of the course section is finalized.

0710. Tradition and Innovation: Nineteenth- and Twentieth-Century Experience
A survey of the forces of tradition and innovation in Spanish literary texts, from the romantic period up to the varied literary experimentation of the 20th century. An ancillary aim is to develop students' written and oral expression in Spanish. For the place of this course in the Hispanic studies concentration, see the list of concentration requirements on the Registrar's webpage (www.brown.edu/Administration/Registrar/). Prerequisite: HISP 0600, or AP score =5, or SAT II (Literature) score of 750 or above, or Brown placement score of 551 or above.

0730. Early and Contemporary Writers of Spanish America
An introduction to major authors, movements, and themes of Spanish American literature from the discovery of the Americas to the twenty-first century. This course is aimed not only at the recognition of social and historical issues addressed by this literature, but also at the recognition of its aesthetics and poetics. It is also intended to develop students' oral and written expression in Spanish, as well as critical vocabulary for the analysis of Hispanic literature and culture. Students are expected to engage in a close reading and discussion of texts, as well as to revise their papers systematically. Conducted in Spanish. Prerequisite: HISP 0600 or placement by exam, AP or Brown Placement Test. N. WEY-GOMEZ, J. ORTEGA.
0740. **Intensive Survey of Spanish Literature**
An introduction to the major authors and literary movements of Spanish literature from the Middle Ages to contemporary times. Focuses on building critical vocabulary. Also aims to develop students' written and oral expression in Spanish. Preparatory course for 1000-level courses for students who achieve the highest placement in Spanish. Prerequisite: HISP 0600, or AP score = 5, or SAT II (Literature) score of 750 or above, or Brown placement score of 551 or above. M. VAQUERO and STAFF.

0750. **Topics in Hispanic Culture and Civilization**
Addresses the interdisciplinary study of Hispanic cultures as manifested in history, literature, and the arts, as well as in the every day discourses of a culture (film, television, journalism). An ancillary aim is to develop students' written and oral expression in Spanish. Prerequisite: HISP 0600 or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam.

0750A. **Cultures of Violence**
Studies wide-range treatments of violence in Hispanic literature, film, and TV. We will address the protocols of honor in Golden Age Spain; state-sanctioned bloodshed in Latin America; endemic violence in over-populated cities; and ritual lynching in confessional TV shows. Works by Cervantes, Catalina de Erauso, Garcia Marquez, and Fernando Vallejo. Films: Historia official, Amores perros. V: Show de Cristina. Prerequisite: HISP 0600 or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam.

0750B. **Hispanics in the United States**
Designed to bridge academic learning about Hispanic/Latino culture and volunteer work in agencies serving Hispanics in Providence. Readings, films, and guest presentations focus on issues of concern to these groups. Spanish language learning occurs in the classroom and the community, where students have the opportunity to enrich and test course content. Prerequisite: HISP 0600 (formerly SP 0060) or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. THE STAFF.

0750C. **Love and War in Medieval and Contemporary Spanish Fiction**
Examines presentations of Medieval Iberian culture in literature and film. This subject interrogates the persistent popularity of medieval themes and stories in contemporary film and fiction. It will consider some medieval narratives, such as El Cid, medieval chronicles and ballads, and La Celestina, which inspire a tradition of revisionist rewriting, as well as modern "inventions" of the medieval in a range of cultural forms. Prerequisite: HISP 0600 (formerly SP 0060) or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. THE STAFF.

0750D. **Mexico, Image and Encounter**
An exploration of portrayals of contemporary Mexican culture and attitudes in the media, art and literature, and by means of an on-line dialogue with Mexican university students. Special emphasis on Mexico City and Tijuana and the perspectives of regional, foreign, and social outsiders. Analysis of films, travel guides/accounts, and readings by Monsivais, Pacheco, Poniatowska, Swain, Villoro, etc. Prerequisite: HISP 0600 (formerly SP 0060) or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. THE STAFF.

0750E. **Topics in Hispanic Culture and Civilization**
Prerequisite: HISP 060 or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam.
0750F. Transition to Democracy in Spain, 1975-1985
With the death of General Francisco Franco in November of 1975, Spain began the period of transition from a forty-year dictatorship to a modern democracy. This course focuses on cultural production of the transition period, including literature and other high art forms as well as popular culture, in order to assess the way in which these discourses worked simultaneously to both reflect and effect change. Prerequisite: HISP 0600 (formerly SP 0060) or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam.. THE STAFF.

0750G. Wildeyed Stories
From the 12th century to the 1500s. Tales of heroism, fables, stories of deception and revenge, and humorous narratives of bawdy content were transmitted orally and in manuscript first, and then, after 1472, also in print. Such narratives will help us to explore the social, cultural, and political forces that affected behavior and motivated change in Medieval and Early Modern Spain. For first year students only. Prerequisite: HISP 0600 (formerly SP 0060) or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. THE STAFF.

0750H. Uneven Modernity: Bourgeois and Popular Culture in Nineteenth-Century Spain
Throughout the nineteenth century, Spain evolves from absolutism to the constitutional monarchy of the Restoration, with the corresponding formation of a new bourgeoisie and urban proletariat. Modernization was nevertheless uneven, and different stages of political, economic, and social development coexisted. This course will analyze how literature and other cultural products both reflected and incarnated the contradictions inherent to this process. Prerequisite: HISP 0600 (formerly SP 0060) or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. THE STAFF.

0750I. Spanish Cinema and Literature: The Postmodern Cinema of Pedro Almodóvar
Spanish film has experienced a total renewal after Franco's death. In this course we will analyze recent developments in Spanish film paying special attention to the way film directors have exploited a very rich and well established literary tradition from Luis G. Berlanga, and Carlos Saura, to Víctor Erice and Pedro Almodóvar. Prerequisite: HISP 0600 or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. THE STAFF.

0750J. Hispanic Population US
Designed to bridge academic learning about Hispanic/Latino literature and culture with volunteer work in agencies serving Hispanics in Providence. Readings, films, and guest presentations focus on issues of concern to these groups, particularly language and literacy. Spanish language learning occurs in the classroom and the community, where students test and enrich course content. Prerequisite: HISP 0600 (formerly SP 0060) or placement: SAT II scores of over 750, 5 in AP Literature or 551 and over in the Brown Placement Exam. B. W. BAUER.

For Undergraduates and Graduates

1020. Spanish Literature in English Translation
1030. Contemporary Latin American Fiction in Translation
1100. Cultural Diversity in the Hispanic Worlds
1210. Studies in Spanish Literature of the Middle Ages
1240. *Studies in Spanish Literature of the Golden Age*

1260. *Studies in the Nineteenth Century*

1290. *Literature of the Spanish Twentieth Century*

1330. *Studies in Spanish American Literature*

1370. *Studies in Contemporary Spanish American Literature*

1370A. "One Hundred Years of Solitude": Culture and Politics in García Márquez's Work

This course will focus on García Márquez's masterpiece in order to analyze its modes of representation, discursive strategies, and fictional construction as well as its interactions with history, politics, and literary and popular traditions. Other related work by the Colombian Nobel Prize winner will be discussed, as will his journalistic pieces and movies. The novel may be read in Spanish or English; discussion will be mainly in Spanish. **J. ORTEGA**

1500. *Special Topics in Hispanic Literature*

1700. *Stylistics and Linguistics*

Este curso está dedicado a ejercitar la creatividad en el uso del español. La clase será un taller de escritura, tanto de ensayos y crónicas de poemas y cuentos. Seguiremos modelos literarios y ejemplos de poesía y relato pero también haremos reseñas de películas y crónicas de periodismo. **THE STAFF.**

1900. *Capstone Course*

Required of all concentrators in Hispanic studies in their junior or senior year, after they have completed 100-level courses in the department; other students who have done the same may take the course with written permission. A prosenal covering research tools and methods and cutting-edge topics of broad relevance to Latin American and Peninsular literatures and cultures. Several faculty members contribute to the seminar; each student develops and presents a final project on an intercultural topic.

1990. *Senior Conference*

Primarily for Graduates

2010. *Spanish Philology*

Brief introduction to textual criticism and to the development of the Spanish Language. This course is divided into 10 hour segments. Only for graduate students. **M. VAQUERO.**

2030. *Studies in Spanish Literature of the Middle Ages*

2100. *Literary Theory and its Relation to Hispanic Studies*

Provides a basic theoretical foundation in matters relating to the literary act and system (representation, literary change, contextualizations), to the subject (voice, biography, readers), and to the cultural configuration (models, innovation, translation). Texts: Bakhtin, Jakobson, Lotman, Barthes, Derrida, Kristeva, De Certeau, and Eco. Cases and texts from Spain, Latin America, and their interactions. Five short papers. Seminar.

2150. *Studies in Spanish Literature of the Golden Age*

2160. *Seminar in Spanish Literature of the Golden Age*

2250. *Seminar in Spanish Literature of the Eighteenth and Nineteenth Century*

2350. *Studies in Spanish American Literature*

2520. *Seminar: Spanish American Literature*
2620. Special Topics in Hispanic Literature
2820. Special Topics in Hispanic Literature
2900. Theory and Methods of Foreign Language Teaching
How are second languages acquired? How can instruction optimize acquisition? How do we evaluate, improve or create effective teaching materials? This course introduces the theory of foreign language learning and teaching and seeks to help language teachers implement communicative language teaching through reflective practice. Written permission required for undergraduates. S. SOBRAL AND STAFF.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. Research in Spanish and Latin American Literature
2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

2991. Thesis Preparation

History


The Department of History offers a wide variety of courses concerned with changes in human experience through time. These courses range from the histories of Classical Greek and Roman civilizations to the histories of Africa, the Americas, East Asia, the Middle East, and South Asia. The department has no single approach or pedagogic method. Some courses deal with the history of a particular country (e.g. France or Japan); others concentrate on a certain period of time (e.g., the Middle Ages or the Renaissance); and still others deal with a special topic (e.g., twentieth-century science or multiracial societies in the Americas). All use methods of instruction appropriate to the particular subject and to students’ level of knowledge. Introductory and intermediate courses combine lectures and discussions, while a sizeable number of small seminars give students an opportunity to delve deeply into an area of special interest. By taking advantage of the variety of offerings, students will be able to develop broad perspectives on both the past and the present.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html.
Graduate Programs

For a complete description of the requirements for the Master of Arts and Doctor of Philosophy degrees in History, please see the History Department website at: http://www.brown.edu/Departments/History/Courses of Instruction

Primarily for Undergraduates

0010. Europe from Rome to the Eighteenth Century
This course explores the vast changes in the organization of physical, social, political, and mental space that occurred in European societies during this period. Themes include the complex divisions and interactions of various groups within these societies according to gender, class, and ethnicity, and the relations between European societies and others (including the Islamic world and the Americas). P T. E. NUMMEDAL.

0020. Europe since the French Revolution
A survey of European history from the middle 18th century until recent times. The themes include the transformation of a traditional society, industrialism, revolutionary movements, ideological changes, imperialism, fascism, communism, and the present state of European civilization. M J. L. RICHARDS.

0410. Introduction to East Asian Civilization: China
This course is an introduction to Chinese history from earliest times to present and an introduction to historical analysis, open to all students without prerequisites. We will examine the changing conception of empire in traditional China and how China and focus on the interactions between the Chinese and their neighbors, especially the steppe nomads from the north and westerners from Inner Asia and Europe. We aim to help students understand modern China by emphasizing the connections between the past and the present. Students will be encouraged to give their own readings of primary sources in translation. E C. BROKAW.

0420. Introduction to East Asian Civilization: Japan
A broad-based survey that begins with the formation of a distinctive lifestyle in prehistoric times and continues through Japan’s emergence to a modern nation today. Particular emphasis is placed on understanding the fundamental cultural values and aspirations of Japanese who lived in various historical periods and analyzing their attempts to create particular political, social, and economic systems that would give life to those dreams and ambitions. E K. SMITH.

0510. American History to 1877
A survey of social, cultural, and political trends from colonial times to Reconstruction focusing primarily on the lives of ordinary Americans. E M. VORENBERG.

0520. American History since 1877
A survey of social, cultural, and political trends from 1877 to the present focusing primarily on the lives of ordinary Americans. M H. P. CHUDACOFF.

0970. Introductory History Seminar
Designed for first-year students who wish to acquire historical skills and experience working together as an intellectual community. May serve as a gateway for more advanced courses. Enrollment limited to 20 first year students. FYS.

0980. Introductory Seminars in History
Designed for students who wish to acquire historical skills and an introduction to the discipline. May serve as a gateway for the history concentration. Enrollment limited to freshmen, sophomores and juniors.
For Undergraduates and Graduates

1000. Ancient Greek History

1000A. History of Greece: From Alexander the Great to the Roman Conquest
Covers the decline of Athens as the center of classical civilization; the conquests of Alexander the Great; the culture of the Greek elite and, to the extent that it's recoverable, of the indigenous populations of the Hellenistic world; and Greek contributions to what we call Western Civilization. P

1000B. The Shaping of the Classical World: Greeks, Jews, and Romans
Focuses on the ancient Greeks, Romans, and Jews, from 300 B.C.E. to 400 C.E. Covers primarily social, philosophical, and religious areas of contention and accommodation, ending with the late antique, Christianity, and rabbinic Judaism. P

K. SACKS.

1010. Roman History

1010A. Roman History I

1010B. Roman History II
J. Bodel.

1020. Living Together: Muslims, Christians, and Jews in Medieval Iberia
While in most of medieval Europe Christians predominated numerically and culturally, in medieval Spain they were often overshadowed by people of the other two monotheistic faiths, Islam and Judaism. The course explores the diverse world of medieval Spain from the Visigothic prelude to the momentous events of 1492. Particular focus on the social, cultural, and political modes of interaction among Christians, Jews and Muslims. P

A. G. REMENSNYDER.

1030. Early Medieval Europe
Once thought of as the “Dark Ages,” this period of western European history should instead be seen as a fascinating time in which late Roman culture fused with that of the Germanic tribes, a mixture tempered by a new religion, Christianity. Issues of particular concern include the symbolic construction of political authority, the role of religion, the nature of social loyalties, and gender roles. P

A. G. REMENSNYDER.

1040. Europe in the High Middle Ages (ca. 1000-ca. 1450)
Popes named Joan, Gothic cathedrals, and crusaders—all these were produced by the rich world of the western European Middle Ages. The cultural, religious, and social history of this period are explored with special attention to the social construction of power, gender roles, and relations between Christians and non-Christians. P

A. G. REMENSNYDER.

1050. Renaissance Italy
Italian society and culture from the fourteenth through the sixteenth centuries. Explores the traditional understanding of the Renaissance as a period of remarkable artistic and intellectual achievements in Italy as well as the broader social, political and cultural context for these innovations. Topics include art, political theory, humanist scholarship, family life, court society, religion, urban and rural identities and sexuality. P

T. E. NUMMEDAL.

1060. Late Renaissance and Reformation Europe

1070. Early Modern Europe from Religious Reform through the Age of Absolutism
This course surveys the history of Europe from the Reformation to the early eighteenth century. Particular attention will be paid to the major religious splits and conflicts and political developments, as well as the expansion of European powers overseas. P
1080. Slavery in the Ancient World
Examines the institution of slavery in the ancient world, from Mesopotamia and the Near East to the great slave societies of classical Greece and (especially) imperial Rome; comparison of ancient and modern slave systems; modern views of ancient slavery from Adam Smith to Hume to Marx to M.I. Finley. Readings in English. P J. Bodel.

1090. Black Freedom Struggle Since 1945
Examines the extended history of the Civil Rights Movement in the U.S. with a range of primary sources. Starting at World War II, the course considers the roles of the courts, the government, organizations, local communities, and individuals in the ongoing struggle for African American equality, focusing on African American agency. Sources include photographs, documentaries, movies, letters, speeches, autobiography, and secondary readings. Must have taken at least one post-1865 U.S. history course demonstrating a foundation in this time period. Enrollment limited to 50. M F. HAMLIN.

1130. The Renaissance in Northern Europe
Explores the late Renaissance as it developed primarily in sixteenth-century Northern Europe, particularly the relationship between artistic and intellectual developments and their social, political, and religious context. Topics include: the commodification of art and knowledge, court culture and patronage, early museums and curiosity cabinets, the gendering of intellectual authority, humanism and print culture. P T. E. NUMMEDAL.

This course connects natural knowledge to larger developments in early modern Europe such as noble court culture, artistic innovation, commercial exchange, exploration and colonization. Topics include: alchemy, early museums, the visual culture of science, and the impact of New World nature on Old World knowledge systems. P T. E. NUMMEDAL.

1170. Topics in Jewish History

1180. The Rise of the Scientific Worldview
Examination of the worldview that emerged in Europe during the scientific revolution, from 1543 when Copernicus and Vesalius published their works until Lavoisier’s chemical revolution in the late 18th century. Considers both the chronology of scientific developments, and their broader social and intellectual contexts. Accessible to science, humanities, and social science concentrators. P J. L. RICHARDS.

1190. Nineteenth-Century Roots of Modern Science
A consideration of developments in 19th-century physics, chemistry, biology, and mathematics in their relation to the natural and social worlds. Explores the ways scientific theories affected and were affected by views of the nature and potential of scientific knowledge. Also addresses the development of institutional structures and their effects on theories generated. No formal prerequisites—open to science and humanities students. M J. L. RICHARDS.

1200. Science and Society in the Twentieth Century
Examines selected aspects of the development of science in relation to society. The development of relativity theory, quantum mechanics, evolutionary theory, molecular biology, and ecology are considered within their social and intellectual contexts. No formal prerequisites for the course which is open equally to science and humanities students. Occasional extra technical sections are offered to explain basic scientific ideas when necessary. M J. L. RICHARDS.

1210. European Intellectual History: Discovering the Modern
A lecture course, primarily for juniors and seniors, that focuses on salient philosophic, artistic, and ideological currents of 19th-century Europe. Beginning with the crisis of political and cultural legitimacy posed by the French Revolution, it concludes with the consolidation
of bourgeois culture in the 1860s and 1870s and the two great scientific systematizers of these decades: Darwin and Marx. M M. GLUCK.

1220. European Intellectual and Cultural History: Exploring the Modern, 1880–1914
A sequel to HIST 1210 focusing on radical intellectual and cultural currents that challenged and destabilized the assumptions of Victorian high culture during the fin de siècle. Through a careful reading of primary texts by Hobhouse, Nietzsche, Weber, Bergson, and Freud, explores issues such as the rise of consumer mass culture, neoliberal and neofascist politics, philosophic irrationalism, psychoanalysis, and the woman question. M M. GLUCK.

1230. European Intellectual History: Exploding the Modern
The overarching theme of the course is the relationship between modernity and the primitive as manifested in major cultural, aesthetic and political movements in the 20th century. Films are an integral part of the course. M M. GLUCK.

1260. Modern European Women's History
The history of European women from the Enlightenment to the present, with special attention to culture and sexuality. M C. J. DEAN.

1280. English History, 1529–1660
Examines politics, religion, and society from the Protestant Reformation to the Puritan Revolution—a period of rapid and dramatic change when the world, for most English people, was turned upside down. Considers the experiences and concerns of ordinary men and women, as well as the elite. Takes in Scotland, Ireland, and the great migration to New England. P T. J. HARRIS.

1290. British History, 1660–1800
A survey of British history from the restoration of monarchy to the Wilkes affair and the loss of the American colonies. In addition to political developments such as the Glorious Revolution and the rise of party, examines political ideology (including the great political theorist, John Locke) and various themes in social history (such as crime, popular protest, the sexual revolution, and the experiences of women). P T. J. HARRIS.

1300. Victorian Britain: Liberalism, Morality and Empire
How and why did 19th-century Britain become the most powerful nation in the world? We will investigate Britain’s remarkable political stability, examine its industrial expansion and the growth of cities, explore its trademark philosophy—liberalism—and consider challenges to the parliamentary system, especially by workers; and chart the expansion of empire and its consequences for the metropole. M D. A. COHEN.

1310. Empire to Cool Britannia: Twentieth-Century Britain
One hundred years ago the greatest power in the world, Great Britain today is merely a junior partner in the new Europe. Yet is the history of Britain in the twentieth century chiefly a story of decline? Themes include the effects of the two world wars, the political incorporation of labor, decolonization and immigration, state expansion, and mass culture. M D. A. COHEN.

1350. Modern Genocide and Other Crimes against Humanity
The emergence, evolution, varieties, and underlying causes of and confrontations with genocide and other crimes against humanity in the 20th century: genocide in colonial empires, Ottoman Turkey, Nazi Germany, Cambodia, and Rwanda; killing of the handicapped, wartime massacres, mass crimes of Communism, and “ethnic cleansing”; the role of racism in and moral arguments about crimes against humanity; and policies of retribution and restitution. M O. BARTOV.
1370. Germany, 1914 to the Present
Explores the extraordinarily violent and no less remarkably creative course of German history in the 20th century. Emphasizes the impact of World War I; politics and culture in the Weimar Republic; conformity, resistance, and complicity in the Third Reich; Hitler’s war of destruction and genocide; the divergent paths of East and West Germanies; reunification and Germany’s future prospects. *M. O. Bartov.*

1380. Peasant Rebellion and Popular Religion in China
Treats the role that religious beliefs played in inspiring and guiding popular protest and peasant rebellion in China up to the present. We will discuss the relationship between folk beliefs and the Three Teachings (Confucianism, Taoism, Buddhism) and state efforts to regulate religious belief. Then, through a series of case studies (the Eight Trigrams uprising, the Taiping rebellion, and the Boxer movement), we will examine how religious belief shaped both the ideology and the actions of protesters and rebels. We will conclude with a consideration of the place of religion in contemporary China. *E. C. Brokaw.*

1390. Modern Italy
Examination of Italian society, culture, and politics over the past two centuries. Particular attention is devoted to the creation of Italian national identity, the role of the Catholic Church, changing gender and class relations, conflicts between North and South, the development of fascism, postwar political developments, and changing Italian family life. *M.*

1400. The East Slavic World to 1800
The development of the Eastern Slavs before 1800, with an emphasis on Russia. *P.*

1410. Modern Russia to the Revolution
This course provides a broad survey of the history of Russia from the reign of Ivan the Terrible in the 16th century to the Revolution of 1905, when the Romanov dynasty faced crisis and collapse. The following themes are emphasized in the lectures and readings: the changing stratification of society; the expansion of the Russian empire; Russia and the West (including diplomatic and cultural relations); economic development; and the growth of the Russian intelligentsia. *M. E. Pollock.*

1420. Twentieth-Century Russia
Successive phases of the Soviet experience from the Russian Revolution of 1917 through the Gorbachev era. Topics include the Russian Revolution and the Civil War, Collectivization, the Purges, the Second World War, the Cold War, and the dissolution of the Soviet system. *M. E. Pollock.*

1430. Truth on Trial: Justice in Italy, 1400-1800
Law courts had a profound impact on Italian society and culture between the Renaissance and the Enlightenment. Law courts helped define what constituted deviance, legitimate knowledge, and individual rights. They did so in a long ago world in which it was possible to imagine that some gifted individuals could fly; that certain people were created superior to others, and that the sun revolved around the earth. From the persecution of heretics and witches, to the trial of Galileo and the increasing use of courts by women and other marginalized groups, the Italian legal arena mediated what was political, social, scientific, and religious truth. By the eighteenth century many judicial practices came under criticism, including the use of torture and the death penalty. How did reformers attempt to remake the legal regime and the society in which it was by then so intricately entangled? *P C. Castiğlione.*

1440. Islamic History, 1400–1800
A survey of the major sociopolitical alignments of the central parts of the old world from 1400 to 1800. Particular attention given to the Ottoman, Safavi, and Mughal empires, which spanned much of these lands ca. 1500-1750. Concentrates on the socioeconomic and cul-
tural environment within which the main institutions of these empires developed. P E. D. AKARLI.

1450. History of the Modern Middle East, 1800–1918
Transformation of Middle Eastern societies and polities from 1800 to 1918 under the impact of growing Western economic, political, and cultural domination. The rise of new patterns of economic organization, governance, sociopolitical alliances, and cultural tastes in Ottoman Turkey, Arab lands, and Iran. M E. D. AKARLI.

1460. History of the Modern Middle East since 1918
A comparative survey of independence movements and the rise of modern states and societies in the Middle East since World War I. Problems of political organization, rapid socio-economic development, and identity formation; causes and consequences of interstate conflicts; the impact of external powers’ involvement in the region (with an emphasis on American involvement and interests). M E. D. AKARLI.

1470. Southern African History
This course examines major themes of the history of southern Africa from the earliest times until 1994, with emphasis on historiographical debates. Our discussions of the South African past will always be informed by a consideration of the approach of the scholars who have interpreted and presented it as history. Our major questions concern the origins of historical change and the creation of racial groups. We will probe the significance of race in South African history but also the limitations of its explanatory power. The course meets twice a week for lecture and discussion groups will meet once a week. E N. J. JACOBS.

1510. History of Modern China I
M M. SWISLOCKI.

1510A. China's Late Empires
A post-nationalist perspective on history in China from 1200-1930, with emphasis on empire-formation, gender, and daily life in the Mongol Yuan, Chinese Ming, and Manchu Qing empires, as well as nationalist reconstructions of the Chinese past in the early twentieth century. P

1510B. Race and Ethnicity in China

1520. History of Modern China II
M M. SWISLOCKI.

1520A. China Since 1936
Examining competing visions of Modern China as seen from the vantage points of China, Taiwan, Hong Kong, Tibet, and Inner Asia. Emphasizes changing relations among these places and China's contributions to the rise and fall of international socialism, feminism, decolonization, the cold war, the emergence of Asian capitalism, the growth of international exile communities. HIST 0410 or 1510 recommended. Lecture with discussion. M

1520B. Twentieth Century China
Examining competing visions of twentieth-century China as seen from the vantage points of various regimes in China, as well as Taiwan, Hong Kong, and Tibet. Emphasizes changing relations among these places and China's place in the history of the rise and fall of international socialism, feminism, decolonization, the cold war, and the emergence of East Asian capitalism. Lecture with discussion. M

1530. Modern Korea: Contending with Modernity
This course examines the extraordinarily rapid revolution of Korea from isolated, agrarian society into a culturally modern, industrialized, and democratic nation that is an important
actor on the world stage. It also will investigate how a non-Western society generates its own inspiration for human relations, social structure, political and cultural values. Includes coverage of North Korea. M J. L. McClain.

1540. *Samurai and Merchants, Prostitutes and Priests: Japanese Urban Culture in the Early Modern Period*
Examines the cultural traditions of the urban samurai, the wealthy merchant, and the plebian artisan that emerged in the great metropolises of Edo, Osaka, and Kyoto during the early modern period. Focuses on the efforts of the government to mold certain kinds of cultural development for its own purposes and the efforts of various social groups to redirect those efforts to suit their desires and self-interest. P J. L. McClain.

1560. *The Social History of Modern Japan*
Since Japan’s modern transformation began some 150 years ago, its citizens have repeatedly confronted questions about the nature of democracy, capitalism, and modernity itself, and in so doing have shaped the institutions of society into new and powerful patterns. This course examines those transformations through the lenses of popular culture and social history. M K. Smith.

1570. *Japan’s Pacific War: 1937–1945*
Uses film, oral histories, historical fiction, and more traditional forms of historical interpretation to explore the events, ideas, and legacies of Japan’s Pacific War. The armed conflict began in 1937 with the Japanese invasion of China and ended in 1945 with the atomic bombing of Hiroshima and Nagasaki. Some attention is paid to military developments, but the principle concerns fall into the areas of mutual images, mobilization, and memory. M K. Smith.

1580. *Making of Modern South Asia*
This course will examine the making of modern South Asia, from the decline of Mughal rule and the emergence of Company Raj, up to present. The course will particularly focus on colonialism and nationalism, the relationship between the colonial state and post-colonial nation-states of South Asia, to understand concepts of empire, resistance and ‘postcoloniality.’ M V. F. Zamindar.

1590. *Beyond Hindu, Muslim: Recovering Early South Asia*
This course will examine the recovery of early South Asia through history, archaeology and art, from the discovery of the Indus valley civilization to the establishment of Mughal rule, paying particular attention to colonial and post-colonial constructions and contestations over ‘antiquity’ and the making of Hindi, Buddhist and Muslim civilizations. E V. F. Zamindar.

1610. *Mexico, 1700-1867*
This course focuses on Mexico’s difficult transition from colony to nation. We will examine the key political, social, economic, and cultural developments during this period. Major topics will include: the paradoxical eighteenth century, which saw Mexico emerge as the most prosperous region of the Spanish empire, even as social and economic tensions deepened; the outbreak of peasant rebellions in the early nineteenth century; the elite-led movement for independence; the economic decline and political turmoil of the early republic; foreign interventions by the United States and France; and the rise of the Liberals as Mexico’s dominant political force. E R. D. Cope.

1620. *Colonial Latin America*
A survey of Latin American history from pre-Columbian times to independence. Focuses on the creation of new societies in the Americas, shaped by the interaction of Europeans, Indians, and Africans. P R. D. Cope.
1630. *Modern Latin America I*
This course offers an introduction to the history of Latin America, beginning with the late colonial period and running through the close of the twentieth century. Emphasis is placed on political, social, and cultural history; less attention is paid to diplomatic and economic history. *M. J. N. Green.*

1640. *Clash of Empires in Latin America*
Examines Latin America as the scene of international rivalry from the 16th to the 19th century. Topics include comparative colonization, the transatlantic slave trade, privateering and piracy in the Caribbean, and the creation of an “Atlantic world.” *P. R. D. Cope.*

1650. *Modern Latin America II*
*M. J. Green.*

1660. *The Mexican Revolution*
An in-depth study of the Mexican Revolution. The focus is on the years of revolutionary violence (1910–1920), but considerable attention is also paid to the roots of the Revolution and to its socioeconomic and political impact in the period 1920–1940. *M. R. D. Cope.*

1670. *History of Brazil*
This course charts the history of Brazil from Portuguese contact with the indigenous population in 1500 to the present. It examines the countries political, economic, social, intellectual, and cultural development to understand the causes, interactions, and consequences of conflict, change, and continuity within Brazilian society. *E. J. Green.*

1680. *History of Modern Cuba*
Examines Cuban history since the late 18th century with a focus on the rise of sugar cane production, the frustrated nationalist revolts against Spain, eventual independence under a virtual U.S. protectorate, the long dictatorship of Batista, and the Revolution of 1959, which produced the first socialist society in the Americas. *M. R. Self.*

1730. *Antebellum America and the Road to Civil War*
Surveys society, culture, and politics between 1800 and 1860. Topics include the social order of slavery, the market revolution and its impact, abolition and other evangelical reform movements, and the development of sectional identities. *M. Rockman.*

1740. *Civil War and Reconstruction*
Examines the origins of the Civil War, the war itself, and the period of Reconstruction. Analyzes the transformation of society, politics, and culture during this period, with special emphasis on slavery and emancipation, the revolutionary nature of the war, and the meanings and legacies of reunion. Not a course on military history. *M. M. Vorenberg.*

1750. *Politics and Culture in the U.S. Since 1945*
History of the United States between the end of World War II and turn of the recent century. Major themes and topics include race and civil rights, women’s history and feminism, the Cold War, Vietnam, and U.S. foreign policy, suburbanization and the urban crisis, the rise and fall of the welfare state, and a history of consumption and popular culture. *M. R. O. Self.*

1760. *Political Movements in Twentieth-Century America*
Political movements in the United States in the twentieth century. History and theory. Highlights of the course include: populism, progressivism, segregationism, first wave feminism, labor movement, civil rights, new left, second wave feminism, new right. The course focuses on the origins, nature, ideologies, and outcomes of major political movements on both left and right in the twentieth century United States. *M. R. O. Self.*
1770. *American Cultural History: 1789–1865*
Investigates the relationship of ritual, language, print, and power in the United States between the Revolution and the Civil War. Approaching cultural history as a mode of posing questions about the past, the course explores how representation, space and performance configured American nation-building and set the racial, class, and gender boundaries of the body politic. Southern slavery receives sustained attention, especially questions of how enslaved men and women contested the commodification, medicalization, criminalization, and sexualization of their bodies. *M S. E. Rockman.*

1780. *Modernizing America*
The arrival of the modern age as recorded in novels, popular history, memoirs, and social and political commentary. We will explore American culture from the “Gilded Age” through the twentieth century. *M E. J. Gorn.*

1790. *North American Environmental History*
Analyzes the relationship between ecological and social change in North America from pre-Columbian times to the 20th century. Topics include Indian uses of the environment; the reshaping of ecosystems under European colonization; the transfer of plants, animals, and diseases from Africa and Europe to the Americas; urbanization; and the rise of the environmental movement. Prerequisites: HIST 0510 and 0520 recommended but not required. *E K. Jacoby.*

1800. *History of Religion in America, 1600-1865*
This course considers the major people, events, and issues in the history of religion in North America, from pre-Columbian Native cosmologies to the tumultuous events of the Civil War. Attention will be given to "religion as lived" by ordinary people, as well as to the ways that "religion" shaped (or not) larger cultural issues such as immigration, public policy, social reform, warfare, democracy, slavery, and women's rights. Advanced undergraduate and graduate students interested in religion and American history will find this course useful. Prior exposure to American history is helpful but not required; there are no formal prerequisites. *E S. Rockman.*

1810. *The American West: Expansion and Empire*
*M K. Jacoby.*

1820. *American Urban History to 1870*
Both a survey covering urbanization in America from colonial times to the present, and a specialized focus exploring American history from an urban frame of reference. Examines the premodern, “walking” city from 1600–1870. Includes such topics as cities in the Revolution and Civil War, the development of urban services, westward expansion, and social structure. *E H. P. Chudacoff.*

1830. *American Urban History, 1870-1950*
A survey with a specialized focus exploring American history from an urban frame of reference. Topics include the social consequences of the modern city, politics, reform, and federal-city relations. *M H. P. Chudacoff.*

1840. *Capitalism, Slavery and the Economy of Early America*
The simultaneous expansion of capitalism and slavery witnessed intense struggle over the boundaries of the market, self-interest, and economic justice. This course traces those arguments from Colonization through Reconstruction and asks how common people navigate the shifting terrain of economic life. The approach is one of cultural and social history, rather than the application of economic models to the past. *E S. Rockman.*

1850. *American Legal and Constitutional History*
History of American law and constitutions from European settlement to the end of the 20th century. Not a comprehensive survey but a study of specific issues or episodes connecting
law and history, including witchcraft trials, slavery, contests over Native American lands, delineations of race and gender, regulation of morals and the economy, and the construction of privacy. E. M. VORENBERG.

1890. Empires in America to 1890
This course surveys the development of American foreign relations from initial encounters between Native Americans and newly arrived Europeans to the extension of Euro-American power beyond the continental United States. By being attentive to a wider global context, we will attempt to understand the trajectory of "America" from a colonial hinterland to dominant world power. E. N. SHIBUSAWA.

1900. American Empire Since 1890
This survey of twentieth-century US foreign relations will focus on the interplay between the rise of the United States as a superpower and American culture and society. Topics include: ideology and U.S. foreign policy, imperialism and American political culture, U.S. social movements and international affairs, and the relationship between U.S. power abroad and domestic race, gender and class arrangements. M. N. SHIBUSAWA.

1920. Chicago and America
This course explores the history of Chicago, but also uses that history as a way to think about issues in American history. Sources include novels, memoirs, popular histories, film and music. M. E. J. GORN.

1940. Making the Nation: Race, Class, Gender, and the Concept of Citizenship in U.S. History
Explores meanings and history of citizenship in the U.S. from the drafting of the national constitution in 1787 to the present. Topics include legal, political, and social content of belonging to the nation. What does citizenship mean? What is the national body? Who has been defined in and out of the nation and why? Focus on race, class, gender, and nationality as analytical frameworks. E. R. O. SELF.

1950. Portuguese Navigations and Encounters with Civilizations
J. FLORES.

1970. Undergraduate Seminars on Interpretations of History
Qualified undergraduates with the consent of individual instructors, may register for 2000-level graduate seminars. Enrollment limited to 20.

1990. Undergraduate Reading Courses
Guided reading on selected topics.

1992. History Honors Workshop for Prospective Thesis Writers
HIST 1992, 1993 and 1994 students meet together in two separate sections per week. Prospective honors students are encouraged to enroll in HIST 1992 during semesters 5 or 6. HIST 1992 offers a consideration of historical methodology and the techniques of writing and research with the goal of preparing to write a senior thesis in history. This course allows students to refine research skills, define a project, and prepare a thesis prospectus, which is required for admission to honors. Students who complete honors may count HIST 1992 as a concentration requirement. Limited to juniors who qualify for the honors program.

HIST 1992, 1993 and 1994 students meet together as the History Honors Workshop, offered in two separate sections per week. All students admitted to the History Honors Program must enroll in HIST 1993 for two semesters of thesis research and writing. They may enroll in the course during semesters 6 and 7, or 7 and 8. Course work entails researching, organizing, and writing a history honors thesis. Presentation of work and critique of peers' work are required. Limited to seniors and juniors who have been admitted to the History
Honors Program. For more information, see the History Concentration Honors Requirements.

This is a year-long course. HIST 1993 is a S/NC course; a grade of ABC will be given for HIST 1994 which will revert to HIST 1993. HIST 1992, 1993 and 1994 students meet together as the History Honors Workshop, offered in two separate sections per week.

Primarily for Graduates

2050. Proseminar in Late Medieval History
Macrohistory/Microhistory. A comparison of two different approaches to the study of the past, especially of late medieval and early modern Europe, focusing on the works of Fernand Braudel and Carlo Ginzburg.

2080. Seminar in European Social History in the Eighteenth and Nineteenth Centuries
Methods of analysis for current topics in social, economic, demographic, family, and gender history. Depending on sources available, papers may be on Italian topics of the 16th-19th centuries, or on French or English topics of the 18th-19th centuries. Language requirement depends on area of specialization.

2090. Proseminar on European Social History in the Eighteenth and Nineteenth Centuries
Selected readings on changes of social life in European cities in the period of transition from the preindustrial to the industrial economy. Primary focus is on developments in France, England, and Italy. Language requirement depends on area of specialization.

2130. Research Seminar in Early Modern Europe
Introduction to the research and writing in early modern Europe, emphasizing the problems of methodology, historiography, and source materials.

2890. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit. THE STAFF.

2910. Reading and Research
Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

2930. Colloquium
Themes and topics in history and historiography. Required of all first-year graduate students. THE STAFF.

2940. Graduate Workshop: The Practice of History
Required of all incoming Ph.D. students. S/NC. THE STAFF.

2950. Professionalization Seminar
Required of all second year Ph.D. students. S/NC. THE STAFF.

2960. Prospectus Development Seminar
This required course open only to second-year students in the History Ph.D. program focuses on the development of a dissertation prospectus. The seminar will include considering the process of choosing a dissertation topic, selecting a dissertation committee, identifying viable dissertation projects, articulating a project in the form of a prospectus, and developing research grant proposals based on the prospectus. THE STAFF.

2970. Graduate Reading Seminars on Interpretations of History

2980. Graduate Research Seminars on Interpretations of History
2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

History of Art and Architecture
Professors Bickford, Bonde, Kriz (Chair), Muller, Neumann, Nickel, Zerner; Associate Professor Lincoln; Assistant Professors Molholt, Vanel; Professors Emeritus Schulz, Winkes; Post Doctoral Fellow Tureli.

Undergraduate Program
The concentration introduces students to the history of art and architecture by a distribution requirement, under which concentrators study several areas in the discipline to apprehend the varieties of forms, themes, and theories that can constitute a visual culture, and the varieties of relationships between artistic, political, intellectual, and social developments that can structure that culture. More advanced work has two aims. Study in seminar courses is designed to give concentrators an awareness of the critical strategies available for interpretation of historical and cultural phenomena, and to foster research skills. Study of a set of coordinated courses in history of art and architecture is designed to give the concentrator knowledge in depth of the major achievements and major issues in one of the component areas of the discipline.

For a complete description of the standard concentration programs leading to the bachelor’s degree in History of Art and Architecture or Architectural Studies, please visit: http://www.brown.edu/Administration/Registrar/concentration.html or http://www.brown.edu/Departments/Art_Architecture/undergraduate.

Graduate Program
The department provides training in the history of art and architecture of Europe, of the ancient, medieval, early modern (ca. 1400–1800) and modern periods, as well as Latin American and East Asian art and architecture. Applicants to the graduate program must possess the bachelor of arts degree or its equivalent and submit Graduate Record Examination (Aptitude) results and a writing sample. Students admitted to the Ph.D. program must first complete the requirements for the A.M. degree. For a complete description of the requirements for the Master of Arts and Doctor of Philosophy degrees in History of Art and Architecture, please see the department’s website at: http://www.brown.edu/Departments/Art_Architecture/.

Courses of Instruction
Primarily for Undergraduates

0010. Introduction to the History of Art and Architecture
Introduction to the history of western art and material culture from the beginning to the present. In addition to examining visual strategies of representation, the course explores the varied ways in which art reflects and shapes social, religious, and political concerns. Weekly one-hour conference required. THE STAFF. A
0020. Introduction to the History of Architecture and Urbanism
Western architecture and urbanism from classical antiquity through the eighteenth century; patterns of development; major architects and monuments; methods of interpretation. Does not presume previous knowledge or special skills. C. ZERNER.

0040. Introduction to Chinese Art and Culture
This course presents a broad view of the material, aesthetic, and cultural processes through which characteristically Chinese art forms developed from their emergence in ancient China to modern times. Emphasis on visual thinking and on connections between Chinese art (why it looks the way it does) and the particular world in which it was made. Readings in Chinese literature, thought, and history are a basic part of this course. Sections and field trip will emphasize hands-on examination of paintings, calligraphies, and pottery, jade, and bronze objects. Paper assignments aim to increase abilities to write about art and to evaluate visual evidence. Weekly one-hour conference required. R. BICKFORD.

0050. First Year Seminar
This seminar is designed to introduce first-year students to the basic study of specific topics in the History of Art and Architecture in a workshop setting. Readings and discussion are emphasized, as is an active introduction to the tools and methods of the discipline in regard to the topics researched in each class. Guided research and writing. Enrollment limited to 20 first-year students.

0050A. The Shape of Good Fortune
Auspicious images that attract blessings and repel harm constitute the longest, richest traditions in the history of Chinese visual culture. Topics include: tomb painting and sculpture of Early China; imperial omen painting; auspicious ornaments in metalwork, ceramics, and textiles; popular prints; visual puns and other strategies of auspicious embodiment; realism and efficacy. Enrollment limited to 20. R. BICKFORD.

0050B. Reframing Francis Bacon (1909 - 1992)
Is Bacon's painting more than the "cultural barometer" of a declining western civilization? In order to answer this question, the seminar will compare Bacon's art with that of the contemporary generation of American artists and its European counterpart. His early and late works will be taken into consideration, as well as the body of works on paper, paintings and working documents discovered after his death in 1992. Enrollment limited to 20. H. VANEL.

0050C. Illustrating Knowledge
Investigates how scientific ideas have been given visual form from the late middle ages to the present. We will use special collections libraries and museums, among other venues, to see how the exchange of ideas and development of specializations are represented in the arts and sciences, from manuscript herbal s and early maps to photographic documentation, textbooks and computer imaging. Enrollment limited to 20. E. LINCOLN.

0050D. Seeing and Writing on Contemporary Arts
The purpose of this writing intensive seminar (especially designed for freshmen) is to train the students in both seeing and writing on contemporary art. The class will be based on looking at specific works of art of the twentieth century in museum context (using nearby collections, notably) and on how to translate visual observations into analytical and critical writing. Enrollment limited to 20. H. VANEL.

0080. Introduction to the History of Photography
This class will survey the history of photography as an art form and means of visual communication, from its discovery in the early nineteenth century to its most recent digital man-
ifestations. The photograph will be considered from both esthetic and social perspectives; photography's rise as a new medium of personal expression will be examined, as will technology's role in the creation of new regimes of scientific thinking, spectatorship, and the mass dissemination of visual information. No prerequisites, but prior coursework in modern history or art history is helpful. D. NICKEL.

0110. Ancient China: Art and Archaeology
An introduction to Chinese art and culture, focusing on recently excavated evidence of material culture from the Stone Age through the Han Dynasty. Students will learn to use the materials and methods of archaeology, art history, and the history of technology, as well as readings in history, literature, and philosophy to interpret excavated materials. Weekly one-hour conference required. R. BICKFORD. A

0140. Introduction to Medieval Art and Architecture
A comparative examination of the three artistic cultures of the medieval Mediterranean: Islam, the Byzantine empire, and the predominantly Christian regions of western Europe. Medieval Jewish art is also treated. Topics include medieval attitudes toward the use of images, the architecture of worship (churches, synagogues, and mosques), royal and domestic art, and instances of contact among all three cultures. Weekly one-hour conference required. S. BONDE. A

0150. Visual Culture of the Spanish Empire, 1500-1800
Surveys the visual culture(s) in Spain and the viceroyalties of New Spain and Peru over a 300-year period from the reign of the Catholic kings in the 15th century to the beginnings of independence at the end of the 18th century. C. ZERNER. A

0160. Philip II of Spain: Society, Politics, and the Arts
Examines the visual culture of the golden age of Spain and Europe from the perspective of the most powerful ruler and patron of the later Renaissance. Enrollment limited. Written permission required. C. ZERNER.

0200. Chinese Scholar Ink Painting
During the Song and Yuan dynasties (11th-14th century), Chinese scholars created a new kind of art that combined poetry, calligraphy, and painting. Course examines the development and uses of scholar painting as part of China’s cultural history from the Song Dynasty to the twentieth century. R. BICKFORD.

0210. Chinese Painting during the Song Dynasty
Song Dynasty paintings literally are the stuff of which dreams of China were made - in their own time, in traditional China, and in modern scholarship. Song painters visualized an orderly cosmos as monumental landscape scrolls, captured poetic moments in painted fans that were the size of a dinner plate, claimed their place in the Great Tradition through antique styles, and advertised signs of heaven’s approval through images of rare birds and flowers, bustling cities, and fat baby boys. Meanwhile, literati painters presented themselves and their virtues as ink-paintings of pine, bamboo, and plum. Our work in this course, through lectures, discussions, and papers, is to investigate these idealized images and to reconnect Song paintings to the world in which they were active agents of the changes that made Song culture, politics, and society. Weekly one-hour conference required. R. BICKFORD.

0220. Roman Art and Architecture: Spectacles and Entertainment
Spectacles offered the Romans innumerable opportunities for self-definition, on the individual level, the community level, and even the imperial level. Performance art cuts across traditional boundaries between media, and we will examine total ensembles as often as possible. Topics will include the amphitheater and the circus, representations of gladiators and charioteers, the architecture of propaganda and theater, and the triumph of victorious indi-
individuals as well as its opposite, the literal defacement of imperial portraits. Domestic spectacles will also be considered, including pleasure boats and vacation homes, dining rooms, gardens and sculpture collections. R. MOLHOLT. A

0340. Roman Art and Architecture: From Julius Caesar to Hadrian
An introduction to the major monuments in Roman art at the point when the Empire emerged up to the time of the creation of the Pantheon. No prior background required. R. MOLHOLT. A

0380. Roman Art and Architecture: From Hadrian to Late Antiquity
This course examines the surviving environments and artifacts created to suit Roman tastes in the high and late empires. It also provides an introduction to the relationship between Roman art and the art of emerging Christianity. Beginning with a study of Roman art in the high empire, and ending with its demise of Rome as a capital in the fourth and fifth centuries C.E., the course focuses on an especially creative and complex period in Roman visual, cultural and religious history. R. MOLHOLT. A

0400. Early Christian, Jewish, and Byzantine Art and Architecture
THE STAFF.

0410 Islamic Art and Architecture
The formation of an Islamic artistic expression in art and architecture and the regional manifestations of that art from central Asia and the Middle East to Sicily and Spain. Weekly one-hour conference required. THE STAFF. A

0440. Gothic Art and Architecture
Critically engages the notion of Gothic art and architecture in order to examine its sources and “invention” in mid-12th-century France and to explore its varied manifestations in European art to the 16th century. Special attention is given to cathedral architecture and decoration. Weekly one-hour conference required. S. BONDE. A

0500. From Van Eyck to Bruegel
Artists of Flanders and Holland effected a revolution in the techniques and subjects of painting during the 15th and 16th centuries. This course explores the roots of artistic change in religion, urban history, politics, Italian humanism, economics, and craft traditions. The focus is on the great works of such artists as Jan van Eyck, Hieronymus Bosch, and Pieter Bruegel the Elder. J. M. MULLER.

0550. Florence and Tuscany in the Fifteenth Century
An examination of the paintings, sculpture, graphic art, and architecture of Tuscany in the 15th century in Florence, but also venturing into Siena, Arezzo, Borgo San Sepolcro. Using Renaissance critical terms and analytical tools, we take into account the technical and commercial habits of craftspeople, the economy of the cities and towns, and the forms and functions of art in domestic, civic, and religious spheres. Weekly one-hour conference required. E. LINCOLN. A

0560. The Visual Culture of Early Modern Rome
Examines Renaissance Roman painting, sculpture, and architecture in the context of the unique urban character of the city: site of antique myth, religious pilgrimage, and a cosmopolitan court. Beginning with Filarete and Fra Angelico, we move through the Renaissance (Michelangelo and Raphael), looking at the formation of artists’ workshops and academies, ending with the urbanization programs of Sixtus V. E. LINCOLN. A

0580. Word, Image and Power in Renaissance Italy
This class is taught by professors from multiple departments, and is designed to introduce cultural and historical perspectives on Italy from medieval Siena to Venice in the High Re-
naissance. We will move across Italy and the centuries focusing on monuments of art, architecture and literature through different disciplinary lenses. E. LINCOLN

0600.  Baroque
The course surveys the visual culture of Rome from 1564–1700. During that time Rome became the center of artistic change in Europe, the seat of the Counter-Reformation Catholic Church, and the dominant source of classical learning. All media that participated in these historical developments are included: from papal urban plans to Bernini’s fountains and Caravaggio’s paintings. J. M. MULLER.

0620.  The Age of Rubens and Rembrandt: Visual Culture of the Netherlands in the Seventeenth Century
Surveys the amazing art in Holland and Flanders that revolutionized all media. We will see how paintings, sculpture, and architecture formed the historical environment of life in the 17th-century Netherlands. The work of such artists as Rubens, Rembrandt, Van Dyck, and Vermeer is presented as part of this history of art in a “golden age.” Weekly one-hour conference required. J. M. MULLER.

0650.  Eighteenth-Century Art—Imagining the Global Eighteenth-Century
Forging a modern state and a modern empire involved new and reworked forms of visual representation. This course looks at how artist in the two leading imperial Western powers, England and France, produced art that addressed the concerns of diverse and newly expanded audiences. K. D. KRIZ.

0700.  Nineteenth-Century Architecture
Surveys stylistic developments, new building types, and the changing conditions of architectural production through the 19th century. Special emphasis placed on the social context in which buildings were designed and used. Weekly one-hour conference required. D. NEUMANN.

0750.  Imagining Nation and Empire in Early Nineteenth-Century Europe
Course will examine visual culture in the context of socio-political transformations during the period. We’ll analyze oil paintings, watercolors, prints, and phenomena such as the panorama and the Great Exhibition. While we will look briefly at artistic production in Spain and Germany, the geographical focus will be on the two major Western colonial powers, Great Britain and France. K. D. KRIZ.

0760.  Later Nineteenth-Century Painting
Impressionism and Post Impressionism: the course focuses on the work of Realist, Impressionist, and Post-Impressionist artists within their political and social context. Issues to be covered include the rise of the avant-garde, the painting of contemporary life, the privatization of artistic practice, the death of naturalism, the role of gender, and the impact of mass culture. Artists to be considered include Courbet, Manet, Degas, Monet, Cezanne, Pissaro, Morisot, Renoir, Seurat, Van Gogh, Gauguin, and Toulouse-Lautrec. THE STAFF.

0800.  Twentieth-Century European Art
Modern Art 1880–1945 surveys a wide range of modern art practices in Europe from the 1880s up through World War II. Works of art and avant garde modern movements of the early 20th century will be framed by their historical contexts including issues of nationalism, gender, identity and colonial politics. Weekly discussion sections focus on problems of interpretation and reception. Enrollment limited. Written permission required. THE STAFF.

0840.  History of Rhode Island Architecture
This course examines the historical development of architecture and building in Rhode Island within the larger context of colonial and national trends and with a focus on important manifestations of a distinct regional identity. Emphasis will be placed on stylistic develop-
ments, new building types and technologies, and the social and economic influences on the creation of the built environment. D. Neumann.

0850. Modern Architecture
The “classic” period of European and American modern architecture from the turn of the century to the 1950s. Presents both the established canon of masterpieces by Frank Lloyd Wright, Mies van der Rohe, and LeCorbusier, and counterbalances this approach with information about new building materials, changing conditions of architectural production, and the “mechanisms of fame.” D. Neumann.

0860. Contemporary Architecture
Stylistic, technological, and theoretical developments in architecture from the 1960s to the present. Analyzes movements such as “Brutalism,” “Postmodernism,” and “Deconstruction” and works by architects such as Frank Gehry, I. M. Pei, and Zaha Hadid. Emphasizes the complex conditions of architectural production in different parts of the world. Complements HA 85, but may be taken independently. D. Neumann.

0880. Contemporary Art I
This course offers a comprehensive panorama (while inevitably not an all-inclusive one) of the arts from the last sixty years. It covers the major trends and a selection of significant individuals from the post-war period to the most recent developments; following a chronological timeline that leads from abstract-expressionism, minimal art, pop art, performances, happenings, to the various “post” critical attitudes (post-painterly; post-modern). H. Vanel.

0890. Contemporary Art II
This class considers the historical persistence the dream of a realization of art in life from its romantic formulation to its recent incarnations in the contemporary era with an emphasis on the early 20th century avant-gardes, the utopian tendencies of the 20’s and 30’s, the effects of cybernetic in the 50’s and the development of environmental art forms since the 60s. H. Vanel.

0900. Film Architecture
An examination of the mutual influence between two of the major art forms of the 20th century: film and architecture. Concentrates on European and American film sets throughout the 20th century and explores their formal and iconographical sources in contemporary architectural discourse. Presentation and examination of sketches, paintings, still photographs, and film clips as well as writings by directors, set designers, critics, and architects (Eisenstein, Reimann, Kracauer, Bunuel and many others.) D. Neumann.

0910. Contemporary Photography
This course surveys the rise of photography in the art world in the period after 1960. It examines both the development of photography as an independent medium and the appropriation of lens-based imagery by Pop Art, conceptual art, minimalism, and eventually Postmodernism. D. Nickel.

For Undergraduates and Graduates

1040. Topics in East Asian Art
May be repeated for credit. Enrollment limited to 15. Written permission required.

1100. Museum Seminar in East Asian Art
Enrollment limited.

1120. Topics in Pre-Modern Architecture
Enrollment limited.
1150. *Topics in Hispanic Art and Architecture*
Enrollment limited.

1170. *Topics in American Art*

1200. *Topics in Classical Art and Architecture*
Enrollment limited.

1430. *Topics in Medieval Visual Culture*
Enrollment limited.

1440. *Topics in Medieval Architecture*
Enrollment limited.

1460. *Topics in Medieval Archaeology*
Enrollment limited.

1510. *Topics in Medieval Art*
Enrollment limited.

1520. *Special Topics in Nineteenth Century Art and Literature*

1550. *Topics in the Early History of Printmaking*
Enrollment limited.

1560. *Topics in Italian Visual Culture*
Enrollment limited.

1580. *Topics in Renaissance Architecture*

1600. *Topics in Seventeenth-Century Art*
Enrollment limited.

1650. *Topics in Eighteenth-Century Art*
Enrollment limited.

1700. *Topics in Nineteenth-Century Architecture*
Enrollment limited.

1750. *Topics in Early Nineteenth-Century Art*
Enrollment limited.

1760. *Topics in Later Nineteenth-Century Painting*
Enrollment limited.

1850. *Topics in Twentieth-Century Architecture*
Enrollment limited.

1890. *Topics in Contemporary Art*
Enrollment limited.

1910. *Project Seminar for Architectural Studies Concentrators*
May be repeated once for credit. Enrollment limited. Written permission required.

1920. *Individual Study Project in the History of Art and Architecture*
Reading and reports on an approved topic, supervised by a member of the staff. Project proposals must be submitted and approved no later than the first week of the semester.

1990. *Honors Thesis*
The subject of the thesis and program of study will be determined by the needs of the individual student.
Primarily for Graduates

2040. Research Seminar in Chinese Art
Enrollment limited. May be repeated for credit. Written permission required.

2150. Research Seminar in Hispanic Art and Architecture
Enrollment limited. May be repeated for credit. Written permission required.

2250. Research Seminar in Greek Art and Architecture
Enrollment limited. May be repeated for credit. Written permission required.

2350. Research Seminar in Roman Art and Architecture
Enrollment limited. May be repeated for credit. Written permission required.

2430. Research Seminar in Medieval Visual Culture
Enrollment limited. May be repeated for credit. Written permission required.

2440. Research Seminar in Medieval Architecture
Enrollment limited. May be repeated for credit. Written permission required.

2480. Research Seminar in Italian Fourteenth-Century Art
Enrollment limited. May be repeated for credit. Written permission required.

2540. Topics in the History of Printmaking
Enrollment limited. May be repeated for credit. Written permission required.

2550. Topics in Italian Visual Culture 1300–1600
Enrollment limited. May be repeated for credit. Written permission required.

2560. Research Seminar in Early Modern Art and Architecture
Enrollment limited. May be repeated for credit. Written permission required.

2600. Research Seminar in Seventeenth-Century Art
Enrollment limited. Written permission required.

2650. Research Seminar in Eighteenth-Century Art
Enrollment limited. May be repeated for credit. Written permission required.

2700. Research Seminar in Nineteenth-Century Architecture
Enrollment limited. Written permission required.

2750. Research Seminar in Nineteenth-Century Visual Culture
Enrollment limited. May be repeated for credit. Enrollment limited. Written permission required.

2760. Research Seminar in Later Nineteenth-Century Painting
Enrollment limited. May be repeated for credit. Written permission required.

2800. Research Seminar in Twentieth-Century European Painting
Enrollment limited. May be repeated for credit. Written permission required.

2850. Research Seminar in Twentieth-Century Architecture
Enrollment limited. May be repeated for credit. Written permission required.

2860. Topics in the History of Photography
Enrollment limited. May be repeated for credit. Written permission required.

2870. Special Topics in History of Art and Architecture
Enrollment limited. May be repeated for credit. Written permission required.

2920. Methods of Research and Art Historical Interpretation
Required of and restricted to first- and second-year history of art and architecture A.M./Ph.D. students. THE STAFF.
2930. **Practicum**
Required of and restricted to first- and second-year history of art and architecture A.M./Ph.D. students. The Staff.

2940. **Master’s Qualifying Paper Preparation**
2970. **Preliminary Examination Preparation**
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for their doctoral examination. No course credit.

2980. **Individual Reading**
Single credit.

2981. **Individual Reading**
Double Credit.

2982. **Individual Reading for the Doctoral Candidate**
Single Credit.

2983. **Dissertation Research**
Double Credit.

2990. **Thesis Preparation**
For graduate students who are preparing a thesis and who have met the tuition requirement and are paying the Registration Fee to continue active enrollment. No course credit.

2991. **Dissertation Preparation**
For graduate students who are preparing a dissertation and who have met the tuition requirement and are paying the registration fee to continue active enrollment. No course credit.

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**Center for the Study of Human Development**

Child and Adolescent Development is the primary focus of research and teaching of the faculty affiliated with this multidisciplinary Brown University center. In the interdisciplinary study of processes by which infants, children and adolescents proceed through life along pathways characteristic of our species, issues of behavioral stability, change and transformation are paramount. The study of development focuses on the dynamic processes that underlie behavioral, cognitive, social, and affective growth, learning, language, and maturation. Influences of social and cultural context constitute critical elements of these dynamic systems.

The Center was founded in 1967 as the Child Study Center and has had a long history of sponsoring research informed by a variety of disciplines, including longitudinal studies of infant growth and development, social adaptation through childhood and adolescence, and educational reform. Research conducted by faculty affiliated with the Center in recent years includes studies of language acquisition, social and cognitive development, sleep, cultural and structural bases of developmental processes, and parenting and family functioning. Studies include both normative populations and children at risk due to physiological and/or social disadvantage. A distinguishing feature of child and adolescent developmental research at Brown is its integration of basic scientific scholarship with research that bears direct implications for practitioners and policy makers.
At Brown, scholarship in child and adolescent development is distributed across multiple departments, including Anthropology, Cognitive and Linguistic Sciences, Education, Pediatrics, Psychiatry and Human Behavior, Psychology, and Sociology. A key mission of the Center is to provide a setting where faculty and students from all units at Brown may collaborate in addressing major issues in human development.

The center’s activities are threefold:

1. The center facilitates communication and collaboration among faculty and students interested in developmental research and training—a collaboration that crosses departmental and disciplinary boundaries and creates links between the campus and the medical school.

2. The center serves as a resource for programs for students interested in learning about human development both on campus and at the medical school. These currently include the Human Development track of the Education Studies concentration, administered by the Education Department which includes courses from several social and life science departments. In addition the Center sponsors pre- and postdoctoral training that provides a solid basis for pursuing careers in Psychology, Education, Pediatrics and a variety of other human service fields. Through grants obtained by faculty and the Solsbery Fellowship Fund students can obtain funding to conduct their own research and/or work closely on a variety of ongoing research projects.

3. The center sponsors an annual colloquium series that brings faculty from within and outside Brown and conferences on topics of interest to the campus community and the broader community beyond Brown. In 2001, for example, a 2-day conference on “Genetic Influences on Human Behavior and Development” provided the basis for a book shortly to be published by Lawrence Erlbaum Associates, Inc., Publishers.

For additional information please visit the Center’s webpage at: http://www.brown.edu/Departments/Human_Development_Center/index.html.

International Health Institute

The International Health Institute (IHI) was established in 1988 to develop, promote, and coordinate the international health activities of Brown University faculty and students. The mission of the IHI is to apply interdisciplinary perspectives to research and training to improve the health of populations in developing countries. IHI faculty have established research collaborations with institutions in developing countries on topics including HIV/AIDS, cardiovascular disease in the health transition and tropical parasitic diseases. The IHI supports supervised research experiences with overseas partners for Brown University undergraduate, medical, and graduate students. In cooperation with the Department of Community Health, the IHI sponsors PHP 1070, The Burden of Disease in Developing Countries. The course develops an interdisciplinary perspective on international health, and emphasizes the socioeconomic, ecological, and environmental context of morbidity and mortality and the changing demographic and epidemiologic patterns of disease.

The IHI director is Stephen T. McGarvey, Ph.D., M.P.H. For more information see the institute’s website at: http://bms.brown.edu/ihi.
International Relations

The IR Program is governed by the IR Program Advisory Committee, an interdisciplinary group composed of the director of the Watson Institute for International Studies, the IR Program director and assistant director, former IR Program directors, IR Program track advisors, faculty representatives in the social sciences, and a representative from the IRDUG.

Undergraduate Program

For a complete description of the International Relations concentration program leading to the A.B. degree, see the Program website at: www.watsoninstitute.org/IR or visit: http://www.brown.edu/Administration/Registrar/concentration.html.

Courses of Instruction

Primarily for Undergraduates

0100. First Year Seminars
Enrollment is limited to 20 first-year students.

For Undergraduates and Graduates

1280. Global Security After the Cold War
Analyzes major contemporary issues of global security utilizing current theories of international politics, emphasizing both continuity and change in global security since the end of the Cold War. Issues examined include proliferation of weapons of mass destruction and of conventional weapons, terrorism, recent arms control and disarmament initiatives, and the changing role of alliances and regional and global security institutions. Prerequisite: POLS 0400. This course is open to Senior and Junior concentrators in IR and Political Science, and to other students by permission of the instructor.

1350. History and Theory of International Relations
Examines the struggles of power and knowledge which have constituted international relations history and theory. This survey stretches from the beginnings of the Western states system and its early exemplar thinkers like Machiavelli, Grotius, and Kant, to the current issues and contemporary theories of international relations. Focuses primarily on the ‘classical’ and ‘post-classical’ theories of international relations.

1700. International Law
This introduction to public international law covers the nature of legal reasoning in international relations, the interplay of international law and international politics, and the international legal process. Examines selected substantive fields such as state responsibility, the use of force, international human rights, and the U.S. and international law. For juniors and seniors. Prerequisite: POLS 0400.

1800. Senior Seminars
These seminars constitute the capstone of the IR concentration. They integrate interdisciplinary approaches to the study of international relations around a specific topic of contemporary interest. Approximately eight to ten seminars per semester are offered on topics related to the four tracks. A complete list of topics, instructors, and times for the current senior seminars may be obtained from the Program website (www.watsoninstitute.org/IR) or the International Relations Program office at 111 Thayer Street. Only seminars taken as a junior or senior meet the capstone requirement. Instructor's permission required.
1800N  *Global Media: History, Theory, Production*
Explores the historical and contemporary roles of media in international affairs as a source of information and as an important medium of war and diplomacy. Three tracks: historical, focusing on the dual development of colonial and media empires from early days of print media to the Internet; theoretical, using classical IR and critical theory to examine media as product and instrument of cultural, economic and political struggles; and practical, using biweekly 'Global Media Labs' in which guest media practitioners teamed with media theorists present master classes in print, photography, radio, cinema, television, and online convergences. Instructor permission required. Enrollment limited to 20. WRIT

1800Q  *The Nuclear Revolution Revisited*
Explores the next phase of the nuclear revolution and its political, military and economic implications in the next two decades. After a decade and more during which the issues posed by nuclear weapons were largely eclipsed by concerns over ethnic wars and the threat of terrorism, there is renewed serious interest in the goal of nuclear disarmament. Instructor permission required. Enrollment limited to 20.

1800R  *Post-Soviet States From the Past into the Future*
Examines in historical context the emergence of the new post-Soviet states from the disintegrating USSR, the development of their foreign policies, and the evolution of their mutual relations in the political, economic, security, and environmental spheres. Devotes special attention to the functioning of the Community of Independent States and other multilateral institutions. Instructor's permission required. Enrollment limited to 20.

1800V  *The United States in World Politics*
Examines major aspects of American foreign policy after the Cold War and 9/11 in terms of domestic and international challenges. Discussions of the United States as 'empire' and 'republic,' with independent research and a foreign policy game. Emphasis is on the connections between the processes of policy making and the substance of policies pursued. Prerequisite: POLS 0400 required; POLS 1560 highly recommended. Enrollment limited to 20 juniors and senior concentrators. WRIT

1801G  *Nationalism, Colonialism, Religion, and International Law*
Explores the internationalism of the past century in terms of its relationship to separtist nationalism, anti-colonialism, and religious radicalism. It takes as its point of departure the dramatic political, cultural, and intellectual transformations that followed in the wake of World War I. A guiding hypothesis of the seminar is that internationalism cannot be understood apart from its complex relationship to "identity" broadly conceived -- the identity of local or transnational groups as well as the identity of internationalists themselves. Readings will be drawn from law, cultural studies, politics, and postcolonial theory. Instructor permission required. Enrollment limited to 20, with priority given to junior and senior International Relations concentrators.

1801H  *Amazon Governance*
Studies the political economy of Amazon governance in comparative perspective. Readings trace distinct national and local paths of Amazon governance. Topics include the colonial history of deforestation, the impacts of globalizations and nation-state modernization projects, the evolution of environmentalisms and Amazonian contentious movements, and selected case studies of good governance at the grassroots level. Relies on history-based research and multidisciplinary perspectives.
Enrollment limited to 20 seniors and graduate students. Instructor permission required.

1801I Public Theologies of Governance and Secularism in World Politics
Public theology of a particular issue includes human interpretation of what is relevant and to what extent particular religious premises can be experienced in the public arena. In the analyses of international politics, what we call "religion" is usually the sum of clashing or converging public theologies. This course comparatively investigates these different religious perspectives towards issues of political governance with case studies from Islam, Christianity, Judaism, Hinduism and Buddhism. The course also focuses on modes of secularism and the challenges they pose to political theologies of faith traditions. Enrollment limited to 20 juniors and seniors. Instructor permission required.

1801J War and Human Rights
How nations and their adversaries treat civilians and other non-combatants in wartime has become an increasingly central issue in global politics. This seminar will explore the intersection of war, human rights, and the laws of war (also known as the law of armed conflict or international humanitarian law). It will focus especially on how civilians and other non-combatants are protected (or not) in times of war and the politics and institutions of enforcement. Topics include war crimes, genocide, targeted killings, torture, humanitarian intervention, and the international criminal court. Prerequisite: POLS 0400; prior coursework in human rights or international law desirable. Enrollment limited to 20 junior and senior concentrators in International Relations and Political Science. Instructor permission required.

1801K China and the World
The rise of China has emerged as one of the most important developments in world politics during the early 21st century. Chinese foreign policy will have an important impact on the U.S. economy as well as on U.S. national security. Moreover, China's influence now touches upon every continent of the globe. This course surveys the cultural underpinnings, modern history, institutional structures, and vital regional contexts for contemporary Chinese foreign policy. Students will emerge from the course with a more sophisticated understanding of China's rise and the implications of this momentous development for the international system. Prerequisite: POLS 0400. Enrollment limited to 20 seniors. Instructor permission required.

1910. Senior Honors Seminar
Open only to Senior students accepted into the honors program in international relations. Instructor's permission required.

1920. Senior Honors Thesis
Open only to Senior students accepted into the honors program in international relations. Instructor's permission required.

1970. Individual Research Project
Limited to juniors and seniors. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Required: all proposals for independent study must be approved by the faculty sponsor and the INTL program director or assistant director. Students should not register for any section of INTL 1970 without this approval.
Italian Studies

Professors Kertzer (Anthropology), Martinez (Chair), Oldcorn (Emeritus), Riva (Graduate Advisor); Associate Professors Abbona-Sneider, Castiglione (Undergraduate Advisor), Lincoln (History of Art and Architecture), Stewart-Steinberg; Senior Lecturer De Angelis (Emerita); Visiting Professor from University of Bologna; Lecturer of the Italian Government.

Italian Studies at Brown not only teaches language and literature to students but also guides their research toward problems that are cross-disciplinary in both content and method, rather than merely confirming a fixed canon or predetermined field of study. To investigate these problems, we can draw upon traditional alliances with Anthropology, Art History, Classics, Comparative Literature, History, Musicology, and Philosophy, but we also join forces with disciplines such as History of Science, Film Studies, Cultural Studies, Women’s Studies, and the use of Computers in the Humanities.

Undergraduate Program

It is quite possible to concentrate in Italian without having studied the language before coming to Brown, although doing so requires an early start. Accelerated programs should be discussed with the concentration advisor. Having fulfilled the language requirements, students will be able to enroll in a variety of advanced courses, reflecting the interdisciplinary scope of Italian studies at Brown (including literature, history, history of art and culture). For a complete description of the standard concentration program leading to the A.B. degree, please see the Department website at: http://www.brown.edu/Departments/Italian_Studies/ or visit: http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

The interdisciplinary graduate program in Italian Studies at Brown University offers students the opportunity to study the history and culture of Italy under the guidance of internationally renowned scholars in Anthropology, History, History of Art, Literature and Media. Major international scholarly resources for the study of Italian culture are currently produced by Brown faculty and their students, including:

The interdisciplinary Journal of Modern Italian Studies, edited by David Kertzer and John Davis (University of Connecticut).

Online projects (www.brown.edu/Departments/Italian_Studies/projects.html), based on international collaborations and recent winners of several awards, including major NEH grants:

The Garibaldi and the Risorgimento Project (dl.lib.brown.edu/garibaldi)

1427 Florentine Catasto Project and Tratte database, based on the work of the late David Herlihy and edited by Burr Litchfield (History, Brown Emeritus) and Anthony Molho (European Institute in Florence)

The Decameron Web, edited by Massimo Riva and Michael Papio (University of Massachusetts, Amherst)
The Pico della Mirandola Project, coordinated by Massimo Riva, Francesco Borghesi (University of Sydney) and Dino Buzzetti (University of Bologna)

The electronic archive of the Dante journal Lectura Dantis, edited by Michael Papio


Doctor of Philosophy

Requirements for the Ph.D.

There are three stages in the Ph.D. program: 1) Preparation for Candidacy, which includes Coursework, the First Year Review and the fulfillment of the Teaching and Foreign Language Requirement; 2.) Advancement to Candidacy, which includes the Preliminary Examination and the writing of an approved Dissertation Proposal; 3.) The writing and defense of a Dissertation in completion of the degree and the completion of the final foreign language requirement.

1. Preparation for Candidacy
   a. Course requirements:
      At least twelve courses in Italian Studies are required of doctoral students. All courses must be at the 1000- or 2000-level. Graduate students are required to take three courses in Medieval/Early Modern Italian Studies (one must be Dante), and three courses in Modern/Contemporary Italian Studies. Graduate students are also required to take at least one course in three out of four disciplinary fields (Italian literature; Italian history and anthropology; history of Italian art and architecture; Italian film and media studies). However, one course can fulfill both the chronological and the field requirement (for example: a course in Renaissance art can fulfill both the Medieval/Early Modern and the field requirement) in either area (Medieval/Early Modern or Modern/Contemporary Italian Studies). The following courses are required of all graduate students:
      ITAL 2100 Introduction to Italian Studies (1st year)
      ITAL 2820 Italian Studies Colloquium (offered every year in Spring Sem., students are expected to attend it, when in residency)
      ITAL 2900 Teaching Methodology (no later than the second year.
   b. First Year Review:
      At the end of the first year, each student will participate in a review of his or her progress in the program. This review by the Department Graduate Committee will be based on a sample of work submitted by the student (e.g. seminar papers) and on reports by the student’s instructors.
   c. Foreign Language Requirement:
      Two Foreign languages, other than English and Italian.
   d. Teaching Requirement:
      A minimum of two years of teaching experience is required for the degree.

2. Advancement to Candidacy
   a. Preliminary Examination
      Students entering the program with a B.A. are expected to take the Preliminary Examination (PE) by the end of the third year. Students entering with an M.A. are expected to take the PE by the end of the 5th-semester (semester 1 of the third year).
      There are three necessary steps for the preparation and completion of the PE: 1.) the student must define his or her fields of examination and form a PE committee; 2.) he or she must select a list of texts and other materials for the examination in consultation with the PE committee; 3.) the student must take the examination. [For
more information, consult the Graduate Student handbook, available online at: www.brown.edu/Departments/Italian_Studies/graduate.html]

b. The Dissertation Prospectus and the Dissertation

After passing the preliminary examination, the candidate proceeds to the Dissertation Prospectus. He or she forms a dissertation committee, writes a Dissertation Prospectus, en route to writing the dissertation and finishing the degree. The Dissertation is a substantial work of scholarship and criticism.

Courses of Instruction

Primarily for Undergraduates

0100-0200. Elementary Italian
Elective for students without previous training in Italian. No credit for first semester alone. Fundamentals of Italian grammar and development of skills in speaking, comprehension, and writing. Overview of contemporary Italian society. Five meetings per week, audio and video work, two Italian films. Note: This is a year course. CHRISTINA ABBONA-SNEIDER OR STAFF.

0110. Intensive Elementary Italian
Covers the same material presented in ITAL 0100–0200. One semester equivalent to the standard two-semester sequence. Eight meetings per week plus audio and video assignments. Double credit.

0300. Intermediate Italian I
Review of the fundamentals of grammar, with emphasis on speaking and writing. Reading of representative short stories. Weekly compositions, presentations, and a paper. Three Italian films. Prerequisite: ITAL 0100-0200, or placement by examination. Requirement for enrollment in the Bologna Program. CHRISTINA ABBONA-SNEIDER OR STAFF.

0400. Intermediate Italian II
Review of specific grammar problems. Reading of one novel and newspaper articles. Compositions and oral presentations. Three Italian films. Prerequisite: ITAL 0300, or placement by examination. CHRISTINA ABBONA-SNEIDER OR STAFF.

0500. Advanced Italian I
The purpose of this advanced course is to improve speaking and writing skills by offering extensive practice in a variety of styles and forms. Students will discuss various aspects of contemporary Italian culture. Reading, analysis and class discussion of texts (articles, songs, pictures, short stories, movies and television), oral presentations, based on research, and a writing portfolio (compositions, essays, blog and a journal). Prerequisites: ITAL 0400, or placement by examination. CHRISTINA ABBONA-SNEIDER OR STAFF.

0600. Advanced Italian II
A sixth semester course with intensive practice in speaking and writing. Short stories, poems, music, and movies will be used to discuss Italian Society from the Second World War through the present. We will explore some important themes--family, religion, gender, and politics. Class discussion, compositions, oral presentations, and a final paper. Prerequisite: ITAL 0500, placement by examination. CHRISTINA ABBONA-SNEIDER OR STAFF.

0750. Truth on Trial: Justice in Italy
This seminar analyzes controversial trials in Italy between 1500 and 1800. From the persecution of heretics to the trial of Galileo and the increasing use of courts by marginal members of society, the judicial arena was crucial in defining political, social, scientific, and re-
religious truth. Were law courts successful sites for resolving what constituted deviance, legitimate knowledge and individual rights? C. CASTIGLIONE.

0751. When Leaders Lie: Machiavelli in International Context
This course examines the content, context, and impact of the writing of Niccolò Machiavelli, a Renaissance author both praised and condemned for his insistence on analyzing the realities of politics, rather than the cherished ideals of political behavior. Machiavelli’s pragmatic view of the tenuous relationship of ethics to politics has cast him alternatively as the founder of modern political science, the architect of realpolitik, and the proponent of "consequential morality" or the notion that the ends justify the means. This course examines closely the writings of Machiavelli as well as the precedents and comparisons for his ideas in the Greek and Islamic world, and in a wider European context. The course concludes with an exploration of the relevance of Machiavelli's brutal insights for understanding the practices and the ethics of politics in the twenty-first century, in the particular case of the Iraq war. Reserved for First Year students. Enrollment limited to: 20. FYS LILE

0950. Introduction to Italian Cinema: Italian Film and History
How do we visualize the past? How has cinema influenced our understanding of contemporary history? The course will focus on how key moments of 20th-century History (Fascism, WWII, the Mafia and Terrorism) have been described or fictionalized by major Italian film-makers (including Benigni, Bertolucci, Cavani, Fellini and Pasolini). Subtitled films, readings and discussion groups. Reserved for First Year students. Enrollment limited to: 20. S. STEWART-STEINBERG.

For Undergraduates and Graduates

1000. Studies in Contemporary Italian Culture
An introduction to contemporary Italian culture, history and society. Topics vary from year to year and instructor to instructor. Taught in English or Italian.

1010. Dante in English Translation: Dante’s World and the Invention of Modernity
Primarily for students with no knowledge of Italian. Given in English. Concentrators in Italian should enroll in ITAL 1610; they are expected to read the material in the original. Close study and discussion of Dante’s deployment of systems of retribution in the Inferno and rehabilitation in the Purgatorio with a view to imagining a society based on love and resistant to the effects of nascent capitalism and the money economy. Dante's work summarizes and transforms the entire ancient and medieval tradition of literature, philosophy, and science. R. L. MARTINEZ.

1020. Boccaccio's “Decameron” and the End of the World
Close study and discussion of Boccaccio's collection of 100 tales told by ten narrators over a period of two weeks, while in flight from the devastating plague of 1348. The Decameron defined the standard of Italian prose narrative for almost four centuries, and furnished a great number of the plots of Italian (and French and English) Renaissance drama. Students will be invited to contribute to the Decameron Web, the Boccaccio award-winning web site administered by the department of Italian Studies. Other, shorter, works of Boccaccio will be read to prepare for tackling the Decameron. Sections in both English and Italian. M. RIVA AND R. L. MARTINEZ.

1030. Realism and Utopia in Italian Cinema
A seminar on the work of major directors and/or special topics in contemporary Italian cinema. Directors and special topics vary from year to year. M. RIVA.

1310. Literature of the Middle Ages
Readings in early Italian literature, including religious writers and love poets of the 13th century, Petrarch, Boccaccio, the Humanists of 15th-century Florence, Ferrara, etc.
1320. Great Authors and Works of Italian Renaissance
The major authors and trends of 16th-century Italy (Machiavelli, Giucciardini, Ariosto, Tasso, classicism and anti-classicism, petrarchism, mannerism). R. L. MARTINEZ.

1340. Garibaldi and the Risorgimento
The life and career of one of the Founding Fathers of modern Italy, viewed and reviewed through the eyes of his 19th-century contemporaries and 20th-century emulators and critics, against the backdrop of the Italian National Revolution and other International liberation movements, from his early years in Latin America to the battle for Rome and the expedition in Sicily. Biographies and historical studies, paintings and films. Students will have the opportunity to contribute to the Garibaldi and the Risorgimento project focused on a moving panorama (or diorama) made in England in the early 1860s and accessible in digital form at: dl.library.brown.edu/garibaldi. Lectures in English; discussion group in Italian. [dl.lib.brown.edu/garibaldi] M. RIVA.

1350. Contemporary Italian Literature
From Svevo and Pirandello through “hermetic” poetry and neorealism, to minimalism and postmodernism. Topics vary and include: “Narratives for the Next Millenium” (Calvino and Eco), “Nonfiction” (literature and documentary film), and “Contemporary Poetry.” M. RIVA.

1360. Renaissance Italy
Italian society and culture from the second half of the thirteenth to the middle of the sixteenth century. Special attention devoted to the contexts (demographic, social, economic, political) within which political ideas and theories were developed from the generation before Dante to that following Machiavelli. C. CASTIGLIONE.

1380. Italy: From Renaissance to Enlightenment
Between 1500 and 1800, Italians made significant contributions to European debates about the boundaries between orthodoxy and heresy; the legitimacy of social and gender hierarchies; the future of republics in an age of empires; and the possibilities for reform. Works by Machiavelli, Bernini, Galileo, Tarabotti, Goldoni, and Beccaria (among others) enrich this survey of early modern Italian history.

1390. Modern Italian History
Examination of Italian society, culture, and politics over the past two centuries. Particular attention is devoted to the creation of Italian national identity, the role of the Catholic Church, changing gender and class relations, conflicts between North and South, the development of fascism, postwar political developments, and changing Italian family life. This course is taught in Italian. D. I. KERTZER OR STAFF.

1400. Special Topics in Italian Studies
Seminars on topics that transcend usual course boundaries and are of special concern to a member of the department. Undergraduates explore the ramifications of the topic under the direction of the instructor.

1420. Sex and the Cities: Venice, Florence, and Rome, 1450-1800
This course examines the politics of sexuality and the sexuality of politics in Italy between the Renaissance and the Enlightenment. Italy’s urban settings saw the development of some of the most sophisticated political systems in Europe, and issues of gender identity and sexual practices figured prominently in the political symbolism, political criticism, legal and social orders of these regimes. Lectures and course discussions also explore everyday practices and their implications for defining and defying the social and political norms of gender and sexuality in early modern Italy. Suggested prerequisites are HIIST 0010 or any Italian Studies course at level 1000 or above. No prerequisites are required. Lectures in English. Discussion groups in English and Italian.
1550. **Italian Representations of the Holocaust**
A survey of some of the most important texts (fiction, history, philosophy, films) that deal with both the Holocaust in Italy, and representations of the Holocaust by Italians. Readings include Levi, Bassani, Loy, Agamben; films those of Benigni, Cavani, Wertmuller. There will also be discussion of the aesthetic and political complexities regarding portrayals of the Holocaust, such as trauma, witnessing, historical truth, kitsch. Taught in English, with the possibility of a section in Italian. S. STEWART–STEINBERG.

1610. **The Divina Commedia: Inferno and Purgatorio**
A close reading of the first two canticles of Dante’s poem in the light of contemporary European and American critical interpretations. In Italian. R. L. MARTINEZ.

1620. **The Divina Commedia: Dante's Paradiso: Justifying a Cosmos**
Close study of the third and final part of Divine Comedy, in which Dante unfolds how, in his view, the planetary and stellar spheres condition human life and fashion the Providential plan of history. There will be ancillary readings from Dante's other works: Convivio, the Monarchia, and the Epistles. In Italian. Prerequisite: ITAL 0500 or 0600. R. L. MARTINEZ.

1690. **Senior Conference**
Special work or preparation of an honors thesis under the direction of a member of the staff. Primarily for Graduates

2050. **Microhistory**
Italian historians pioneered a methodology called “microhistory,” which emphasizes the importance of interpreting seemingly insignificant details in order to understand individuals for whom we typically have little information. We will examine some classic examples of this genre, alongside debates about the method. Students should pursue their own geographic and disciplinary interests in the final assignment by writing a microhistory. C. CASTIGLIONE.

2100. **Introduction to Italian Studies**
Introduction to problems, instruments, and techniques of interdisciplinary research, as applicable to Italian studies—anthropology, history, art history, literary and media studies, including computing for the humanities. Taught in Italian for graduate students or concentrators. M. RIVA OR STAFF.

2130. **Studies in the Duecento and Trecento**
Monographic studies in the "Scuola Siciliana," the "Dolce stil nuovo," Dante, Petrarch, Boccaccio.

2150. **Studies in the Renaissance and Baroque**
Monographic studies in major 16th- and 17th-century authors. R. L. MARTINEZ.

2160. **Family History: Early Modern Methods and Sources**
This course examines the world’s oldest institution during the early modern period (1500–1800). Italian scholars have been especially innovative in advancing our understanding of the early modern family, relying on legal, quantitative, religious, literary, and visual sources in their efforts. Students may concentrate in their longer essay on controversies in family history currently debated in or beyond the Italian context. C. CASTIGLIONE.
2170. Studies in the Enlightenment and Romanticism
Writers and cultural movements from 1750 to 1860.

2190. Studies in Modern Literature and Theatre
Problems and figures from 1860 to the present.

2300. Seminar in Italian Literature, Culture, and Criticism
Analytical study of specific authors, works, or subjects. STAFF.

2820. Italian Studies Colloquium
The Italian Studies Colloquium is a forum for an exchange of ideas and work of the community of Italian scholars at Brown and invited outside scholars. Graduate students present their work in progress, and engage the work of faculty and visitors. They are expected to come prepared with informed questions on the topic presented. Presentations in both Italian and English. Instructor permission required.

2900. Theory and Methods of Foreign Language Teaching
Theory and practice of foreign language learning and teaching (theory of language, language learning and acquisition, approaches, methods and techniques, curriculum design, materials development, testing and evaluation). In English. Written permission required for undergraduates. S/NC.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. Reading and Research
Courses on special subjects individually planned and supervised.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Judaic Studies

Professors Jacobson (Director), Kraemer, Olyan, Satlow; Associate Professors Mandel, Teller; Assistant Professor Brink-Danan; Adjunct Associate Professor Rojanski; Adjunct Assistant Professor Galor; Senior Lecturer Adler; Postdoctoral Fellow Kozody.

The Program in Judaic Studies is an interdisciplinary unit devoted to the academic study of Jews and Judaism in all historical and geographic contexts. The faculty includes scholars from both humanistic and social scientific disciplines, including anthropology, history, literary criticism, philosophy, and sociology. We offer an undergraduate curriculum that covers a wide array of courses in Judaic Studies. Several of our faculty members are engaged in graduate instruction in other departments. There are ten faculty members with appointments in the program, eight affiliated faculty members with research and teaching interests in Judaic Studies. Home departments of affiliated faculty include Anthropology, History, Modern Culture and Media, Political Science, and Sociology.

Undergraduate Program
For a complete description of the standard concentration program leading to the A.B. degree, please visit the department’s website at:
Courses of Instruction

Primarily for Undergraduates

0010. Judaism
Surveys the major practices, traditions, and beliefs of the Jews, with an emphasis on modern Jewish communities. How does a Jewish community shape its practices and beliefs against its own specific historical circumstances to create a coherent and meaningful religious system? What is “Judaism,” and how do scholars of religion explain and interpret it? M. L. SATLOW.

0020. The Jews: History, Culture, and Religion (Bible to Middle Ages)
A survey of Jewish history, culture, and religion from the biblical period through the middle ages. Continued through the modern period in JUDS0030. No prerequisites.

0030. The Jews: History, Culture, Religion (Spanish Expulsion to Contemporary Times)
A survey of Jewish history, culture, and religion since the Spanish Expulsion. By comparing Jewish communities in Europe, the Middle East, and the United States, we will examine the social, economic, political, and intellectual forces that shaped Jewish experiences and self-expression. Particular emphasis will be placed on the seismic shifts in Jewish political and social status over time and space. Continued from the ancient and medieval periods in JUDS0020. No prerequisites.

0050. Freshman Seminars
Enrollment limited to 20 first-year students.

0050A. Believers, Agnostics, and Atheists in Contemporary Fiction
Contemporary society is divided over issues of religious faith. In recent decades there has been a resurgence of religious faith, while at the same time many have been skeptical and even hostile to religious belief and practice. Others are just not sure what to believe. In this seminar, we will read and discuss contemporary short stories that explore the ways that these ongoing differences over spiritual matters affect people. These works portray a variety of human situations: the affirmation and rejection of religious faith, confusion over the existence and nature of God, and positive and negative views of religious institutions and the clergy who lead them. Writers of both Christian and Jewish background will be studied. D. C. JACOBSON.

0050C. Jewish Messiahs from Jesus of Nazareth to the Lubavitcher Rebbe
What's a messiah? A messianic movement? What makes such movements Jewish? Why do they flourish at certain times and places? A consideration of three major instances of Jewish messianic figures and the movements around them: Jesus of Nazareth (1st century C.E.), Shabetai Zvi (17th century), and Menachem Schneerson, the late Lubavitcher Rebbe (20-21st century). We'll combine primary sources with insights drawn from sociology, anthropology and other disciplines. R. S. KRAEMER.

0080. Jewish Art and Architecture from Antiquity to Modernity
This course is divided thematically and chronologically, and overviews ancient, medieval and modern through contemporary times. The last sessions will be devoted to the Jewish lifecycle. Artifacts and monuments will be examined from a stylistic, esthetic and visual point of view. They will be placed into their historical context and evaluated critically from a social, religious and if applicable political point of view. K. GALOR.
0090. Modern Jewish History and Society
The study of Jews in their historical and contemporary communities of western and eastern Europe, the U.S., and Israel. Major themes include emancipation and assimilation; secularization and new religious expressions; the Holocaust and modern anti-Semitism; Zionism; immigration, ethnicity, and nationalism; family and intermarriage; education, Jewish culture, and politics. M. MANDEL.

0100. Studying Jewish Life: Anthropological Perspectives
Through readings, films and fieldwork, course participants will learn how social scientists make use of interviews, participant-observation and discourse analyses to interpret Jewish culture and folkways. By looking through a Jewish lens at contemporary social theory and method, this class critically examines major themes in anthropology, sociology, psychology, and linguistics: race, nationalism, diaspora, kinship, gender, and modernity. M. BRINK-DANAN.

0110-0120. Elementary Hebrew
An introduction to the skills of reading, writing, and conversing in contemporary Israeli Hebrew. Students also read Hebrew texts adapted for their level of Hebrew based on biblical, rabbinic, and modern Hebrew literature, which introduce them to the approaches of Hebrew writers in various periods to a variety of cultural issues. Enrollment limited to 20. If unable to enroll because of closed registration, please contact the Professor and a wait list will be created. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in JUDS 0120 covers the entire year and is recorded as the final grade for both semesters. R. ADLER BEN YEHUDA.

0130, 0140. Intermediate Hebrew
Develops the skills of reading, writing, and conversing in contemporary Israeli Hebrew at the intermediate level and of reading Hebrew texts of the biblical, rabbinic, and modern periods (biblical stories, rabbinic legends, modern Hebrew poems, stories, essays, newspaper articles). Discussions and compositions focus on the psychological, cultural, political, and social issues reflected in the Hebrew sources that we study. Prerequisite: JUDS 0120 or equivalent. Enrollment limited to 20. If unable to enroll because of closed registration, please contact the Professor and a wait list will be created. R. ADLER BEN YEHUDA.

0150. Writing and Speaking Hebrew
Enables students to improve their skills in speaking and writing Hebrew on a variety of topics. Features advanced work on language structure and active language practice in the classroom. Class discussions of Israeli current events draw on Israeli stories, poems, television programs, and films and on the Israeli press. Students also compose essays and stories in Hebrew. Prerequisite: JUDS 0140 or equivalent. R. ADLER BEN YEHUDA.

0170. Introduction to Biblical Hebrew
An intensive introduction to the fundamentals of biblical Hebrew grammar and vocabulary intended to prepare students to read biblical texts in the original language. For students with little or no prior knowledge of Hebrew. THE STAFF.

0180. Readings in Biblical Hebrew
An introduction to the reading of biblical texts in Hebrew. Reading of selected texts from narrative, law, and poetry in the Hebrew Bible, with a few texts in post-classical Hebrew (the Dead Sea Scrolls and the Mishnah) introduced late in the semester. Intended for students who have completed JUDS 0170; others should consult the instructor. THE STAFF.

0260. The Bible as Literature
Explores how methods of literary analysis can be applied to the reading of narratives of the Hebrew Bible (in English translation). Also traces the influence of the Bible on Western
literature by comparing the ways that writers have transformed biblical stories into new interpretive literary works. All readings in English. D. C. JACOBSON.

0300. Israeli Literature in Hebrew
For students interested in reading selections of Hebrew fiction, drama, and poetry. Concentrates on major issues of the State of Israel, for example: the relationship between modernity and tradition, responses to the Holocaust, the Arab-Israeli conflict, and other cultural, social, and political issues. Israeli feature films are viewed and discussed. Conducted in Hebrew. Emphasizes strengthening Hebrew reading, writing, and speaking skills. Prerequisite: JUDS0150. Students who have not taken JUDS0150 should see instructor for permission to enroll. D. C. JACOBSON.

0310. Contemporary Israeli Literature in Translation
Explores social, cultural, and political issues reflected in contemporary Israeli fiction, drama, and poetry: Jewish national and religious identities, responses to the Holocaust, tensions between Eastern and Western Jews, the Arab-Israeli conflict, and the search for meaning. All readings are in English translation. Israeli feature films with English subtitles are viewed and discussed. D. C. JACOBSON.

0350. Jewish Fiction
A comparative study of short stories and novels written in Russian, German, Yiddish, Hebrew, and English by 20th- and 21st-century Jewish writers in Eastern and Central Europe and in America. Explores similarities and differences in the experiences of Jews related to a variety of themes: anti-Semitism, the Holocaust, the relationship between Israel and the Diaspora, immigration experiences, tensions between modernity and tradition, the family, and gender relations. Authors will include: Isaac Babel, Franz Kafka, Isaac Bashevis Singer, S. Y. Agnon, Anzia Yezierska, Henry Roth, Saul Bellow, Bernard Malamud, Philip Roth, Rebecca Goldstein, Allegra Goodman, Cynthia Ozick, and Anne Roiphe. All readings in English. D. C. JACOBSON.

0390. Holocaust Literature
Readings in works of prose and poetry by victims and survivors of the Holocaust that portray experiences in ghettos, in concentration camps, and in hiding. Additional readings in works of the post-war era by survivors and their offspring. Discussion of the moral, psychological, religious, and cultural dimensions of the Holocaust and its ongoing impact on humanity. D. C. JACOBSON.

0410. Talmud
Written from the first - seventh centuries CE, the Talmud (which runs to 20 volumes) contains law, lore, theological speculation, and complex argumentation. We will read a selection in depth and examine both traditional and modern critical (e.g. historical and literary) approaches to this fundamental text. No prerequisites; all texts in English translation. M. L. SATLOW.

0470. The Hebrew Bible and the History of Ancient Israel
An introduction to the historical-critical study of the Hebrew Bible and a reconstruction of the history of Israel to the end of the Persian period (332 B.C.E.). Topics include biblical source criticism; Israel’s obscure origins; reconstructing the settlement period; an imperial Israel under David and Solomon; institutions—law and authority, covenant, prophecy, temple cult, and priesthood. All readings in translation. No prerequisites. S. OLYAN.

0530. The Beginning of Judaism
When and how was Judaism created? Traces the formation and evolution of Judaism from the rebuilding of the Temple and redaction of the Torah in the sixth century BCE to the enduring legacy of the Rabbis who flourished in the sixth century CE. Topics include the
Dead Sea scrolls, apocalypticism, Philo, sectarianism, midrash, and Talmud. M. L. SLOW.

0610. American Jewish History
By the mid-20th century, the U.S.’s Jewish population was one of the world’s largest and most important. In 1654, however, when 23 Jews landed in New Amsterdam, their position was far from assured. The history of American Jewish settlement is considered by exploring the interaction between the political, social, and cultural environment and successive waves of Jewish migrants. M. MANDEL.

0640. History of the Holocaust
Explores questions raised by the Holocaust regarding how such barbarism erupted in our so-called civilized and enlightened age. Attempts to analyze the meaning of the Holocaust from three vantage points: that of European, and more particularly, German history; that of Jewish history; and that of those states and religious institutions which shared responsibility. Enrollment limited to 50. If unable to enroll because of closed registration please contact the Professor and a wait list will be created. M. MANDEL.

0650. History of Zionism and the Birth of Israel
Examines the history of the Zionist movement within the context of the history of European nationalism and as one of numerous Jewish political responses to rising antisemitism. Explores the ideological and political foundations of the Zionist movement until Israel’s establishment as well as broader concerns of Jewish politics in the late 19th and early 20th centuries. M. MANDEL.

0870. Israeli Society
Focuses on the social, economic, political, and immigration factors shaping the emergence of Israeli society. Traces the selective movement of the Jews to Palestine and the establishment of the state of Israel, the development of ethnic diversity, the changing Arab minority, and general patterns of socioeconomic development. Issues of ethnic-religious assimilation, social inequalities, segregation, ethnic intermarriage, social mobility, and religiosity are examined. M. BRINK-DANAN.

0940. Issues in Modern Jewish Thought
Beginning with the Enlightenment and Emancipation, this course explores the encounter between Judaism and modernity. Themes include: new political and philosophical approaches to Jewish identity; the rise of Jewish identity; the rise of Jewish philosophical ethics; the impact of the Shoah and the State of Israel on Jewish self-understanding and on Jewish thinking about "modernity." Thinkers discussed will include: Mendelssohn, H. Cohen, Rosenzweig, Buber, Levinas, Leibowitz. M. GOTTSEGEN.

0980 Seminar in Judaic Studies

0980A. Memoirs and Memory: The Individual Experience of Modern Jewish Life
By comparing memoirs from the early modern period through contemporary times and from widely divergent geographical settings such as eastern, central and western Europe, North Africa, the U.S., and Palestine/Israel, this course considers how Jews in different historical settings have understood their "Jewishness" and their relationship to their past, as well as the historian's role in this relationship.

0980B. God and Poetry
Throughout recorded history, poetry has expressed a variety of religious experiences. In this seminar we read selections from the Hebrew poetic tradition (in English translation), including the biblical psalms, medieval sacred poetry, and modern poetry, and explore how the language of poetry can serve as a means to convey the nature of relations between humanity and God. Enrollment limited to 20. D. C. JACOBSON.
0980D. **Good and Evil**
This course explores changing conceptions of good and evil from antiquity to the present. After surveying the views of the Hebrew Bible and of Ancient Greek Philosophy, we will consider Jewish and Christian interpretations from the medieval period. A survey of modern thinkers - including Kant, Nietzsche and Freud will follow, before we turn to post-Holocaust thinkers Arendt, Jonas and Levinas.

0980G. **Global Culture: Religion, Migration, and Diaspora**
Through historical and ethnographic texts, music, images and film, this class provides students with a global perspective on Jewish society. Special attention will be given to the languages and literatures of the Sephardi and Mizrahi diasporas in places such as the Middle East, North Africa, France and the Americas. Issues raised include the representation of Sephardi and Mizrahi Jews in academic and popular media, the politics of ethnicity in Israel and the relationship to Ashkenazi Jewish practices worldwide.

0980H. **Origins of Jewish Philosophy**
Explores how Jewish philosophers conceptualized Biblical and Rabbinic concepts under Muslim rule. Themes to be discussed include: God's existence, the relation between reason and revelation, the purpose of Jewish law, and the nature of Jewish religious dogma. Thinkers to be studied include: Sa'adiah, Halevi, Maimonides.

0980O. **Zionism, Anti-Zionism and Post-Zionism: Israel - Past, Present, Future**
Introductory discussion of the Political Sovereignty concept in Jewish history, yearnings for return to the Land of Israel, 19th century nationalism in Europe and its influence on proto-zionism. The main section of the course will survey and analyze various forms of Zionism from late 19th century to the present era: political, cultural, religious, Socialist, Revisionist; anti-Zionism of early Reform Judaism, ultra-Orthodox Jews, and Israeli Arabs; evolving contemporary types of post-Zionism within and outside of Israel.

0980Y. **Mysticism and Community in the Hasidic Tale**
An exploration of the model of a mystical community with a charismatic leader developed by the religious revival movement of Hasidism, as reflected in tales told by and about the Hasidic masters and their followers from eighteenth century Eastern European centers to contemporary centers in the U.S., including tales of Israel Baal Shem Tov, Nahman of Bratslav and the Habad dynasty. Enrollment limited. Written permission required. D. C. JACOBSON.

0990. **Topics in Judaic Studies**
For Undergraduates and Graduates

1390. **The Archaeology of Jerusalem**
Jerusalem constitutes one of the most important archaeological sites connected to the origins of Judaism, Christianity and Early Islam. In this class we will explore the material remains of the city beginning with David's conquest in ca. 1000 BC through the Crusader’s defeat in 1187 C.E.. The contemporary literary sources as well as the more recent scholarly debates and discoveries help us understand the material remains of the relevant periods.

1400. **The Archaeology of Palestine**
Palestine constitutes one of the most important archaeological regions connected to the origins of Judaism, Christianity and Islam. In this class we will examine the material remains of the region beginning in pre-historic times until the end of the Ottoman period in 1917.
Literary sources as well as the more recent scholarly debates and discoveries help us understand the material remains of the relevant periods.

1440. **Ancient Synagogues, Churches, and Mosques in Palestine**
Reviews the discoveries and related scholarship of ancient synagogues, churches, and mosques in ancient Palestine. Focuses on their architectural and decorative as well as their spiritual and religious characteristics, and examines how those institutions influenced each other throughout their history of development.

1450. **The Archaeology of Qumran and the Dead Sea Scrolls**
Qumran is one of the most prominent archaeological sites in the world. Its fame derives from its proximity to a series of caves in which some 800 ancient scrolls were found. Scholars have debated the relevance of this site to the histories of Judaism and Christianity. This seminar will examine the debates regarding the character of Qumran through the material finds from old and new excavations conducted at the site itself and in the Dead Sea region. The lectures and readings are intended to stimulate a discussion about how to use texts and material culture for reconstructing the past.

1530. **Exilic Responses to Crisis: Biblical Literature of the Sixth Century B.C.E.**
The exile of Judah’s elite to Babylon elicited profound and conflicting literary responses. We will undertake a literary and historical analysis of a number of the most important works produced in response to the crisis of exile, including Jeremiah, Ezekiel, Second Isaiah, Lamentations, Psalm 137, the Priestly Writing, and the work of the exilic deuteronomists. S. OLYAN.

1970. **Individual Study Projects**
Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

1980. **Advanced Seminar in Judaic Studies**

1980A. **Comparing Genocide: Armenians and Jews in Twentieth-Century Europe**
Recent historical debate has centered on the Holocaust and the question of "uniqueness." Was the Nazi slaughter of Europe's Jews an incomparable event? We address this question by comparing the Holocaust with the genocide of Ottoman Armenians during World War I, among others. Our goal: to analyze the historical, political, and societal roots of the genocidal process. M. MANDEL.

1980B. **Out of the Ghetto: Emancipation and Integration in Modern Jewish History**
The acquisition of citizenship in modern nation-states transformed the course of modern Jewish history. We consider the complexities of this emancipatory process. How did the move away from self-governing enclaves, which had characterized communal life prior to this period, change Jewish life? How did Jewish communities reconcile a particularistic Jewish identity with a more universalistic national one? M. MANDEL.

1980C. **Problems in Israelite Religion and Ancient Judaism**
A series of topics in Israelite religion and ancient Judaism which are of current scholarly interest are explored in a seminar setting. Students are encouraged to read widely and pursue individual research interests. The course assumes a basic knowledge of biblical literature and scholarly criticism. Enrollment limited. Written permission required. S. OLYAN.

1980K. **Problems in Israelite History**
Topics of recent and current debate among specialists in the field of Israelite history. Problems include (1) the historicity of the patriarchs and matriarchs; (2) the historical
evidence relevant to the question of an exodus; (3) the nature of Israel's settlement in Canaan; (4) the 10th century, era of empire or literary fiction? (5) the land of Judah after the Babylonian conquest. S. OLYAN.

1980O. *Adam and Eve in Early Jewish and Christian Interpretation*
Evil, gender hierarchy, the human condition-as far as Western culture is concerned, it all begins with the story of Adam and Eve. Today, many of our more heated public policy debates (e.g., marriage, homosexuality) explicitly evoke this biblical myth, and implicitly the story continues to exert a phenomenal influence on modern thought and art. M. SATLOW.

1980Q. *Jews and Muslims*
This course considers interactions between Muslims and Jews in various historical settings from the early Islamic world, to Medieval Spain, to contemporary Europe and the Middle East. The goal is to move beyond simplistic histories of interfaith utopia, Islamic persecution, and Zionist domination to consider the complexities of ethno-religious interaction in a variety of social,

1980T. *Jews and Judaism in the Greco Roman Mediterranean*
An advanced survey of the evidence for Jews and Judaism in the Greco-Roman Mediterranean (Egypt, Asia Minor, Rome, North Africa, etc.). Sources include synagogue mosaics, burial and donor inscriptions, personal documents, and references in non-Jewish writers, including Christians. Also considers what theoretical models best enable us to reconstruct the identity, practices and beliefs of the ancient diaspora Jewish communities. R. KRAEMER.

1980X. *Religion in the Dead Sea Scrolls*
An examination of the Dead Sea scrolls and the archaeology of Qumran with a particular focus on the religious aspects of this community. How did the authors of these scrolls envision their relationship with the divine? How did they worship? How did they understand religious and moral perfection? M. SATLOW

1980Y. *Mysticism and Community: Tales of the Hasidic Masters and Their Followers*
An exploration of the model of a mystical community with a charismatic leader developed by the religious revival movement of Hasidism, as reflected in tales told by and about the Hasidic masters and their followers from eighteenth century Eastern European centers to contemporary centers in the U.S., including tales of Israel Baal Shem Tov, Nahman of Bratslav and the Habad dynasty. D. C. JACOBSON

1980Z. *Jews, Race, and Ethnicity*
Whether Jews are “white” has been debated in many places in various historical eras. For example, in the 1800’s others characterized Jews as non-white, and Jews identified themselves as a racial grouping. This course explores the social contexts and factors that shape how and whether Jews identify as a racial grouping and the social meaning of whiteness in these contexts. M. BRINK-DANAN.

1981C. *Minority News: Radical Reporting and Reading*
By reading historical and contemporary accounts of minority newspapers, journalists and readerships, this course offers a comparative view of how small communities envision their role in the public sphere and how they create counterpublics. In addition to our focus on traditional news media, we examine the role new media play in transforming minority representation. Students in this course also engage in original research into the state of today's minority presses, their rhetorics and audiences. Enrollment limited to 20. M. BRINK-DANAN.
Center for Language Studies

Members of the Center for Language Studies (www.brown.edu/Departments/CLS/) share intellectual interests in issues of learning and teaching second languages and their cultures. The mission of the center is to facilitate contact and cooperation among second language faculty across individual department boundaries. CLS aims to promote research in the field of language study, to develop experimental or innovative language teaching materials, and to design new curricular configurations which stress the central position and interdisciplinary nature of language study. The center supports the application of emerging technologies to language learning, it seeks to improve the professional development of graduate and undergraduate teaching assistants, and it strives to forge new links within the second language community as a whole.

The Center for Language Studies is dedicated to improving the study of languages at Brown University, to extending the field of second language study, and to increasing the collaboration between language specialists and faculty and students in other disciplines. Such collaboration may be pursued: 1. through the development of interdisciplinary programs (e.g., the “Languages Across the Curriculum” program); 2. through collaborative grants and research projects; 3. through lectures and conferences involving professionals in language education; and 4. through community-oriented initiatives and projects. Individuals interested in creating new opportunities for language study are invited to share their ideas with us.

Brown University has excellent technological facilities for the study of second languages. The Language Resource Center (LRC), primarily an online repository of media for language learning, as well as the Educational Technology Center (ETC), provide access to materials and venues for learning languages and cultures. Both centers are part of the Academic Technology group of Computing and Information Services. The ETC is located on the second floor of the Thomas J. Watson, Sr. Center for Information Technology. It comprises a teaching laboratory/classroom equipped with computers, projection, sound reinforcement and display technologies, a development studio for faculty to work on projects in language instruction and other disciplines, and a videoconferencing seminar classroom. Input and display of languages other than English, as well as software oriented toward language instruction, are available in all public workstations at Brown. For more on the LRC, please visit us at http://www.brown.edu/Departments/LRC/index.shtml.

Courses in American Sign Language, Arabic, Hindi/Urdu, English for International Teaching Assistants, and Modern Persian are offered through the Center for Language Studies. Students may take up to six semesters of American Sign Language courses, studying both the expressive and receptive skills and the culture of the Deaf community. Eight semesters of Modern Standard Arabic are offered each year through the Center for Language Studies. Beginning with the fifth semester, students work with classical Arabic and Islamic texts, as well as with materials from contemporary media. Each year six semester-long courses in Hindi/Urdu provide students the opportunity to begin or continue to study the languages and cultures of South Asia. The introductory courses are designed to meet the needs of both heritage and nonheritage learners, and the advanced course is often tailored to address the research interests of students in either Hindi or Urdu. Currently, three years of Modern Persian language and culture are available for study, as well as a course in Iranian Cinema taught in English. The center administers the Program in English for International Teaching Assistants. Graduate students whose first language is not English
500 / Divisions, Departments, Centers, Programs, and Institutes

and who will be teaching undergraduates must demonstrate their English proficiency. For those who need to improve their English, the ITA Program offers five noncredit English As a Second Language courses. Other international graduate students or visiting scholars interested in strengthening their spoken skills may enroll as space allows.

Courses of Instruction

American Sign Language

Primarily for Undergraduates

0100-0200. American Sign Language I, II
Introduces basic ASL conversation. Features core vocabulary, common signing phrases, non-manual components (facial expression, body postures), signing space, fingerspelling, numbers, loan signs, cultural protocols, rules of ASL grammar and structure. Deaf cultural behavior is introduced in the classroom and through readings, videotapes, and Deaf community events. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in SIGN 0200 covers the entire year and is recorded as the final grade for both semesters. A. BELOZOVSKY.

0300. American Sign Language III
Explores sociolinguistic aspects of ASL within the Deaf cultural context. Focuses on classifiers, linguistic principles related to dialogues and storytelling techniques (e.g., role-shifting, narrative structure). Deaf culture is experienced by attending events and by voluntary service to the Deaf community. Prerequisite SIGN 0200 or placement interview. Enrollment limited. A. BELOZOVSKY.

0400. American Sign Language IV
Intensive use of expressive and receptive skills in complex grammatical structures, advanced classifiers, dialogues, and storytelling techniques. Discussion of social factors that give rise to code-switching; regional and ethnic sign variations; social, political, and cultural evolution of U.S. Deaf community. Interaction with Deaf community in directed and non-directed activities. Prerequisite SIGN 0300 or placement interview. Enrollment limited. A. BELOZOVSKY.

0500. American Sign Language V
Focuses on the use of ASL discourse in formal as well as informal settings. Students will explore and present the advanced ASL genres of public speaking, artistic expression, formal discussion, interview, and narrative projects. Development of ASL vocabulary in specialized area not covered in previous courses. Prerequisite: ASL IV (SIGN 0400) or equivalent. Enrollment limited. A. BELOZOVSKY.

0900. Introduction to Deaf Studies
Introduction to the Deaf Community and Deaf Culture. Discussion of similarities to, and differences from, mainstream hearing culture. Supplemental videotapes focus on aspects of the culture including Deaf education and history, autobiographical sketches, Deaf norms and values, and Deaf literature, art and folklore. Theoretical issues of culture and linguistics applied to Deaf culture, American Sign Language, and the variety of cultural perspectives of the Deaf community. Students also engage in a research project related to course content. Voice interpreter will be provided; all students are welcome; no previous knowledge of American Sign Language or Deaf Studies is needed. A. BELOZOVSKY.
For Undergraduates and Graduates

1910. *Independent Study in Sign Language/Deaf Studies*
Independent study in an area of special interest to the student, with close guidance by a member of the faculty, and leading to a major paper/project. Required of candidates for honors, and recommended for third year students. Please check Banner for the correct section number and CRN to use when registering for this course. Prerequisite: SIGN 0500 or instructor permission. A. BELOZOVSKY.

Arabic

Primarily for Undergraduates

0100-0200. *First-Year Arabic*
Builds basic listening, speaking, reading, and writing skills in Modern Standard Arabic, introducing the language in its cultural environment. Six contact hours per week, with an emphasis on grammar and communication, plus written, audio, and video assignments outside of class. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in ARAB 0200 covers the entire year and is recorded as the final grade for both semesters. Enrollment limited. THE STAFF.

0300-0400. *Second-Year Arabic*
Expands students' proficiency in Modern Standard Arabic; develops listening, speaking, reading, and writing skills at the intermediate level through extensive use of various texts and multimedia; promotes a better understanding of Arabic cultural traditions. Six contact hours weekly, plus written, audio, and video assignments outside of class. Prerequisite: ARAB 0200. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in ARAB 0400 covers the entire year and is recorded as the final grade for both semesters. Enrollment limited. THE STAFF.

0500, 0600. *Third-Year Arabic*
Offers comprehensive training in listening, speaking, reading, and writing Modern Standard Arabic with grammar review as needed. Broadens students' perspective on Arabic culture with selections from the classical and modern traditions of Arabic writing and various art forms. Includes basic conversation in colloquial Arabic. Five contact hours weekly. Prerequisite: ARAB 0400. Enrollment limited. THE STAFF.

0700, 0800. *Fourth-Year Arabic*
Guided reading, writing and research for advanced Arabic students. Prerequisite: ARAB 0600. THE STAFF.

For Undergraduates and Graduates

1990. *Independent Study in Advanced Arabic*
Superior level integrated skill course specializing in different Arabic writing styles, reading genres, and arts expressed in the Arabic language. Students must complete third year Arabic (ARAB 0600) and demonstrate a superior level competency in Arabic grammar and reading comprehension. Instructor permission required. THE STAFF.
English for Internationals

Primarily for Graduates

2100. Academic Discourse for Internationals
This course develops the English skills of first-year international graduate students who are preparing to be teaching assistants. Students improve their listening comprehension and fluency in conversational interactions typical of academic settings. Areas of spoken English that are addressed include pronunciation, stress patterns, intonation, vocabulary, and structure. No course credit. Written permission required. B. GOURLAY.

2200. Academic Interactions
This course develops the English language skills of first-year international graduate students who are preparing to be teaching assistants. Students improve their fluency and expression of complex ideas in a variety of linguistic situations typical of classroom interactions. Students also increase their control of vocabulary, pronunciation and listening comprehension when communicating with American undergraduates. No course credit. Written permission required. THE STAFF.

2300. Negotiating an American Classroom
In this course, international graduate students increase their abilities to communicate accurately and fluently in English with American undergraduates. International students develop their ability to interact, in culturally appropriate ways, in a variety of teaching situations common to an institution of higher education, where they are responsible for expressing and explaining complex information and ideas in English. No course credit. Written permission required. B. GOURLAY.

2400. Speaking Professionally for Internationals
This course develops the English communication skills of international graduate students with an emphasis on intelligibility of speech and clarity of expression in a variety of teaching and professional situations (e.g. presenting material, responding to questions, directing discussions). Students develop increased facility of English in extended discourse when they are the authority in a teaching or other professional context. No course credit. Written permission required. THE STAFF.

2500. Advanced Articulation Tutorial
This course is an advanced pronunciation tutorial for international graduate students who have achieved a near-native speaker level of fluency in English, but who require greater precision of English articulations, pronunciation, fluency and/or expression. No course credit. Written permission required. B. GOURLAY.

Hindi-Urdu

Primarily for Undergraduates

0100-0200. Beginning Hindi or Urdu
Introduces conversation, reading, and writing of modern standard Hindi and the Devanagari script. Those who already know Devanagari but have rusty conversation skills may join the class second semester; obtain instructor’s permission during the first semester. Those who prefer to learn Urdu and the Persian script should contact the instructor. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in HNDI 0200 covers the entire year and is recorded as the final grade for both semesters. A. K. KOUL.
0300-0400. Intermediate Hindi-Urdu
A continuation of HNDI 0100-0200, which is a prerequisite. Introduces the variation of the Persian script used for Urdu. Prepares students to communicate in written and spoken language. Activities are conducted in Hindi/Urdu. Meets four hours weekly. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in HNDI 0400 covers the entire year and is recorded as the final grade for both semesters. A. K. KOUL.

For Undergraduates and Graduates

1080. Advanced Hindi-Urdu
Each student follows an independent reading list determined in consultation with the instructor. The readings may include folk tales, journalistic prose, 20th-century literature, classical Urdu poetry of the 17th to 19th centuries, or subjects in nonfiction. The class meets together three hours weekly for discussion. Each student also spends one hour weekly with the instructor. Prerequisite: HNDI 0400. May be repeated once for credit. A. K. KOUL.

Modern Persian

Primarily for Undergraduates

0100-0200. Basic Persian
Fast-paced course for beginners. Course stresses acquisition of Persian alphabet and basic grammatical patterns, beginning levels of speaking, listening, reading, and writing. Strong emphasis on the links between language and culture. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in PRSN 0200 covers the entire year and is recorded as the final grade for both semesters. Enrollment limited. I. ANVAR.

0300, 0400. Intermediate Persian Language and Culture
Expands students' proficiency in modern Persian language and culture; develops listening, speaking, reading and writing skills at the intermediate level through various texts and multimedia. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in PRSN 0400 covers the entire year and is recorded as the final grade for both semesters. Enrollment limited. I. ANVAR.

0500. Advanced Persian Language and Culture I
For students who have completed PRSN 0400 or have acquired language skills above the intermediate level through contact with Persian in other ways. The main goal of this course is to improve speaking, listening, reading and writing skills and promote exposure to the culture. It will enable students to expand their knowledge of the language by studying samples of modern and classical Persian literature in order to advance toward mastery of contemporary literature. The course will motivate students to communicate both in written and spoken Persian by utilizing the adequate grammatical order and correct vocabulary. Enrollment limited. I. ANVAR.

0600. Advanced Persian Language and Culture II
Designed for students who have completed PRSN 0500 or have acquired language skills above the advanced level through other means. The main goal of the course is to improve speaking, listening, reading and writing skills and promote exposure to the language and culture through in depth study of samples of Persian literature, history, journals, newspa-
pers, radio and TV material to advance toward mastery of contemporary literature. Students will be motivated to communicate both in written and spoken Persian by utilizing adequate grammatical order and vocabulary. Activities will include poetry reading, informal gatherings and translation from and into Persian. Enrollment limited.
I. ANVAR.

For Undergraduates and Graduates

1200. Iranian Cinema: Before and After the Islamic Revolution
This course provides an overview of Iranian Cinema in general and explores in detail Iranian cinema after the Iranian revolution. It explores the politics, history, techniques and the art of cinema of the past several decades in Iran. Classes consist of screenings, discussions and lectures. Conducted in English, open to all students. I. ANVAR.

Latin American and Caribbean Studies

The Center for Latin American and Caribbean Studies (CLACS) facilitates the study of Latin America in a multidisciplinary perspective. An undergraduate concentration was first approved in 1973. The concentration was later incorporated into the Center for Latin American and Caribbean Studies, established in November 1984. The charge of the center emphasizes research and teaching, and also includes community outreach for public education.

Richard Snyder (Professor of Political Science and International Studies) is director of the center and advisor to concentrators. Susan Hirsch is the assistant to the director and directs the day to day operations of the center. The center office is located at 111 Thayer St., Box 1866, telephone: (401) 863-2106. http://www.watsoninstitute.org/clacs/.

Undergraduate Program

For the standard interdepartmental concentration program leading to an A.B. degree please visit: http://www.brown.edu/Administration/Registrar/concentration.html. Because the courses that are available tend to change from year to year, students should consult the Course Announcement Bulletin, or the concentration advisor.

Graduate Studies

Brown offers no advanced degree in Latin American Studies, but our faculty work closely with interested graduate students in other departments such as Hispanic Studies, History, Economics, American Civilization, Anthropology, Sociology, Political Science, Portuguese and Brazilian Studies, and the A.M. in Development Studies. Information about these degrees may be obtained directly from these departments or programs.
Courses of Instruction

Hatian Creole

Primarily for Undergraduates

0100. Basic Hatian Creole
Fast-paced course for beginners. Course stresses acquisition of skills in speaking and listening comprehension; writing included to a lesser degree. Strong emphasis on cultural as well as linguistic competency. Enrollment limited to 18.

0200. Early Intermediate Hatian Creole
Fast-paced course for beginners. Course stresses acquisition of skills in speaking and listening comprehension; writing included to a lesser degree. Strong emphasis on cultural as well as linguistic competency. Enrollment limited to 18. Prerequisite: Beyond basic level of reading, writing and comprehension or having successfully completed CROL 0100.

0300. Advanced Intermediate Hatian Creole
Fast-paced course for advanced/intermediate students of Haitian Creole. Designed for those who speak and understand Haitian Creole with some fluency but are seeking ways of perfecting their language skills, overcoming grammatical snags, increasing vocabulary, and mastering the idiomatic use of the language and proverbs. Reading and responding to authentic literature in Haitian Creole will be the focus of the course. Prerequisite: CROL 0200. Enrollment is limited to 18.

Latin American and Caribbean Studies

For Undergraduates and Graduates

1510. Selected Topics in Latin American Studies
Provides a Latin American perspective on a range of topics appropriate for advanced students already familiar with Latin American peoples, languages, literatures, and/or cultures. In English, with possibly some discussion and readings in Spanish and/or Portuguese. Enrollment limited to 20.

1510B. The Struggle for Human Rights in Brazil: Democracy without Citizenship
Provides a Latin American perspective on a range of topics appropriate for advanced students already familiar with Latin American peoples, languages, literatures, and/or cultures. In English, with possibly some discussion and readings in Spanish and/or Portuguese.

1510C. Democracy and the (Un)rule of Law in Latin America: Two Decades after Transitions
This seminar aims to better understand how Latin American countries perform in terms of respect for human rights, and how citizens perceive their governments' human rights' record. One of the key questions will be to ask what kind of democracy can prosper in an environment of continued violation of human rights, and how change can take place so that a 'good' democracy can develop. Another question will be to access the role of rule of law in the development in the continent and how the evolution from a democracy of voters to a democracy of citizens can happen.

1510D. Popular Music and Social Change in Latin America
This course is designed to illuminate the many ways that popular musicians shape, and are shaped by, the broader social milieu within which they act. Focusing largely on twentieth-century case studies from Cuba, Brazil, and Peru, it illustrates how social
dynamics particular to Latin America have constrained popular musicians' efforts to communicate, circumscribed their artistic and political goals, and enabled them to intervene in sociocultural debates in specific ways. Issues to be considered include the sanctioning of musical styles as national symbols; the harnessing of music to project promoting racial diversity; its use as a medium of political protest as well as a vehicle for populist politics; the shifts in style wrought by industrialization, migration, and urbanization; the importance of media dissemination and commercialization, both in driving musical change and in determining its scope of influence; and the ambivalent role of the processes variously dubbed "westernization," "Americanization," and "globalization."

1510E. Race, Music and Literature in the Spanish Caribbean
The course provides an interdisciplinary approach to racial representations in the Literature and Popular Music of the Spanish Caribbean. It explores the different definitions and representations of the Spanish Caribbean cultures and identities from a comparative view of the Anglo and French Caribbean writers.

1510F. Institutions of Justice and Democracy in Latin America
The course will examine the relationship between democracy building and the performance of Institutions of Justice in Latin America. We will address issues of human rights violations, globalization and its threats, and the Challenges that Latin American regimes faces to build democratic institutions and the rule of Law. The course will focus will be both on the normative and sociological and analysis of the institutions of Justice in Latin America.

1510G. Literature and Popular Culture in Latin America
Latin American cultures were built on the humanistic and intellectual perspectives exposed by José Enrique Rodó and José Martí, among many others, which propose the artistic aesthetic as a social ideal and the spreading of education as a sign of progress. But these cultural and national projects were developed in "the era of mechanical reproduction" and their literary project soon was menaced by the "cultural industry." This course explores the dialogues and tensions between what has been branded as the "lettered" and the "real city" in Latin American societies in a selection of literature, film, television, and popular music. This course will be given in Spanish.

1510H. Shaping the Brazilian Nation through Music
This course provides an introduction to the music of Brazil, with a particular emphasis on its role in creating and contesting visions of nationhood during the twentieth century. Focusing upon a limited number of musical practices, from different regions and periods, it is not intended to provide a comprehensive survey. Rather, using a small set of case studies, it highlights key dynamics that have shaped the relation between Brazilian music and Brazilian society more broadly. Topics range from traditional practices, such as candomblé and folias de reis; to samba, bossa nova, and Northeastern regional styles; to the work of composer Heitor Villa-Lobos; to the contemporary hip hop scene of São Paolo. There are no prerequisites, but it is recommended that students have either some knowledge of Latin American culture and/or history, or some musical background. Enrollment will be limited to twenty people, with preference given to those matching these criteria.

1510I. Urban Latin America
This course will analyze the crucial dynamics, contradictions and consequences of urbanization in contemporary Latin America. Themes to be addressed include: urban
culture, sports, national and ethnic identities, religion and violence. Prerequisite: at least one other class in Anthropology or other social sciences.

For Latin American Studies concentrators writing senior projects or honors theses. This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade at the end of the course work in LAST 1991 covers the entire year and is recorded as the final grade for both semesters. Written permission required.

Program in Literary Arts
Professors Evenson (Director), Gander, Harper, Maso, Rahman, Steinbach, Waldrop, Wideman, Wright; Associate Professor Field; Assistant Professors Gladman; Lecturer Nelson; Adjunct Professor Coover.

Undergraduate Program
For a complete description of the standard concentration program leading to the A.B. degree in Literary Arts, please visit the department’s website at:
http://www.brown.edu/Departments/Literary_Arts/ or http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Program

Master of Fine Arts
Acceptance of candidates for the master of fine arts degree in literary arts is determined by the staff of the Graduate Program in Literary Arts. Candidates take eight courses, four of which are in writing. The other four courses supplement the major objective of completing a substantial manuscript in fiction, poetry, or electronic work, which is submitted as a thesis. Normally, work for the degree is done during a two year period, though on rare occasions it may be completed in a shorter time.

Courses of Instruction

Primarily for Undergraduates

0110. Workshops in Creative Writing I
Workshops are designed for students who have little or no previous experience in writing literary texts in a particular genre or in interdisciplinary manners. Students will be introduced to a variety of technical and imaginative considerations through exercises, readings and discussions. A genre is not open to those students who have taken intermediate or advanced workshops in that genre.

0110A. Fiction I
A workshop for students who have little or no previous experience in writing fiction. Enrollment limited to 17 per section. This course is limited to undergraduates. S/NC.

0110B. Poetry I
A workshop for students who have little or no previous experience in writing poetry. Enrollment limited to 17 per section. This course is limited to undergraduates. S/NC.
0110E. Screenwriting I
A workshop for students who have little or no previous experience in writing screenplays. This course is limited to undergraduates. S/NC. Enrollment limited to 17.

0210. Workshops in Creative Writing II
Designed for students who have some experience in writing literary texts. Introductory workshops in respective genre is desirable but not required. Most sections require readings from published work in addition to exercises and workshop discussions of works in progress. During registration, 10 spots may be filled by students who are concentrating in Literary Arts. All other students must submit a separate writing sample for each section to which they wish to apply. All writing samples are due at 68-1/2 Brown Street between 10 am and 4 pm on the first day of the semester. Permission will be issued by the instructor after the manuscripts have been reviewed. A student may take LITR 0210 up to six times for credit, but no more than three sections may be in one genre or interdisciplinary area.

0210A. Fiction Writing II
Topics often include stylistic matters related to tone and point of view, and structural matters like controlling switches in time. See general course description above for course entry procedures for all intermediate workshops. Written permission required. S/NC.

0210B. Poetry Writing II
Emphasis is placed on verse strategies, meter, rhythm, imagery and rhyme. Writing includes frequent exercises in various poetic traditions. See general course description above for course entry procedures for all intermediate workshops. Written permission required. S/NC.

0210D. Electronic Writing II
Project-oriented workshop for writers, visual/sound artists, filmmakers, and programmers wishing to explore techniques for effective and innovative use of text in digital media. Topics include hypertext narrative, kinetic poetry, and recombinant and computer-generated texts. Collaboration encouraged. Work sample (writing, programming, website) due on first day of semester. Enrollment limited to 17. Written permission required. S/NC.

0210E. Screenwriting II
Emphasis is placed on filmic devices, such as dialogue, voice-over, montage and time. Writing includes frequent exercises. See general course description above for course entry procedures for all intermediate workshops. This course is limited to undergraduates. Written permission required. S/NC.

0310. Creative Writing Special Topics Workshops
Workshops provide students with a forum for the practice of the art of writing within the context of a special topic that may focus on a particular genre or cross the boundaries of genre. Students must submit a separate writing sample for each section to which they wish to apply. Samples are due the first class meeting. Permission will be issued by the instructor after the manuscripts have been reviewed. A student may take LITR 0310 up to six times for credit, but may not repeat a particular special topic.

0310A. Poetry in Service to Schools and the Community
We shall be reading, writing and talking about poetry and letting this medium reflect back on other artistic practices -- what it means to live, work & think (in) this way; another key component will be an engagement with community practice through bringing poetry to local schools, a direct personal and enlightening exchange of enlightening ideas and experience. Participants will work independently, in groups, in
classes (including this one); you produce, and work with others to produce, art individually as well as communally; you are the gaffer, you are also, and simply, a member of the guild. This feels more like a teacher's enterprise, though I call it, simply, community practice-- what happens when people just put themselves in the position to give their gifts, while allowing, at the same time, others to give equally of themselves. Limited to 17. S/NC. Permission will be granted by the instructor after the first class session.

0310B. City/Spaces: An Introduction to Psychogeography
Psychogeography is an artistic discipline concerned with the subconscious ways in which we respond to and interact with the physical environment of the city. This course will focus on the intersection of psychogeography and text--both narrative and non-narrative--and the possibilities for walking to inform text and narrative. Limited to 17.

0510. First Year Literary Seminars
Literature seminar courses designed for first-year undergraduate students. Each section will have its own special topic. Enrollment limited to 20.

0510A. Masters and Servants
We will consider the relationship between servants and masters as portrayed in fiction and films. We shall examine the basic relation of servitude to sovereignty, extrapolating to the broader power dynamics of two-person relationships. Beginning with the Hegelian dialect of the master and the servant, and building as well on a philosophical framework provided by Nietzsche, Kojève and Bataille, we shall look at the complexities of the relationship between masters and servants, exploring the psychological, social and ethical dimensions of two-person relationships that value each person differently. We shall focus on issues of class and power and look at literature and film in which there are explorations of several complicated manifestations of servitude and mastery: overlaps into gender power dynamics and fetishism, power dynamic reversals both to comic and tragic effect, and questions of boundaries and violation of social propriety and human communication. Core texts will include work from Ishiguru, Wodehouse, D.H. Lawrence, Miabeau, Richardson, Broné, and Stanley Crawford, and film texts will include Joseph Losey's The Servant and Luis Bunuel's Diary of a Chambermaid.

0510B. Into the Machine
Starting from Turing's work on artificial intelligence, we shall examine the cultural and artistic ramifications of the rise of the machine, using Marx and Walter Benjamin to provide a framework. We will look at how machines generate anxiety, with special emphasis on robots, puppets and automatons; and we shall also consider utopian and dystopian images of machines, and visions of near and distant futures. Authors and filmmakers include: Capek, Hoffman, Lem, Breton, Lang, Chaplin, Tati.

0610. First Year Special Topics Workshops
Special topics workshop courses designed for first-year undergraduate students. Each session will have its own special topic. FYS. Enrollment limited to 12. Reserved for first-year students. S/NC.

0610A. Unpublishable Writing
This writing workshop is primarily for fiction students interested in working on projects which do not fit into conventional avenues of publication (i.e. books, print). We will explore how extended narrative can incorporate a variety of relationships to time, materials, sequence, indeterminate or procedural approaches, and collaboration.
Assigned reading and independent research will support your own creative projects throughout the semester. FYS. Enrollment limited to 12. S/NC.

0710. Writers on Writing Seminar
Offers students an introduction to the study of literature (including works from more than one genre) with special attention given to a writer’s way of reading. This course will include visits to the course by contemporary writers who will read to the class and talk about their work. Enrollment limited to 20.

For Undergraduates and Graduates

1010. Advanced Creative Writing Workshops
Workshops provide students with a forum for extended practice of the art of writing. Intermediate workshop in respective genre is desirable but not required. Students must submit a separate writing sample for each section to which they wish to apply. All writing samples are due at 68-1/2 Brown Street on the first day of the semester. Permission will be issued by the instructor after the manuscripts have been reviewed. A student may take LITR 1010 up to six times for credit, but no more than three sections may be in one genre or interdisciplinary area. Enrollment limited to 12.

1010A. Advanced Fiction
The writing of short stories or longer works in progress in regular installments, along with appropriate exercises and reading assignments. See general course description above for course entry procedures for all advanced workshops. Written permission required. S/NC. Enrollment limited to 12. T. FIELD, R. GLADMAN, M. STEINBACH, J. WIDEMAN.

1010B. Advanced Poetry
Course work includes a body of exercises, close reading of poetry, workshop conversations and conferences. See general course description above for course entry procedures for all advanced workshops. Written permission required. S/NC. Enrollment limited to 12. M. S. HARPER, P. G. NELSON.

1010C. Advanced Playwriting
Course work includes a body of exercises, significant reading, workshop conversations and conferences. See general course description above for course entry procedures for all advanced workshops. Written permission required. S/NC. Enrollment limited to 12. A. RAHMAN.

1010D. Advanced Electronic Writing
Experiments in nonlinear narrative within the hypertext environment of the computer. For students with some experience in the electronic environment. S/NC. Enrollment limited to 12.

1010E. Advanced Screenwriting
The writing of short screenplays or a longer work in progress in regular installments, along with a body of exercises, workshop conversations and conferences. See general course description above for course entry procedures for all advanced workshops. Written permission required. S/NC. Enrollment limited to 12. A. RAHMAN.

1010F. Advanced Translation
This translation workshop will focus on translating poetry texts from English to English; and then poems from another language (with which the student has facility) to an English version. Writing samples due on first day of the semester. Written permission required. S/NC. Enrollment limited to 12. F. GANDER, B. K. WALDROP.
1010G. **Cave Writing**

An advanced experimental writing workshop in spatial hypertext, introducing text, sound, and narrative movement into the immersive reality environment of Brown's "Cave" (Center for Computation and Visualization), using an easy-to-use application that allows non-programmers to create projects on their own laptops and install them in the Cave without the intercession of computer programmers. Broadly interdisciplinary. Involves writers, composers, designers, modelers and programmers working collaboratively. Instructor permission required. S/NC. Enrollment limited to 12.

1110. **Advanced Creative Writing Special Topics Workshops**

Workshops provide students with a forum for extended practice of the art of writing within the context of a special topic that may focus on a particular genre or cross the boundaries of genre. Students must submit a separate writing sample for each section to which they wish to apply. All writing samples are due at 68 1/2 Brown Street on the first day of the semester. Permission will be issued by the instructor after the manuscripts have been reviewed. A student may take LITR 1110 up to six times for credit, but may not repeat a particular special topic. Enrollment limited to 12. S/NC.

1110B. **American Political Drama**

What exactly is an American political play? We'll examine issues of personal freedom, community rights, and the positioning of public power. Are we different from the myths of America? Political theater enables us to see our moral choices and aspirations. From Aristophanes to Suzan-Lori Parks, we will look at various political texts while we attempt to create new approaches to the writing of American Political Theater. Instructor permission required. Enrollment limited to 12. S/NC.

A. RAHMAN.

1110F. **Narrative Strategies**

A course essentially geared to the creative and critical writer interested in experimenting with some of the narrative structures suggested by the great films. To include films of Akerman, Antonioni, Eisenstein, Hou Hsiao, Hsien, Goddard, marker, Tarkovsky and others and texts by Duras, Sebald and Vittorini. Instructor permission required. Instructor permission required. Enrollment limited to 12. S/NC. C. MASO.

1110G. **Narrative Voice: Fact and Fiction**

Instructor permission required. Enrollment limited to 12. S/NC.

1110J. **The Short Story**

Experiments in writing; extensive reading in traditional and experimental collections of fiction in shorter forms. Writing samples of no more than ten pages should be left at 68 1/2 Brown Street on the first day of the semester. Instructor permission required. Enrollment limited. S/NC. M. STEINBACH.

1110L. **Aspects of Contemporary Prose Practice**

Using Chimamanda Ngozi Adichie's *Purple Hibiscus*, Tayeb Saleh's *The Wedding of Zein and Other Stories*, Luis Bernard Honwana's *We Killed Mangy Dog*, and *Our Sister Killjoy*, this course will look at prose narrative in contemporary African Literature, for a background to general narrative practice. Among areas of special interest, the course will examine the contents and structure of the short story, not as an abbreviated novel, but as an autonomous genre. We shall also look at literature in translation, and discuss what the reader loses in the process if anything, and how much that matters, if at all. Students will be expected to work on short stories and novel chapters.. Enrollment limited. Written permission required. S/NC.
1110M. Stereotexts: Experimental Multidimensional Fiction Workshop
A project-driven writing workshop focused on innovative multidimensional approaches to narrative. Projects using two or more media such as print and digital formats or text and sound, filmed text, hyperfictions, narratives with multiple voices or even multiple spaces, text installations, fictions that put contraries into play, etc., all are welcome submissions. Instructor permission required. Enrollment limited. S/NC.

1110N. Workshop for Potential Literature
A novel without the letter “E”, 100,000-billion sonnets by permutation and texts that take the shape of a Mobius-Strip-- all this and more, as workshop participants try their hands in writing in response to problems created by and inspired by a group of writers engaged in strange constraints and procedures. Instructor permission required. Enrollment limited. S/NC. P. G. NELSON.

1110O. Hybrid Texts, Hybrid Thinking
In neither being fiction, poetry, memoir, theory, nor art writing but a crossing of these genres, the hybrid text proffers an open and complexly layered environment for engaging questions of perception, knowledge and articulation. In this course, we will study exemplary works of literature and venture briefly into visual art. Both critical and creative responses will be required. Instructor permission required. Enrollment limited. S/NC.

1110P. Alternative Scriptwriting: Writing Beyond the Rules
This course will consider various screenwriting genres and how to write against genre or extend the traditional screenwriting forms. Students applying must have already completed either a 90+ page screenplay or have taken Advanced Playwriting (LITR 1010C) or Advanced Screenwriting (LITR 1010E) at Brown. Instructor permission required. Enrollment limited. S/NC.

1110R. Performance Dimensions of Text
This workshop (modeled on a traditional "atelier") explores the relationships between the performative and the printed/textual, asking in particular how the page can serve as a dynamic blueprint for sound, video, movement, and theatrical practice. Weekly examples of works that have pushed the boundaries of literary genres by incorporating performative elements will be combined with student experimentation in long and short pieces. As an interdisciplinary workshop, this course invites students from all backgrounds. Instructor permission required. Enrollment limited. S/NC.

1110S. Fiction into Film
A study of various directors' attempts to transfer masterpieces of fiction into film. Concerning both genres we will ask Gertrude Stein's question: What are masterpieces, and why are there so few of them? Includes fiction by Austen, Bierce, Carter, Cowley, Doyle, Faulkner, Forster, Fowles, Kesey, Joyce, McCullers, Morrison, Nabokov, O'Connor, Thompson, Walker, Woolf, Yamamoto as directed by Burton, Forman, Felini, Gilliam, Huston, Jordan, Kurasawa, Lee, Potter, and others. Class and weekly screenings. Instructor permission required. Enrollment limited. S/NC.

1150. Special Topics Workshop/Seminar in Literary Arts
Special topics workshop/seminars combine elements of the writing workshop with elements of a seminar on literary issues. Courses under this rubric will require students to read, discuss and write creative and critical work. Students must submit a separate writing sample for each section to which they wish to apply. The writing sample is due at the first class session. Permission will be issued by the instructor after the manuscripts have been reviewed. Enrollment limited to 12. S/NC.
1150A.  Ecopoetics in Practice
What we have perpetrated on our environment has certainly affected a poet's means and material. But can poetry be ecological or display values that acknowledge the economy of interrelationship between human and non-human realms? Aside from issues of theme and reference, how might syntax, line break, or the shape of the poem on the page express an ecological ethics? How might poetry register the complex interdependency that draws us into a dialogue with the world? Readings, discussion, essays and creative writing. See general course description above for course entry procedures for all special topics workshop/seminars. Enrollment limited. Written permission required. S/NC.

1150B.  The Foreign Home: Interdisciplinary Arts
Project-centered workshop for exploration beyond one's "home" genre, whether in video, poetry, fiction, music, performance or visual arts. Contemporary and art-historical interdisciplinary works will ground our investigation into the tension between expertise and "beginner's mind". Collaborative and individual work expected. See general course description above for entry procedures for all special topics workshops/seminars. Enrollment limited. Written permission required. S/NC.

1150C.  Unpublishable Writing
Before becoming the dominant form of book-marking, "the codex" meant a tree stump where criminals were tied. After examining conventions of western print culture, we will explore literary practices which are performative, sculptural, multimedia, or out-scale. Through the course is primarily for creative projects, critical research will also be expected. Enrollment limited. Written permission required. S/NC.

1150E.  Strange Attractors: Adaptations/Translations
A workshop for students from all genres and disciplines to explore adaptation as creative process. Adaptation can be between any genres and from any source. See general course description above for entry procedures for all special topics workshops/seminars. Enrollment limited. Written permission required. S/NC.

1150F.  Home and Abroad
This course combines seminar and workshop sessions for students with special interest in the writing of novels and short fiction. Attention will be given to the ways certain English and American writers - Herman Melville, Joseph Conrad, E. M. Forster, Graham Greene - have interpreted the lives of people in other and foreign cultures. These are classic examples of the meeting of insiders and outsiders in the house of fiction. Enrollment limited. Written permission required. S/NC.

1150G.  Books by Hand
As both a seminar and workshop, this course will explore small press publishing and bookmaking from historical, contemporary and hands-on perspectives. Students will be asked to design and carry out small creative projects throughout the semester as well as research particular concerns in the field. See general course description above for course entry procedures for all special topics workshop/seminars. Enrollment limited. Written permission required. S/NC.

1150H.  Latin-American Poetry Live!
Students will read (in translation and, if possible, in Spanish), analyze, discuss and write essays about contemporary Latin American poets such as Cecilia Vicuna (Chile), Homero Aridjis (Mexico), Maria Negroni (Argentina), Jaime Saenz (Bolivia), et. al. Particular attention will be paid to how styles, themes, and geographies might be related. Although no Spanish is necessary, students will be encouraged (sometimes in
pairs) to try translations and to write about the process. This section does not require permission from instructor. Enrollment limited. S/NC.

1150I. The Lyric Essay
Advanced level workshop for graduates and undergraduates to explore the possibilities of creative nonfiction in a radical or hybrid mode. See general course description above for course entry procedures for all special topics workshop/seminars. Enrollment limited. Written permission required. S/NC.

1150J. The Cinematic Essay
A creative writing seminar in which we take the Essay Film as the primary inspiration for weekly writing exercises. Works by Marker, Godard, Ivens, Resnais, Varda, Akerman, Herzog, Morris, Su Friedrich, Sadie Benning and Trihn Mon-Ha to be included. Also writing by Cannetti, Gass, Handke, Cha, Hong Kingston and more. See general course description above for course entry procedures for all special topics workshop/seminars. Enrollment limited. Written permission required. S/NC.

1150M. Short Fiction Experiments
A course in fiction which pushes against the very definitions of stories and fictions. Using short forms, we will examine our habits and assumptions of story telling and engage in willful adventures of mind, spirit, and language. Prerequisites include a passion for trying everything and anything once. No prior writing experience needed. Enrollment limited. Written permission required. S/NC.

1150N. The Novella: An Adventure in Writing
In this workshop/seminar, we will explore the ever elusive world of the novella - how to think of this work, what the rules are, where the boundaries lay. Alongside their reading of writers such as Marguerite Dumas and Michael Ondaatje, students will embark on their own novella-writing journeys. Enrollment limited. Written permission required. S/NC.

1150P. John Cage and Meditative Poetics
Primarily an interdisciplinary literature course, we will experience the writing and thinking of John Cage in the context of a wider exploration of creative process with a basis in american and european interpretations of Buddhist practice and thought. We will explore the work of contemporary artists such as Bill Viola, Philip Glass, Meredith Monk, Allen Ginsberg and Anne Waldman, as well as Samuel Beckett and others. Students in the course will be expected to write in both creative and critical modes. Instruction in basic meditation practice is recommended but optional throughout the semester. Enrollment limited. Written permission required. S/NC.

1150Q. Reading, Writing and Thinking for the Stage
Composed of contemporary dramatic literature for playwrights. Contemporary texts are studied. Use of each author's dramatic techniques, the influence of the times on his drama, his themes, the demands of market driven theater and popular art considered. Simultaneously students will write an original 60-page manuscript. Students applying must have already completed plays of 60 pages or have advanced playwriting experience. Enrollment limited. Written permission required. S/NC.

1150R. Exemplary Ancient Fictions
We shall discuss and examine a selection of pre-Gutenberg narratives from Gilgamesh and Genesis through Ovid and fairytales and medieval romance, with a focus on the ancient art of narrative. We shall also try our hands at exercises in the alternative fictional strategies these works suggest. Course entry based on the submission of a
writing sample (and in-class writing in response to an assignment) at the first class session. Enrollment limited. Written permission required. S/NC.

1150S. What Moves at the Margins
A multi-genre seminar/workshop based on fiction, non-fiction and dramatic literature that has been banned or otherwise marginalized because it is critical, interrogative and alternative. Weekly writing exercises based on readings and discussions in class. A term project is required. For students who love literature. For admission, students may submit fiction, non-fiction or drama. Enrollment limited. Written permission required. S/NC.

1150T. Foreign Home
Project-centered workshop for exploration beyond one's "home" genre, whether in video, poetry, fiction, music, performance or visual arts. Contemporary and art-historical interdisciplinary works will ground our investigation into the tension between expertise and "beginner's mind". Collaborative and individual work expected. Enrollment limited. Written permission required. S/NC.

1150U. Prose City: The Making of Spatial Texts
In this workshop/seminar, we will explore, through selected reading and writing exercises, some basic questions of "writing city": how is place captured, encompassed; how can the city emerge in language as a character, an event, as reflective space; how do we enter the city; how do we recognize its borders? Students will be asked to create a portfolio of texts for an imagined city, as well as to think through concepts such as "structure," "location," "encounter," and "identity" as they occur in the paragraph. Enrollment limited. Written permission required. S/NC.

1200. Writers on Writing
Offers students an introduction to the study of literature (including works from more than one genre) with special attention given to a writer's way of reading. This course will include visits to the course by contemporary writers, who will read to the class and talk about their work. Enrollment is limited to 30 students. B. K. EVENSON.

1220. Reading, Research, and Writing About Literature
Students may repeat courses, provided that the topics are different.

1220A. History and Practice of English Versification
An opportunity to study through reading and imitating poems that represent a variety of poetic eras and traditions. S/NC. B. K. WALDROP.

1220B. Samuel Beckett
This course will mark the centenary of the author by reading and discussing a range of works from Samuel Beckett’s substantial output of fiction, poetry, drama and translation. S/NC. B. K. WALDROP.

1220C. The Cantos in their Environment
A reading of Pound’s Cantos, with attention to their origin and developments, their background and their influence. S/NC. B. K. WALDROP.

1220D. The Bible as Literary Source
A survey of the English Bible and its presence in English and American literature. Students will learn to notice and account for Biblical echoes in a wide variety of writings from several cultures. S/NC. B. K. WALDROP.
1220E. *Dada and Surrealism*
Two of the most famous modernist movements, studied through their writings, their visual arts, their performances, and their manifestoes; their origins and influence; their place in history. S/NC. S/NC.

1220F. *Restoration Drama*
A survey of English drama and theatrical practice from the reopening of the theaters at the Restoration to the early eighteenth century. Works of the major playwrights, including Dryden, Congreve, Wycherly, Gay. S/NC.

1230. *Seminars in Reading, Research, and Writing about Literature*
Designed for students who have an interest in reading, researching and writing about literature, in a seminar environment, under the instruction of a practitioner in the discipline. Students may repeat courses provided that the topics are different.

1230C. *Poetry Newly in Translation in English*
Readings and considerations of poetry newly in translation or newly re-issued, including works by Inger Christensen, Cesare Pavese, Jacques Roubaud, Vincente Huidobro and other singular and single texts by individual contemporaries. Enrollment limited. Written permission required. C. D. WRIGHT.

1230D. *Poetry, Mind, World*
How does the poetic mind negotiate between an account of itself and an account of the world? How have poets used landscape as a model of mind, as an erotics, as elegy? Merleau-Ponty, Hardy, Houle, Alexander, Dewdney, Hass, D’Aquino, Audubon and others. Presentation, several short essays, a poem, and one final essay. Enrollment limited. Written permission required. F. GANDER and S. BERNSTEIN.

1230E. *Form and Theory of Fiction*
Offers an exploration of narrative theories directed particularly at Creative Writers, in conjunction with a hands-on examination of contemporary fictional narrative practices. Theoretical readings include historical essays on fiction and work by Gaston Bachelard, Mieke Bal, Gilles Deleuze, and others. Enrollment limited. Written permission required.

1230F. *Writing, Reading City*
In this course, we will explore correlations, points of convergence, and possible mimesis between city and text. Students will be expected to keep a weekly journal, to have a city in question, and to write both imaginatively and critically in response to readings and class discussion. Enrollment limited. Written permission required.

1230G. *Master Poets of Apartheid Streets: Sterling Brown, Robert Hayden, Margaret Walker, Gwendolyn Brooks*
With the theme of "Slavery and Justice" in recent Brown University review, [4] "Master Poets of Apartheid Streets: Perpetual Resistance against de jure and de facto Segregation" is the formal and precise embouchure as Critical Realism which legislates as antidote to pernicious social, economic and educational racism: the aesthetic stance of this seminar is "An Integer Is a Whole Number." Through close attention to the conventions of poetry as praxis by these four master poets, in social context, the modality of this study is poetic discourse (what Frederick Douglass called 'a sacred effort' in Douglass' description of President A. Lincoln's 'Second Inaugural'). Peripheral insights will be provided by Brown University researchers of the past: Charles H. Nichols, Winthrop Jordan, Richard Slotkin, in their three dissertations, and
James R. Patterson's most recent book on "Brown v. Board of Education." Enrollment limited. Written permission required.

1230H. Being in Time
In this discussion-based course, we will examine the many roles time plays in the building of narratives as well as its impact on contemporary concepts of self. We will use both literary and philosophical texts to explore the spaces between time and perception, time and memory, and time and grammar. Enrollment limited. Written permission required.

1230I. The Documentary Vision in Recent American Literature
A study of genre-defiant works from James Agee's *Let Us Now Praise Famous Men*, Charles Reznikoff's *Holocaust*, Theresa Hak Kyung Cha's *Dictee* to the conceptual work of Kenneth Goldsmith and the American lyrics *Don't Let Me Be Lonely* by Claudia Rankine and *The Folding Cliffs* by W.S. Merwin. The chosen texts propose drastic examples that conform to the exigencies of contemporary circumstances and respond to the challenges with vigorous, imperfect models whereby language and form are primary and history is centrally positioned in art. The literary text will form the ground, but our "findings" may be comprised of artifacts, footage, music, interviews, archives, court records -- "the rest would be fragments of cloth, bits of cotton, lumps of earth, records of speech, pieces of wood and iron, phials of odors, plates of food... a piece of the body torn out by the roots" as Agee writes -- in other words the talents and resources of the group will be polled, pooled, and pulled to create and present a "walk-in book" of the elected project. Enrollment limited. Written permission required.

1230J. Writing: Material Differences
An exploration of the material poetics and certain (transcultural) practices of writing, beginning 'West' and moving 'East,' wherever 'to write' always means something radically different 'here' and 'now' or 'there' and 'then.' We will engage with, amongst others, work by: Steve McCaffery, Joan Retallack, Caroline Bergvall, TNWK (material poetics & performance); John Welch & Ian Sinclair (out walking); John Hall (domestic grammars); Oskar Pastior & Harry Mathews (self-referential machinery); Alan Sondheim (bad code read/writing in Life 2.x); Ian Hamilton Finlay (gardens, temples & the State); Alec Finlay (shared writing in the open air); Wang Wei (regulated verse/painting); Wang Xizhi (prefaces, parties, & calligraphic afterparties); Xu Bing (hallucinations of world writing); with theorist/critics: Foucault; Hayles; Fenollosa; Kittler; Lessig. Before taking this course, students should have taken one of the course listed as examples of 'Reading/Theory' prerequisites on the LitArts site at: http://www.brown.edu/Departments/Literary_Arts/undergraduate.htm# Enrollment limited. Written permission required.

1300. Independent Study in Reading, Research, and Writing About Literature
Provides advanced students with an opportunity to pursue tutorial instruction oriented toward a literary research topic.

1310. Independent Study in Creative Writing
Offers tutorial instruction oriented toward some significant work in progress by the student. Typically taken by honors or capstone candidates in the antepenultimate or penultimate semester. See instructor to seek permission during the semester before undertaking the course of study. One advanced-level workshop is prerequisite.
1410. Honors Workshops in Creative Writing
Workshops provide a forum for students working on their theses. See instructor for permission during the semester before undertaking the course. Enrollment limited to 12. S/NC.

1410A. Fiction Honors
A workshop setting for the completion of theses by advanced writers of fiction. See general course description above for course entry procedures for all honors workshops. Enrollment limited. Written permission required. S/NC. M. STEINBACH.

1510. Honors/Independent Study in Creative Writing
Provides tutorial instruction for students completing their theses. Typically taken by honors candidates in their final semester. See instructor to seek permission during the semester before undertaking the course of study. S/NC.

Primarily for Graduates

2010. Graduate Workshops in Literary Arts
Graduate-level practice of the art: writing workshops, ordinarily limited to graduate students in Literary Arts, with emphasis on a better understanding of creative process, strategies and forms. A student may take LITR 2010 up to six times for credit, but no more three sections may be in one genre or interdisciplinary area.

2010A. Graduate Fiction
Advanced practice of the art: a writing seminar, limited to graduate students in Literary Arts. Emphasis is placed on developing a better understanding of the creative process, strategies and forms. Written permission required. S/NC. B. K. EVENSON, R. GLADMAN, C. MASO, J. WIDEMAN.

2010B. Graduate Poetry
Advanced practice of the art: a writing seminar, limited to graduate students in Literary Arts. Emphasis is placed on developing a better understanding of the creative process, strategies and forms. Written permission required. S/NC. F. GANDER, B. K. WALDROP, C. D. WRIGHT.

2110. Graduate Workshops in Special Topics
Provides students with a forum for extended practice of the art of writing within the context of a special topic. These courses are ordinarily limited to graduate students in Literary Arts.

2110C. Reading, Writing and Thinking
A course for graduate prose writers. We will explore various ways to engage with a work of art in order to fuel one’s imagination and projects. Close textual reading of several books with writing assignments based on the readings. Writers will include Woolf, Stein, Beckett, Coetzee, Kertesz and others. Written permission required. S/NC.

2110E. The Foreign Home: Interdisciplinary Arts
Project-centered workshop for exploration beyond one's "home" genre, whether in video, poetry, fiction, music, performance or visual arts. Contemporary and art-historical interdisciplinary works will ground our investigation into the tension between expertise and "beginner's mind". Collaborative and individual work expected. Written permission required. S/NC.

2230. Graduate Independent Study in Reading, Research, and Writing About Literature
Provides graduate students with an opportunity to pursue tutorial instruction oriented toward a literary research topic.
2310. *Graduate Independent Studies in Literary Writing*
Offers tutorial instruction oriented toward some significant work in progress by the graduate student. S/NC.

2410 *Graduate Thesis Independent Study in Literary Writing*
Provides tutorial instruction for graduate students completing their graduate theses. Typically taken in the final semester. See instructor to seek permission during the semester before undertaking the course of study. S/NC.

2600. *Seminar in Teaching Creative Writing*
A course focused on how to design and lead a creative writing workshop. Reading, writing and laboratory workshop sessions. Designed for first-year Literary Arts graduate students. S/NC.

**Mathematics**

Professors Abramovich, Banchoff, Braverman, Brock, Cole, Daskalopoulos, Goodwillie, Hoffstein (Chair), Kapouleas, Lichtenbaum, Oh, Pipher, Schwartz, Silverman, Strauss, Treil; Associate Professor Landman; Assistant Professors Gillam, Holmer, Kotke, Kutlthan, Pausader, Vaghshakyan, Viray, Vuletic; Professors Emeriti Accola, Browder, Federer, Fleming, Harris, Kalin, Lubin, Rosen, Stewart, Wermer.

For further information about the Mathematics faculty and programs, visit [http://www.math.brown.edu](http://www.math.brown.edu).

**Undergraduate Programs**

Concentrators in mathematics should complete the prerequisites by the end of their sophomore year. Those interested in graduate study in mathematics are encouraged to take Mathematics 1130, 1140, 1260, 1410, and 1540. Students who have not had a course at the Honors level (Mathematics 0350 or 0540) should consider taking Mathematics 1010 before Mathematics 1130. Students are encouraged to take advanced courses whenever their preparation qualifies them to do so.

For a complete description of the following standard concentration programs leading to the bachelor’s degree please visit: [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

- Mathematics-Computer Science
- Mathematical Economics
- Mathematics-Physics
- Geology-Physics/Mathematics

**Graduate Program**

The graduate program in mathematics is primarily a Ph.D. program planned to prepare especially able students for a career of basic research and college training. These students may also earn the A.M. or Sc.M.

The department offers nine semesters of basic courses: Differentiable Manifolds (2110), Real Function Theory (2210, 2220), Complex Function Theory (2250, 2260), Topology (2410, 2420), and Algebra (2510, 2520). Students are required to qualify in 2110, 2210, 2250, 2410, and 2510, and in at least three of the other four. “Qualifying” ordinarily means taking the course and doing sufficiently well, but students who have done the equivalent of one or more of these courses may qualify by passing diagnostic examinations.
in September. Students are admitted to candidacy for the Ph.D. degree on the basis of qualification in the basic areas and other evidence of readiness for mathematical research. Typically, a student completes at least six basic courses in the first year and fulfills the remaining basic course requirements in the second year.

Beyond admission to candidacy, the requirements of a candidate for the Ph.D. are to:
1. Obtain “qualification credit” in three courses beyond the basic eight.
2. Pass a topics examination. This is an oral examination in an advanced subject, and is ordinarily to be satisfied by November of the third year. It may well occur before admission to candidacy.
3. Acquire some teaching experience.
4. Demonstrate proficiency in one foreign language, ordinarily chosen from French, German and Russian.
5. Write a doctoral thesis. This must be original mathematical research of sufficient quality to be published in a recognized mathematics journal. Thesis research is done under the direction of a faculty member with whom the student has close scientific contact. Doctoral candidates present their completed thesis to the department in a final public oral examination.

For the master’s degree, the department requires completion of at least four courses at the graduate level (see General Regulations). A student may satisfy requirements for the master’s degree either by writing an acceptable thesis (which, in contrast to the Ph.D. thesis, may be purely expository) or by taking a greater number of graduate level courses.

Mathematical activity of the department includes formal and informal seminars on a wide range of topics conducted by the faculty and students. Prominent scholars are invited to lecture on their recent research at a weekly colloquium. The department has extensive computer facilities.

The mathematics library is part of the Sciences Library. Its collection is one of the finest anywhere and provides complete facilities for research. It is the policy of the department to acquire all important new publications in mathematics. Many out-of-print books and journals are recorded on microfilm and are available for general use. The University provides electronic access to MathSciNet and a variety of mathematics journals online.

Other courses of interest to mathematics students are offered by the Division of Applied Mathematics, the Department of Computer Science, and the Department of Physics.

Courses of Instruction

Primarily for Undergraduates

0010. First Year Seminar
The course description will vary from semester to semester, depending on the faculty member and topic. Enrollment limited to 20 first year students. S/NC.

0050, 0060. Analytic Geometry and Calculus
A slower-paced introduction to calculus for students who require additional preparation. Presents the same calculus topics as MATH 0090, together with a review of the necessary precalculus topics. Students successfully completing this sequence are prepared for MATH 0100. Prerequisite: for MATH 0050 is written permission; for MATH 0060 is MATH 0050 or written permission. S/NC only.
0070. *Calculus with Applications to Social Science*
A one-semester survey of calculus for students who wish to learn the basics of calculus for application to social sciences or for cultural appreciation as part of a broader education. Topics include functions, equations, graphs, exponentials and logarithms, and differentiation and integration; applications such as marginal analysis, growth and decay, optimization, and elementary differential equations. May not be taken for credit in addition to MATH 0090. S/NC only.

0090. *Introductory Calculus, Part I*
An intensive course in calculus of one variable including limits, differentiation, maxima and minima, the chain rule, rational functions, trigonometric functions, and exponential functions. Introduction to integration with applications to area and volumes of revolution. MATH 0090 and 0100 or the equivalent are recommended for all students intending to concentrate in the sciences or mathematics. Lectures plus one 80-minute section arranged. S/NC.

0100. *Introductory Calculus, Part II*
A continuation of the material of MATH 0090 including further development of integration, inverse trigonometric and logarithmic functions, techniques of integrations, and applications. Other topics include infinite series, power series, Taylor’s formula, introduction to differential equations, and numerical methods. MATH 0090 and 0100 or the equivalent are recommended for all students intending to concentrate in the sciences or mathematics. Lectures plus one 80-minute section arranged.

0170. *Advanced Placement Calculus*
Begins with a review of fundamentals of calculus and includes infinite series, power series, paths, and differential equations of first and second order. Placement in this course is determined by the department on the basis of high school AP examination scores or the results of tests given by the department during orientation week. May not be taken in addition to MATH 0100.

0180. *Intermediate Calculus*
Three-dimensional analytic geometry. Differential and integral calculus for functions of two or three variables: partial derivatives, multiple integrals, line integrals, Green’s Theorem. Recommended prerequisite: MATH 0100, 0170, or 0190.

0190. *Advanced Placement Calculus (Physics/Engineering)*
Covers roughly the same material and has the same prerequisites as MATH 0170, but is intended for students with a special interest in physics or engineering. The main topics are: calculus of vectors and paths in two and three dimensions; differential equations of the first and second order; and infinite series, including power series and Fourier series. The extra hour is a weekly problem session.

0200. *Intermediate Calculus (Physics/Engineering)*
Covers roughly the same material as MATH 0180, but is intended for students with a special interest in physics or engineering. The main topics are: geometry of three-dimensional space; partial derivatives; Lagrange multipliers; double, surface, and triple integrals; vector analysis; Stokes’ theorem and the divergence theorem, with applications to electrostatics and fluid flow. The extra hour is a weekly problem session. Recommended prerequisite: MATH 0100, 0170, or 0190.

0350. *Honors Calculus*
A third-semester calculus course for students of greater aptitude and motivation. Topics include vector analysis, multiple integration, partial differentiation, line integrals, Green’s theorem, Stokes’ theorem, the divergence theorem, and additional material selected by the instructor. Prerequisite: Advanced placement or written permission.
0420. Introduction to Number Theory
An overview of one of the most beautiful areas of mathematics. Ideal for any student who wants a taste of mathematics outside of, or in addition to, the calculus sequence. Topics include: prime numbers, congruences, quadratic reciprocity, sums of squares, Diophantine equations, and, as time permits, such topics as cryptography and continued fractions. No prerequisites.

0520. Linear Algebra
Vector spaces, linear transformations, matrices, systems of linear equations, bases, projections, rotations, determinants, and inner products. Applications may include differential equations, difference equations, least squares approximations, and models in economics and in biological and physical sciences. MATH 0520 or 0540 is a prerequisite for all 1000-level courses in Mathematics except MATH 1260 or 1610. Recommended prerequisite: MATH 0180, 0200, or 0350. May not be taken in addition to MATH 0540.

0540. Honors Linear Algebra
Linear algebra for students of greater aptitude and motivation, especially mathematics and science concentrators with a good mathematical preparation. Matrices, linear equations, determinants, and eigenvalues; vector spaces and linear transformations; inner products; Hermitian, orthogonal, and unitary matrices; and Jordan normal forms. Provides a more extensive treatment of the topics in MATH 0520. Recommended prerequisites: MATH 0180, 0200, or 0350.

For Undergraduates and Graduates

1010. Analysis: Functions of One Variable
Completeness properties of the real number system, topology of the real line. Proof of basic theorems in calculus, infinite series. Topics selected from ordinary differential equations. Fourier series, Gamma functions, and the topology of Euclidean plane and 3-space. Prerequisite: MATH 0180, 0200, or 0350. MATH 0520 or 0540 may be taken concurrently. Most students are advised to take MATH 1010 before MATH 1130.

1040. Fundamental Problems of Geometry
Topics are chosen from euclidean, projective, and affine geometry. Highly recommended for students who are considering teaching high school mathematics. Prerequisites: MATH 0520, 0540, or instructor permission.

1060. Differential Geometry
The study of curves and surfaces in 2- and 3-dimensional Euclidean space using the techniques of differential and integral calculus and linear algebra. Topics include curvature and torsion of curves, Frenet-Serret frames, global properties of closed curves, intrinsic and extrinsic properties of surfaces, Gaussian curvature and mean curvature, geodesics, minimal surfaces, and the Gauss-Bonnet theorem.

1110. Ordinary Differential Equations
Ordinary differential equations, including existence and uniqueness theorems and the theory of linear systems. Topics may also include stability theory, the study of singularities, and boundary value problems.

1120. Partial Differential Equations
The wave equation, the heat equation, Laplace’s equation, and other classical equations of mathematical physics and their generalizations. Solutions in series of eigenfunctions, maximum principles, the method of characteristics, Green’s functions, and discussion of well-posedness. Prerequisites: MATH 0520 or MATH 0540, or instructor permission.
1130, 1140. Functions of Several Variables
A course on calculus on manifolds. Included are differential forms, integration, and Stokes' formula on manifolds, with applications to geometrical and physical problems, the topology of Euclidean spaces, compactness, connectivity, convexity, differentiability, and Lebesgue integration. It is recommended that a student take a 1000-level course in analysis (MATH 1010 or MATH 1260) before attempting MATH 1130.

1260. Complex Analysis
Examines one of the cornerstones of mathematics. Complex differentiability, Cauchy-Riemann differential equations, contour integration, residue calculus, harmonic functions, geometric properties of complex mappings. Prerequisite: MATH 0180, 0200, or 0350. This course does not require MATH 0520 or 0540.

1270. Topics in Functional Analysis
Infinite-dimensional vector spaces with applications to some or all of the following topics: Fourier series and integrals, distributions, differential equations, integral equations, calculus of variations. Prerequisite: At least one 1000-level course in Mathematics or Applied Mathematics, or permission of the instructor.

1410. Combinatorial Topology
Topology of Euclidean spaces, winding number and applications, knot theory, fundamental group and covering spaces. Euler characteristic, simplicial complexes, classification of two-dimensional manifolds, vector fields, the Poincaré-Hopf theorem, and introduction to three-dimensional topology. Prerequisites: MATH 0520 or MATH 0540, or instructor permission.

1530. Abstract Algebra
An introduction to the principles and concepts of modern abstract algebra. Topics include groups, rings, and fields; applications to number theory, the theory of equations, and geometry. MATH 1530 is required of all students concentrating in mathematics.

1540. Topics in Abstract Algebra
Galois theory together with selected topics in algebra. Examples of subjects which have been presented in the past include algebraic curves, group representations, and the advanced theory of equations. Prerequisite: MATH 1530. May be repeated for credit.

1560. Number Theory
A basic introduction to the theory of numbers. Unique factorization, prime numbers, modular arithmetic, quadratic reciprocity, quadratic number fields, finite fields, Diophantine equations, and additional topics. Prerequisite: MATH 1530 or written permission.

1580. Cryptography
Topics include symmetric ciphers, public key ciphers, complexity, digital signatures, applications and protocols. MATH 1530 is not required for this course. What is needed from abstract algebra and elementary number theory will be covered. Prerequisite: MATH 0520 or 0540.

1610. Probability
Basic probability theory. Sample spaces; random variables; normal, Poisson, and related distributions; expectation; correlation; and limit theorems. Applications in various fields (biology, physics, gambling, etc.). Prerequisites: MATH 0180, 0200 or 0350.

1620. Mathematical Statistics
Central limit theorem, point estimation, interval estimation, multivariate normal distributions, tests of hypotheses, and linear models. Prerequisite: MATH 1610 or written permission.
1810. *Special Topics in Mathematics*  
Topics in special areas of mathematics not included in the regular course offerings. Offered from time to time when there is sufficient interest among qualified students. Contents and prerequisites vary. Written permission required.

1820. *Special Topics in Mathematics*  
Topics in special areas of mathematics not included in the regular course offerings. Offered from time to time when there is sufficient interest among qualified students. Contents and prerequisites vary. Written permission required.

1970. *Honors Conference*  
Collateral reading, individual conferences.

Primarily for Graduates

2010 *Differential Geometry*  
Introduction to differential geometry (differentiable manifolds, differential forms, tensor fields, homogeneous spaces, fiber bundles, connections, and Riemannian geometry), followed by selected topics in the field.

2050, 2060. *Algebraic Geometry*  
Complex manifolds and algebraic varieties, sheaves and cohomology, vector bundles, Hodge theory, Kähler manifolds, vanishing theorems, the Kodaira embedding theorem, the Riemann-Roch theorem, and introduction to deformation theory.

2110. *Introduction to Manifolds*  
Inverse function theorem, manifolds, bundles, Lie groups, flows and vector fields, tensors and differential forms, Sard’s theorem and transversality, and further topics chosen by instructor.

2210, 2220. *Real Function Theory*  
Point set topology, Lebesgue measure and integration, Lp spaces, Hilbert space, Banach spaces, differentiability, and applications.

2250, 2260. *Complex Function Theory*  
Introduction to the theory of analytic functions of one complex variable. Content varies somewhat from year to year, but always includes the study of power series, complex line integrals, analytic continuation, conformal mapping, and an introduction to Riemann surfaces.

2370, 2380. *Partial Differential Equations*  
The theory of the classical partial differential equations; the method of characteristics and general first order theory. The Fourier transform, the theory of distributions, Sobolev spaces, and techniques of harmonic and functional analysis. More general linear and nonlinear elliptic, hyperbolic, and parabolic equations and properties of their solutions, with examples drawn from physics, differential geometry, and the applied sciences. Semester II concentrates on special topics chosen by the instructor.

2410, 2420. *Topology*  
An introductory course with emphasis on the algebraic and differential topology of manifolds. Topics include simplicial and singular homology, de Rham cohomology, and Poincaré duality.

2510, 2520. *Algebra*  
Basic properties of groups, rings, fields, and modules. Topics include: finite groups, representations of groups, rings with minimum condition, Galois theory, local rings, algebraic number theory, classical ideal theory, basic homological algebra, and elementary algebraic geometry.
2530, 2540. Number Theory
Introduction to algebraic and analytic number theory. Topics covered during the first semester include number fields, rings of integers, primes and ramification theory, completions, adeles and ideles, and zeta functions. Content of the second semester varies from year to year; possible topics include class field theory, arithmetic geometry, analytic number theory, and arithmetic K-theory. Prerequisite: MATH 2510.

2630, 2640. Probability
Introduces probability spaces, random variables, expectation values, and conditional expectations. Develops the basic tools of probability theory, such fundamental results as the weak and strong laws of large numbers, and the central limit theorem. Continues with a study of stochastic processes, such as Markov chains, branching processes, martingales, Brownian motion, and stochastic integrals. Students without a previous course in measure theory should take MATH 2210 (or APMA 2110) concurrently.

2710. Advanced Topics in Mathematics
May be repeated for credit.

2720. Advanced Topics in Mathematics
May be repeated for credit.

2970. Preliminary Exam Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

2980. Reading and Research
Independent research or course of study under the direction of a member of the faculty, which may include research for and preparation of a thesis.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Medieval Studies

Professors Bonde (History of Art and Architecture), Bryan (English), Harvey (Religious Studies), Khalek (Religious Studies), Martinez (Italian Studies), Molholt (History of Art and Architecture), Monroe (University Library), Papaioannou (Classics), Pucci (Classics), Remensnyder (History), Salow (Judaic Studies), and Vaquero (Hispanic Studies).

Undergraduate Program

For information regarding the Medieval Studies concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html or http://www.brown.edu/Departments/Medieval_Studies/.

The program hosts the Rhode Island Medieval Circle, a series of lectures on Medieval topics open to the Rhode Island community. In collaboration with the University of Connecticut and Yale University, the program sponsors an annual Graduate Student Medieval Conference, held in rotation at the participating institutions.
Courses of Instruction

Primarily for Undergraduates

0360. Medieval Perspectives
The Middle Ages, conventionally the thousand years from 500 to 1500 C.E. in Western, Central, Eastern Europe, and the Mediterranean were a period of great inventiveness and radical innovation in human society. This seminar is directed by faculty from the Program in Medieval Studies and is designed to provide insight into selected aspects of these formative centuries. Full participation in class discussion of assigned readings is expected of each student. STAFF.

For Undergraduates and Graduates

1970. Independent Study
Tutorial instruction on an approved topic in Late Antique and/or Medieval cultures, supervised by a member of staff. Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course. May be repeated once for credit.

1990. Honors Thesis
Independent research and writing on a topic of special interest to the student, under the direction of a faculty member. Required of candidates for honors. Permission should be obtained from the Director of the Program in Medieval Studies.

Modern Culture and Media

Professors R. Chow, A. Cokes, C. Dean, M. A. Doane, E. Rooney, P. Rosen, R. Scholes (Research), J. Silverman, L. Thornton; Associate Professors W. Chun, L. Joyrich; Assistant Professor M. Tribe.

Undergraduate Concentrations

For a complete description of the following standard concentration programs leading to the bachelor’s degree, please visit http://www.brown.edu/Administration/Registrar/concentration.html.

- Modern Culture and Media
- Modern Culture and Media–German
- Modern Culture and Media–Italian
- Semiotics–French (see the Independent concentration description)

Graduate Program

The department offers a Ph.D. program in Modern Culture and Media. There is no terminal Master’s program, but students who enter the doctoral program only with an undergraduate degree earn an M.A. on their way to the Ph.D.

Doctor of Philosophy

The department is concerned with the study of media of technical reproduction whose historical appearance has characterized modernity—film, video, digital media, photography, sound, and print insofar as it is connected to mass dissemination. These are
not understood in a narrow sense, for a departmental premise is the centrality of media to all modern and contemporary cultural practices.

The Ph.D. prepares students to engage in rigorous and innovative scholarship and teaching in the theory, history, and critical analysis of one or more media, in ways that encompass diverse cultural contexts and historical periods, and within methodological frameworks that include awareness of modern and contemporary textual, cultural and social theory. Plans of study are individualized, based on the student’s own particular areas of interest. Students may emphasize the scholarship of one medium or of several media and their interrelationships, but their coursework and exams will also include a component in textual, cultural, and/or social theory.

Courses: A minimum of 13 courses are required, exclusive of any taken solely in fulfillment of the foreign language requirement. For students entering the program with a B.A., coursework is normally completed in the first three years of the program—six courses are taken in the first year, four in the second year and three in the third year. The student then works on the dissertation during the fourth and fifth year. Students who enter the program with an M.A. take the same number of courses per semester, but they may apply to accelerate their program and eliminate the final year of coursework.

Plans of study are individualized, based on the student’s own particular research and teaching areas within the broader fields of Modern Culture and Media, but at least one graduate course offered by the Department of Modern Culture and Media is required in each of the following three areas:

- **Theory** (A course in theories of textuality, subjectivity, culture, the social, and/or a specific medium in relation to any of these. Normally fulfilled by MCM 2100, 2110 or 2120.)
- **Textual Analysis** (A course that addresses a single medium or genre conceived as a textual object, a mode of cultural production, or a form. Normally fulfilled by MCM 2300 or 2310.)
- **Historical/Cultural Locations** (A course that assists students in understanding how the production, circulation, and reception of media forms operate within and across specific social contexts, periods, geocultural sites, and/or communities. Normally fulfilled by MCM 2500 or 2510.)

**Foreign Language Requirement:** All candidates must demonstrate reading/research competency in one foreign language pertinent to the student’s research interests. Competency in an additional language or languages may be required if advanced research in a student’s particular areas of interest demands it. Competency in a foreign language may be demonstrated in any one of the following three ways:

a. Passing a translation exam administered by MCM faculty.
b. Earning a grade of B or better in a 1000-level; or higher course offered by a Foreign Language department, for which the professor attests that teaching and reading assignments were preponderantly in that language. (This course will count towards the 13 required for the degree only if its substantive context coheres with the student’s scholarly concerns.)
c. Passing a graduate reading course offered by a Foreign Language department.

**Qualifying Review:** After completing eight courses (six in the case of those entering the program with an M.A.), the student undergoes a qualifying review. Faculty of the department Graduate Committee review reports by instructors, the student’s progress, and a sample of work submitted by the student (normally a seminar paper). It then confers with
the student for a 90-minute discussion, which gives the student the opportunity to communicate with the committee. This review covers both the student’s work at Brown to that point as well as plans and conceptualizations for future directions. The latter includes possible preliminary examination fields. The student is then certified to continue studies. Assuming normal progress in coursework, those who entered the program with a B.A. are now awarded an M.A. in Modern Culture and Media.

**Preliminary Examination:** The Preliminary Examination is a three-hour oral exam taken after completing all other requirements. Assuming normal progress towards the degree, a student entering the program with an undergraduate degree takes it at the end of the sixth semester, and a student entering the program with an M.A. takes it at the end of the fourth semester. Before that and in consultation with the department Director of the Graduate Studies, the student will define three fields for the preliminary exam and will constitute a Prelims committee to administer the exam. The committee must be MCM or MCM-affiliated faculty.

Taken together, the fields should delimit the academic area(s) in which the student is preparing to teach, as well the scholarly context(s) for the student’s projected research. Since plans of study and specializations vary, there is room for a great deal of variety among different candidates in defining the fields. However, the configuration of the fields for all students will be as follows:

- **Field 1:** in the history and theory of a medium.
- **Field 2:** in modern cultural theory.
- **Field 3:** an elective field which is designed to provide a comparative perspective.

Before the exam, the student provides two documents that specify her or his fields and provide starting points for the exam: (1) A core bibliography of approximately 40 key scholarly books or the equivalent composed of articles and chapters, for each of the three fields. In addition, the core bibliographies of Fields 1 and 3 will include a comparable body of pertinent media texts. All of these will be chosen in consultation with the committee and the final lists must be approved by the committee chairperson. (2) A Fields Essay of 20–25 pages, also written in consultation with the committee. This essay will broadly indicate the kinds of research questions and scholarly discussion in which the student is preparing to intervene. It should articulate a broad but knowledgeable understanding of the scholarly area(s) in which the student plans to teach and do research. It will indicate key current arguments and problematics that structure scholarly debate in that area. It should explain the coherence of the conjunction of the three fields as a focus in relation to established academic fields.

**Dissertation:** Upon successful completion of the Preliminary Examination, the student constitutes a dissertation committee which normally consists of three members, at least two of whom must be MCM or MCM-related faculty. The candidate submits a dissertation proposal to this committee, which then meets with the candidate. Once the proposal is approved, the candidate proceeds to work on the dissertation.

For additional information please visit the department’s website at: [http://www.brown.edu/Departments/MCM/](http://www.brown.edu/Departments/MCM/)
Courses of Instruction

Primarily for Undergraduates

0100. Screens and Projections: Modern Media Cultures
An introduction to key forms that constitute media in modern culture: photography, film, recorded sound, print, television, video, and digital media. We will examine the materials of such media, and produce critical accounts of them as representational forms as well as aesthetic, social, and/or political practices. Our discussions will be structured by major theoretical concepts and approaches. LILE M. A. DOANE.

0150. Text/Media/Culture: Readings in Theory
An introduction to the theoretical foundations of contemporary cultural criticism. We will study those theories of language and representation, signification and textuality, narrative and image, fantasy and ideology, and modernity and postmodernity that have been crucial to understanding modern culture and media texts (including literary, photographic, film, television, and digital media texts). Readings will range from the work of such scholars as Saussure, Levi-Strauss, Marx, and Freud to Barthes, Fanon, Irigaray, and Butler. E. F. ROONEY.

0230. Digital Media
This course introduces students to the study of digital media. Moving from its popular mass forms to alternative artistic installations, from cyberpunk fiction and movies to SMS text messaging, we will study the aesthetics, politics, history and theory of digital media. Special attention will be paid to the tensions between the ways technology actually operates and the ways we perceive it, in relation to social/cultural formations (gender, sexuality, race, global flows). W. H. CHUN.

0240. Television Studies
Introduces students to the rigorous study of television, concentrating on televisual formations (texts, industry, audience) in relation to social/cultural formations (gender, generational, and family dynamics; constructions of race, class, and nation; consumerism and global economic flows). That is, this course considers both how television has been defined and how television itself defines the terms of our world. L. R. JOYRICH.

0250. Visuality and Visual Theories
Theories of visual representation in such traditional media as painting, in photography, and in emergent digital media (VR, robotics, etc.). Connects problems of representation to issues of power, information, subjectivity. These media are read as historically constituted and specific to particular cultures through complex forms of mediation. J. M. SILVERMAN.

0260. Cinematic Coding and Narrativity
Examination of the structural and ideological attributes of cinema, concentrating on the dominant narrative model developed in the American studio system and alternatives to that model. Emphasis on recent theories of cinematic representation. Students become conversant with specific elements and operations of the cinematic apparatus (e.g. camera, editing, soundtrack) and the production of discursive meanings. LILE. STAFF.

0710. Introduction to Filmmaking: Time and Form
The basic technology of film practice, including cameras, simple lighting, sound recording, and editing. Students produce a series of short, non-sync films. No previous experience or skills are required. Screenings, demonstrations and studio work. Prerequisites: two MCM core courses or equivalent. Application required. Application is available in the MCM office or from http://www.brown.edu/Departments/MCM/. Students must bring a completed application to the first class to be considered for admission. Class list will be posted 2 days...
after the first class meeting. Enrollment limited to 15. Instructor's permission required. S/NC. L. THORNTON.

0720. Intermediate Filmmaking: Cinematic Space
Introduces more sophisticated film production techniques, including sync sound and lighting technique. Explores the influence of digital technologies on cinematic practice. Studio work supplemented by screenings, demonstrations, and discussions. Group and individual projects. S/NC. L. THORNTON.

0730. Introduction to Video Production: Critical Strategies and Histories
Provides the basic principles of video technology and independent video production through a cooperative, hands-on approach utilizing small format video (Mini DV). Emphasizes video as a critical intervention in social and visual arts contexts. S/NC. A. G. COKES.

0740. Intermediate Video Production: Sound, Image, Duration
Expanded principles of independent video production utilizing small format video (Mini DV). Emphasizes video as a critical intervention in social and visual arts contexts. A major project (10-20 minutes) and a class presentation concerning your project are required. S/NC. A. G. COKES.

0750. Digital Art
What would Andy Warhol's Facebook page look like? What would John Cage have done with an iPod? This introductory production course combines history, theory, and practice to explore the intersection of art and digital technologies. Examples of student work include a 3D model of a cybercafe for Google Earth, a Dadaist video game, and an iTunes visualizer that creates customized music videos based on song lyrics. Theoretical readings include Jean Baudrillard, Walter Benjamin, Marshall McLuhan, and Raymond Williams. M. A. TRIBE.

0760. Intermediate Digital Media Production
How do technologies enabling new forms of media and communication reconfigure notions of geography, location, speed, presence, community, autonomy, public, private, and one's ability to participate in culture? This class is an exploration of how artists and other cultural producers use these new technologies and new conditions to activate networks, form communities, create access, self-publish, proliferate, draw attention to context, demand agency, redefine property, and develop spaces for exchange and play. S/NC.

0800. Freshman Seminars in Modern Culture and Media
Enrollment limited to 20 First-year students.

0800A. Agency and Representation
Agency is one of the most popular concepts across the disciplines today, but its definitions are often far from satisfactory in relation to representational forms such as literature and film. Using both fictional and theoretical texts, this course will examine some common assumptions about agency and develop a range of possible interpretations that will make the term viable in the study of artistic representation. For first year students only.

0800B. Freshman Seminar on Visuality
An examination of the key texts (from such diverse fields as philosophy, visual arts, cultural studies) which describe the historical transformation of personal and social visual space. We will explore, for example, Renaissance and Cartesian optics, the mechanization of vision in the late nineteenth century and recent hypotheses around machine-centered visuality. For first year students only.
0800C. *Marx, Nietzsche, Freud: History of Theory*

Many of the most pressing theoretical issues addressed by contemporary cultural analysis were first investigated in the works of these three ground-breaking intellectuals. This course will survey some of their major works, with attention to such concepts as ideology and the commodity; the will to power and truth in language; the unconscious and sexual difference. For first year students only.

0800E. *Race and Imagined Futures*

Why is race so important to imagining utopian or dystopian futures - to signaling world peace or Malthusian disaster? What do these imaginings tell us about contemporary anxieties over / desire for multiculturalism and globalization? This course responds to these questions by examining speculative, science and utopian fiction and films by African-, Asian- and Euro-American authors/film makers. Readings will be theoretical, as well as literary. Enrollment limited to 20 first-year students.

0900. *Undergraduate Seminars in Modern Culture and Media*

Topics vary from year to year and instructor to instructor. In each section, enrollment is limited to 20. Written permission given after the first meeting. Prerequisite: one previous MCM course (MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110 or equivalent). May be repeated for credit. Enrollment limited to 20. Written permission required.

0900A. *Cinema and Stardom: Image/Industry/Fantasy*

Focuses on the star within the "machinery" of Hollywood cinema: how stars function in the film industry, within cinematic and extra-cinematic texts, and at the level of individual fantasy and desire. Including screenings of films which exploit, foreground, or critique star images, also considers the ideological implications and cultural consequences of stardom.

0900B. *Global Cyberpunk*

Examines how cyberpunk functions both as a global phenomenon and as a way to imagine the global. Texts include American science fiction by authors such as Octavia Butler and Neal Stephenson; anime such as *Akira* and *AD Police Force*; feature films such as *Blade Runner*; as well as theoretical texts on globalization, science fiction, and animation.

0900F. *Real TV*

This course will investigate the construction of reality on U.S. television, considering not only specific reality genres (news and "magazine" programs, crisis coverage, docudrama, talk and game shows) but the discursive and representational modes that define the "reality" of commercial television as a whole. Issues include: "liveness"; social relevancy; therapeutic discourse; TV personalities; media simulation; independent television; and new technologies/realisms.

0900G. *Representing the Internet*

Investigates popular representations of the Internet (many of which precede the WWW) from cyberpunk to Supreme Court decisions, from mainstream film to Internet map sites. Considers the relationship between representation, ideology, culture, and technology. All written work for the seminar will be digital.
For Undergraduates and Graduates

1110. *The Theory of the Sign*
A survey of three theorists: Louis Althusser, Jacques Derrida, and Michel Foucault. Readings range from Althusser's *Reading Capital* to Foucault's *History of Sexuality*. Discussion focuses on these figures as they emerge from/intervene in the field of semiotics, with particular attention to the developments in each oeuvre and the differences among them. Pre-requisite - one of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260. E. F. ROONEY.

1200. *Special Topics in Modern Culture and Media*
Topics vary from year to year and instructor to instructor. In each section, enrollment is limited to 50. Written permission given after the first meeting. Prerequisite: one previous Modern Culture and Media course. May be repeated for credit.

1200D. *African Cinema*
Subsaharan African cinemas 1960-present, primary emphasis on narrative films. We will analyze cultural and aesthetic strategies, (cinematic style, narrative, and subjects). in the context of postcolonial African and international film histories. Themes include: anticolonial resistance/nationalist ideologies; third cinema/international art cinemas; oral aesthetic culture and cinematic style; political critique (e.g., gender, state politics); media globalization and resistance; the struggle for a mass audience. Enrollment limited to 50. Previous coursework in MCM, Africana Studies, or related areas highly recommended.

1200G. *Cinema and Stardom: Image/Industry/Fantasy*
Focuses on the star within the "machinery" of Hollywood cinema: how stars function in the film industry, within cinematic and extra-cinematic texts, and at the level of individual fantasy and desire. Including screenings of films which exploit, foreground, or critique star images, also considers the ideological implications and cultural consequences of stardom. Enrollment limited to 50. Prerequisite - one of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. All other seek permission from the instructor. L. R. JOYRICH.

1200K. *Hollywood as Global Cinema*
Commonly treated as a U.S. national cinema, Hollywood film has long been a global institution dominating worldwide distribution. We reread U.S. narrative filmmaking and its products in relation to its global ambitions. Topics include: internationalizing the history of U.S. cinema; rethinking theories of the classical and anticlassical text; local, national and global spectatorship; concepts of cultural imperialism and cultural globalization; etc. Enrollment limited to 50.

1200Q. *Publicity and Surveillance*
Investigates the converging technologies and practices of publicity and surveillance. Considers phenomena such as webcams, face recognition technology and networked art, as well as concepts such as enlightenment, paranoia and exhibitionism. Theoretical, historical and legal readings. Enrollment limited to 50.

1200X. *Contemporary Chinese Cinema*
Films from China and the Chinese diaspora: work by Zhang Yimou, Hou Hsiao-hsien, Stanley Kwan, Tian Zhuangzhuang, Chen Kaige, Ang Lee, Edward Yang, Tsai Ming-Liang, Stephen Chow, Johnny To and others. Writing by Chris Berry, Rey Chow, Paul Clark, Fredric Jameson, Sheldon Lu, June Yip and others. Enrollment limited to 50. Prerequisite - one of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. All other seek permission from the instructor.
1200Z. Contemporary Chinese Cinema: Classics and Controversies
Examines well-known examples of contemporary Chinese film (1980s to the present) in context of the ideological, aesthetic, and cultural politics debates around them, and explores how certain films attain the status of 'classics.' Directors to be studied include those from mainland China, Taiwan, Hong Kong, and the Chinese diaspora. Enrollment limited to 50. R. CHOW.

1201B. Ethnography, Travel, Film
A study of documentary and narrative films that thematize and reenact the West's contacts with its cultural others. Although the focus is on the three exemplary authors (Joris Ivens, Chris Marker, Jean Rouch), a wide range of cinematic practices are examined. Readings from Clifford, Trinh, Taussig, Said, Foster, Burgin, and others. Enrollment limited to 50. J. M. SILVERMAN.

1201C. Imagined Networks, Glocal Connections
This course examines emergent "imagined networks" (anti-globalization activists, youtubers, second lifers, NGOs) fostered by new media technologies and applications. Emphasis will be placed on understanding the changing relationship between the local and the global, and how "glocal" phenomena affect national and personal identities. Readings will be theoretical, historical, political and literary. Enrollment limited to 50. Recommended prerequisite - one of the following: MCM 0100, MCM 0150, MCM 0230, MCM 0240, MCM 0250, MCM 0260, MCM 1110.

1201D. Hitchcock
Beginning with the provincial successes of his British productions (1927-1939) we will trace the director's increasingly playful mastery and subversion of the dominant Hollywood studio style, and his construction of "Hitchcock" as a veritable brand-name for authorship, control and calculated disturbance. A wide range of films, from The Lodger to Marnie. Close attention to classic analyses: Bellour, Edelman, Elsaesser, Mulvey, Ranciere, Wollen, Zizek, etc. Enrollment limited to 50. Prerequisite - one of the following: MCM 0100, MCM 0150, MCM 0230, MCM 0240, MCM 0250, MCM 0260, MCM 1110.

1500. Senior Seminars in Modern Culture and Media
Preference given to seniors in any of the MCM concentrations. In each section, enrollment is limited to 20. Written permission will be given after the first meeting. Prerequisite: two Modern Culture and Media courses. May be repeated for credit.

1500C. Archaeology of Multimedia
A historical and theoretical study of "multimedia" from magic lanterns to the Internet. Examines the ways in which media have always been multiple and have always impacted on each other, as well as the ways that various media discourses constitute an "archive" of the knowable and sayable. Enrollment limited to 20.

1500D. Contemporary Film Theory
Major arguments in film theory from the late 1960s to the present, contextualized by contemporaneous intellectual tendencies and selected films. Some key issues: cinematic specificity and signification, the politics of form and style, subjectivity/spectatorship, gender/sexuality, postmodern media, digital theory and cinema. Readings from figures such as Baudry, Bordwell, Deleuze, Doane, Elsaesser, Gunning, M. Hansen, Heath, Jameson, Koch, Manovich, Metz, Mulvey, Pasolini, Rodowick, L. Williams, Willemen, Wollen, etc. Enrollment limited to 20. Prerequisite: one MCM core course. Preferences given to juniors, seniors, and
graduate students. All others seeking permission, must attend the first class. P. Rosen.

1500F. Deleuze, Foucault, Guattari
A close reading of some of the major works, focusing on the period 1968-1972: Difference and Repetition, The Logic of Sense, Spinoza, Anti-Oedipus, The Order of Things, The Birth of the Clinic. We will attempt to define institutional and group practices emerging from the collapse of the Left after 1968, with an eye to the elaboration of a micropolitics for groups and subjects. Enrollment limited to 20.

1500H. Ethnography, Tourism, Cinema
A study of documentary and narrative films that thematize and reenact the West's contacts with its cultural others. Although the focus is on three exemplary authors (Joris Ivens, Chris Marker, Jean Rouch), a wide range of cinematic practices are examined. Readings from Clifford, Trinh, Taussig, Said, Foster, Burgin, and others. Enrollment limited to 20.

1500J. Feminist Theory and the Problem of the Subject
Readings in contemporary feminist theory and 20th-century theories of subjectivity. Topics include interpellation, modes of address, apostrophe, positionality; texts include Butler, Haraway, Spillers, Spivak. Previous work in feminist theory strongly recommended. Enrollment limited to 20.

1500K. Film and the Avant-Garde
An examination of film's historical relations with various avant-garde movements from surrealism, French Impressionism, German Expressionism, and Dadaism to the theoretically informed independent film of the 1970s and beyond. However, the goal of the course is not a historical survey but the investigation of various conceptualizations of "avant-gardism" and its relation to modernity, mass-culture, and technology. Enrollment limited to 20.

1500L. Film Theory
Major positions in the history of film theory, contextualized by both contemporaneous filmmaking and intellectual approaches (phenomenology, Marxism, structuralism/poststructuralism, feminism, etc.) Key issues include: cinematic specificity, cinematic representation and the real, the politics of form and style, cinema and language, subjectivity and spectatorship, film and postmodern "media." Readings in Munsterberg, Arnhem, Kracauer, Bazin, Balazs, Metz, Heath, Mulvey, Williams. Enrollment limited to 20.

1500M. Films of Robert Bresson
A close examination of the work and its material specificity. Follow Bresson's rejection of classical narrative and performance in favor of a "system" which maintains the importance of the corporeal and the simple. Readings from his sources (especially Dostoevsky and Tolstoy) and examination of cinematic work which complements his (Ozu, Dreyer, Rossellini) and which has been produced in relation to his (Godard, Hartley, Sakurov, Schrader). Enrollment limited to 20.

1500N. Films/Videos by Jean-Luc Godard
A close examination of the work, starting with representative films from the nouvelle vague, through the Dziga Vertov period, videos and films from Grenoble and Nyon, through to the Histoires du cinema. Treats, among others, the question of Godard's relation to Hollywood (and world cinema), militant filmmaking, collective practices, and artistic survival. Enrollment limited to 20.
1500O. *From Classical Film Theory to Cinema Semiotics*
Readings from earliest film theory through the emergence of cinema semiotics, with awareness of contemporaneous filmmaking and underlying intellectual tendencies. Some key issues: cinematic specificity and relations to other media; the politics of cinema; filmic representation and the real; cinema, modernity, and modernism; mass culture debates; cinema, language and signification. Readings drawn from Adorno, Arnheim, Bazin, Benjamin, Bergson, Debord, Eco, Eisenstein, Epstein, Kracauer, Lukács, Merleau-Ponty, Metz, Munsterburg, Pasolini, Sartre, Wollen, etc. Enrollment limited to 20. Previous work in MCM or related topics required. All others seek permission from the instructor after the first class meeting.

1500Q. *Godard/Marker: Modes of Production*
An examination of a range of films/videos that annotate a broad problematic of production: who makes films? Is there an audience for videos? Can there be such a thing as a progressive practice? Godard/Marker often construct films and tapes in relation to a fictional project's being made, and their names define two complementary paths through a thicket of questions: *Contempt, Letter From Siberia, Passion, The Last Bolshevik, Histoires Du Cinema*, and others. Enrollment limited to 20.

1500S. *In the Public's Eye: Publicity and Surveillance*
Investigates the converging technologies and practices of publicity and surveillance. Considers phenomena from the paparazzi to digital surveillance, from the commodification of privacy to reality television, in order to analyze this convergence's impact on theories of public sphere. Theoretical and historical readings. Class hours include viewing time. Enrollment limited to 20. W. H. CHUN.

1500T. *Information, Discourse, Networks*
Examines the historical emergence of information in relation to language and networks more broadly defined. Some key issues: the rise of new media, cyborgs and other posthuman beings, the intersections between post-structuralism and cybernetics and between computer and human languages, and networked multitudes. Readings from Friedrich Kittler, Jacques Derrida, Norbert Wiener, Williams Burroughs, Félix Guattari and Gilles Deleuze. Prerequisite - two of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. Preferences given to juniors and seniors in Modern Culture and Media, Art-Semiotics, Modern Culture and Media-German, Modern Culture and Media-Italian, Semiotics-French, Science Studies, Anthropology, Comparative Literature, English, Gender Studies, and Philosophy. All other seek permission from the instructor.

1500V. *Melancholy: A Genealogy of Affect*
We will trace its movement from medical pathology to a classification for artistic disturbance, thence to its twentieth-century incarnations on the border-line between a category of objective thought and a subjective call to self-annihilation: libidinal identification, the death drive, political struggle. Texts by Bresson, Judith Butler, Bruno Dumont, Fassbinder, Freud, Hou Hsiao-Hsien, Kristeva, Gerhard Richter, Gillian Rose, Shakespeare, Wong Kar-wai and others. Enrollment limited to 20.

1500W. *Foucault*
Focuses on the thematics and controversies of Foucault's work, both through examination of his texts (e.g. History of Sexuality, Discipline and Punish, Archeology of Knowledge, and others) and through discussions of his interlocutors writing on subjects such as sexual politics, knowledge production, history, feminism, literature, race and bipower. Enrollment limited to 20.
1500X. Middlemarch and the Sopranos
The world of The Sopranos has been called "a postmodern Middlemarch, whose inhabitants' moral and spiritual development (or devolution) unfolds within a parochial social milieu." This course offers a comparative analysis of Eliot's 1871-72 novel and HBO's (continuing) television drama, juxtaposing these two very popular, very powerful serializations in formal, thematic, ideological and narrative terms. Enrollment limited to 20. E. F. ROONEY.

1501B. Nation and Identity: The Concept of National Cinema
Comparative study of constructions of nationhood in films and written texts about cinema. Interrogation of the discursive, political and epistemological power achieved by different version of the concept "national cinema" and the kinds of collective identities they imagine, from early cinema to globalized media. Readings by theorists, historians and filmmakers. Screenings from pertinent contexts (e.g. Weimar Germany, U.S. classical cinema, Japanese 1930s, third cinema, New German Cinema, New Chinese cinema, multinational corporate cinema, etc.). Enrollment limited to 20.

1501C. National Cultures/Global Media Spheres
Contemporary cultural practices and media processes are often described as being implicated in "globalization," but this is a linkage that may well predate the present. This course examines theoretical, historical, and critical texts that conceive of media culture through notions of globalization, with attention to the status of nation and cultural identity in a transnational context. Enrollment limited to 20.

1501G. Postcolonial Narratives: Fiction, Memoir, Theory
What does it mean to speak of the postcolonial? Does the word refer to a new historical periodization in the study of world literatures, a recent trend in critical theory, or a type of minority discourse? How is the postcolonial narrativized in different forms of writings? Enrollment limited to 20.

1501I. Reading Marx
What is it to read Marx now? We will begin with a group of key texts written by Marx drawn from different points in his development, including the first volume of Capital. We will study influential later reinterpretations and commentaries on Marx that argue for his contemporary importance (e.g., Althusser, Balibar, Benjamin, J. Butler, Derrida, Haraway, Hardt, Negri, Zizek, etc. Enrollment limited to 20.

1501K. Seeing Queerly: Queer Theory, Film, Video
While cinema has typically circumscribed vision along (hetero) sexually normative lines, can film also empower viewers to see "queerly"? How do we, as sexual subjects (gay and straight), "look" in the cinema, in both senses of the word? This course addresses questions of sexuality and representation as it considers both "mainstream" and "alternative" productions. Enrollment limited to 20. Prerequisite - two of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. All other seek permission from the instructor. L. R. JOYRICH.

1501N. Television Time and Space
Explores television's temporal and spatial construction, considering how television demarcates time (regulating it through flow and segmentation, articulating work and leisure times, marking familial and national events, encouraging rhythms of reception) and space (mapping public and private space, defining a "global media culture" through local viewings, representing and enacting travel and exchange, creating imaginary geographies and communities). Enrollment limited to 20.
1501O. **Television, Gender, and Sexuality**  
This course investigates how television produces and reproduces constructions of gender and sexuality through its institutional form (as it maps relations between the public and the private, the domestic and the social, the inside and the outside), narrative patterns (as it circulates family romances, links gender and genre, and mediates sexual and social tensions), and spectatorial relations (as it variously addresses viewers as sexed and gendered subjects, consumers and commodities, familial and defamiliarized viewers). Enrollment limited to 20. Prerequisite - one of the following: MCM 0100, MCM 0150, MCM 0230, MCM 0240, MCM 0250, MCM 0260, MCM 1110. Preferences given to juniors, seniors, and graduate students. All others seek permission from the instructor.

1501Q. **The Close-Up: Theory and Practice**  
An examination of the use of the close-up in film and theory, from the ‘primitive’ cinema to IMAX and from Münsterberg to Aumont and Deleuze. Special attention to the way in which the close-up has been associated insistently with the face and its heightened cultural significance, with the advent of a ‘cinematic language,’ and with questions of cinematic space and scale. Enrollment limited to 20.  M. A DOANE.

1501W. **The Rhetoric of New Media**  
An examination of contemporary theories and practices of "new media," but in particular cyberspace; investigates the ways in which information technologies are challenging our inherited ideas about knowledge and ethics. All written work for the seminar will be digital. Application required. Occasional screenings to be announced during semester. Enrollment limited to 20.

1501Z. **Vision and Narration**  
Examines the multi-faceted relations between two ubiquitous types of activities, seeing and storytelling, in modern and contemporary cultures. Using a variety of texts, explores how visuality is always coded and produced by certain narratives, and how narration itself, as a literary, cultural, and political event, is inevitably implicated in theories of seeing. Enrollment limited to 20.

1502A. **Visual Culture/Theories of Vision**  
Examines the recent focus on vision and the idea of a "visual culture" in contemporary theory and cultural studies. Central issues include the relations posited between vision and modernity, subjectivity, aesthetic practice, the practice of theory, mass culture and commodification. Readings in Jay, Crary, Solomon-Godeau, Fried, Merleau-Ponty, Lacan, and others. Enrollment limited to 20.

1502B. **Publicity and Surveillance**  
Investigates the converging technologies and practices of publicity and surveillance. Considers phenomena such as webcams, face recognition technology and networked art, as well as concepts such as enlightenment, paranoia, and exhibitionism. Theoretical, historical and legal reading. Enrollment limited to 20.

1502E. **Theories of the Photographic Image**  
Examines the history of attempts to assimilate the photographic image to a theory of representation. Will analyze theories of photography, chronophotography, film with respect to issues of time, subjectivity, historicity, the archive. Will also address the rise of the digital image and its potential threat to photography. Readings in Kracauer, Benjamin, Bourdieu, Barthes, Batchen, Marey, Bazin, Aumont and others. Enrollment limited to 20.
1502F. Robert Bresson and Recent French Cinema
Bresson's work successfully undermines mechanisms of dominant cinema whilst avoiding clichés of "art cinema" like the New Wave. Once thought of as hermetic and self-contained, it has proved decisive in its influence on young filmmakers of the past 20 years. This course will carefully examine all available work by Bresson, with films by Dumont, Zonca, the Dardennes, Kerrigan and others. Enrollment limited to 20.

1502H. Information, Discourse, Networks
Examines the historical emergence of "media" and "media studies" as a methodology of cultural discourse through the theoretical concepts of "information," "discourse" and "networks." Some key issues: what is media and new media? What is the difference between information and knowledge? How does the study of new media inform our understanding of and engagement with older media objects and theory? Readings from Friedrich Kittler, N. Katherine Hayles, Jacques Derrida, Lev Manovich. Enrollment limited to 20.

1502I. Foucault and Comparative Thinking
Focuses on the thematics and controversies of Foucault's work, both through examination of his texts (e.g. History of Sexuality, Discipline and Punish, The Order of Things, and others) and through discussions of his interlocutors writing on subjects such as sexual politics, knowledge production, history, feminism, literature, race and bipower. Prerequisites - two of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. Preferences given to juniors and seniors in Modern Culture and Media, Art-Semiotics, Modern Culture and Media-German, Modern Culture and Media-Italian, Semiotics-French, Comparative Literature, English, History, and Philosophy. All others seek permission from the instructor.

1502J. Race as Archive
Examination of the importance of race to the logic and practice of biological, technological and cultural archives. Engaging the similarities and differences between the categorization of race in these fields, the course will focus on race as a justification for archives more broadly, and race as an archival trace "evidence" of a biological or cultural history. Readings will be theoretical, historical and literary. Preferences given to students in Modern Culture and Media, Art-Semiotics, Modern Culture and Media-German, Modern Culture and Media-Italian, Semiotics-French, Ethnic Studies, and Science & Technology Studies. All others seek permission from the instructor.

1502K. Real TV
How does television bring "real" events to us? How do we know what's "real"? What kinds of "realities" exist on television, and how do they operate (in relationship to one another, to TV fantasy, and to our everyday lives)? This course will consider not only some specific "reality genres" (news, catastrophe coverage, "surveillance programming," documentary and docudrama, talk and game shows, reality series and "docu-soaps") but the representational modes that define the reality of commercial television as a whole. Issues to be addressed include: TV "liveness," crisis and scandal, therapeutic discourses, "surveillance society," media simulation, realism and anti-realism, civic and commercial discourses, and television's construction of history and knowledge. Preference given to graduate students, seniors, and juniors in Modern Culture & Media and Art-Semiotics. Prerequisites - two of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. Interested students who cannot pre-register should come to the first day of class for an application for admission by instructor permission.
1502L. Warhol
Concentrating on a full description and analysis of the films, from BLOW JOB to LONESOME COWBOYS. But also: the onset and consolidation of pop art; the elaboration of queer aesthetics; the hyper-realization of commodification (art world and beyond); Velvet Underground and Nico; the rise and demise of "the '60s"; Edie, Ultra Violet, Viva, Ondine, Taylor Mead; duration, boredom, immobility, heroin, sudden death. Prerequisites - two of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. Enrollment limited to 20.

1502N. Derrida and Telecommunications
Derrida famously proclaimed that writing preceded speech; rendering all communications a form of writing; but he also argued that the history of psychoanalysis would have been different if Freud had used e- instead of snail-mail. Tracing Derrida's thought re. telecommunications from Grammatology to Writing Machines, as well as engaging his interlocutors (Samuel Weber, Avital Ronell, etc.), this course examines the importance of medium-specificity to post-structuralism. Prerequisite - two of the following: MCM 0100, 0150, 0230, 0240, 0250, 0260, 1110. Preferences given to juniors and seniors in Modern Culture and Media, Art-Semiotics, Modern Culture and Media-German, Modern Culture and Media-Italian, Semiotics-French, Science Studies, Anthropology, Comparative Literature, English, Gender Studies, and Philosophy. All others seek permission from the instructor.

1502P. Nation and Identity in Cinema
Comparative study of constructions of nationhood in films and written texts about cinema. Interrogation of the discursive, political and epistemological power achieved by different version of the concept "national cinema" and the kinds of collective identities they imagine. Coverage includes classic conceptions and examples of national cinemas, and recent conceptions of nation and world in an era of globalized media. Readings by theorists, historians and filmmakers. Screenings from pertinent contexts. Enrollment limited to 20. Previous work in MCM or related topics required. All others seek permission from the instructor after the first class meeting.

1502T. Film Noir: Femmes Fatales, Urban Space, and Paranoia
An examination of film noir, concentrating on the classic films of the 1940s and 1950s, but also investigating film noir's relation to German Expressionism as well as remakes and reincarnations of the genre such as Blade Runner. We will discuss various methodologies: psychoanalysis, ideological analysis, close textual analysis, the historiography of noir. Films by Lewis, Tournier, Wilder, Hawks, Lang, Pabst, Welles, Preminger, Hitchcock, Ray. Readings in Copjec, Zizek, Naremore, Dimendberg, Vernet, Jameson. Enrollment limited to 20. Primarily for MCM senior concentrators and MCM graduate students; other qualified students must obtain permission from the instructor.

1502U. Media and Memory: Representing the Holocaust
The Holocaust has been described as unimaginable, at the limits of representation. Yet there have been numerous attempts to imagine and represent it, across media (film, television, graphic novels), genres (documentary, melodrama, comedy, fantasy), and modalities (through history and memory, "high" and "low" culture, fiction and nonfiction, reporting and marketing). Considering such attempts to represent the unrepresentable and "mediate" the immediacy of trauma, this course will explore media texts and theoretical/philosophical reflections on the Holocaust. Enrollment limited to 20. Prerequisite: one of the following: MCM 0100, MCM 0150, MCM
0230, MCM 0240, MCM 0250, MCM 0260, MCM 1110. Preferences given to juniors, seniors, and graduate students. All others seek permission from the instructor.

1502V. Theories of the Body and the Limits of Constructionism
Scholars currently argue that cultural constructionism went too far, that theories of subjectivity that dominated the academy for over two decades neglected the materiality of the body. We will examine these criticisms as well as what it means to theorize the body. Readings include Merleau-Ponty (phenomenology), Freud and Dolto (psychoanalysis), Damasio (neurology), Fausto-Sterling (biology), Butler, Grosz, Kirby, Moore, Wilson, etc. Enrollment limited to 20. Prerequisite: one related MCM course.

1502W. Late Godard
Using HISTOIRE(S) DU CINEMA as a fulcrum we will examine a range of film and video by Jean-Luc Godard made between 1989 and the present. Emphasis on work, such as JLG/JLG and L'ELOGE DE L'AMOUR, which undertake the construction of a self-identified relation between Godard and the cinematic machine: as editor, actor, critic, and witness. Attention will be paid to his work with Anne-Marie Mieville. Writing by Bellour, Daney, MacCabe, Ranciere and others. Enrollment limited to 20. Prerequisite: one of the following: MCM 0100, MCM 0150, MCM 0230, MCM 0240, MCM 0250, MCM 0260, MCM 1110. Limited to Juniors, Seniors and Graduate students. All others seek permission from the instructor.

1700. Seminars in Production
Topics vary from year to year and instructor to instructor. In each section, enrollment is limited to 20. Written permission given after the first meeting. May be repeated for credit.

1700A. Approaches to Digital Cinema
An advanced seminar for students of film and video production. Examines the impact of digital technologies on the forms and practices of time-based media. A production seminar in which students undertake a semester-long project. Requires technical competence and completion of an intermediate level production class. Projects may include digital films, video, installations, and other media-based works. Application required. Enrollment limited to 20.

1700B. Approaches to Narrative
A production seminar for advanced students in film and/or video production. Students complete a substantial media project in the course of the semester. Readings on theories of narrative provide a basis for class discussions. Students are expected to be competent technically and must have completed an intermediate level production class. Application required. Application is available in the MCM office or from http://www.brown.edu/Departments/MCM/. Students must bring a completed application to the first class to be considered for admission. Class list will be posted 2 days after the first class meeting. Enrollment limited to 20.

1700D. Documentary Production Reframed: Concepts, Methods and Questions
An advanced seminar for students of video and/or film production. Focuses on the critical discussion and production of documentary. A major project (10-20 minutes) and in-class presentations of work-in-progress required. Readings on the theory and practice of the form and selective screenings augment the presentation of student work. Prerequisite: one of the following: MCM 0720 or MCM 0740. Application required. Application is available in the MCM office or from http://www.brown.edu/Departments/MCM/. Students must bring a completed
application to the first class to be considered for admission. Class list will be posted 2 days after the first class meeting. Enrollment limited to 20. S/NC. A. G. COKES.

1700J. *Tv/Tv: Commercial and Alternative Television*
Given the centrality of commercial television in our culture, what possibilities exist for independent television viewing and/or independent television production? How might we re-write TV, either by stimulating alternative readings and new interpretive practices or by creating alternative texts and new modes of transmission? Combining theory and practice (television studies and video production), this course will encourage students to critique commercial television through both media analysis and their own video work. Enrollment limited to 20. Preference given to advanced students (graduate students, seniors, juniors) in Modern Culture & Media, Art-Semiotics, MCM German, MCM Italian, Semiotics French and Visual Arts. Prerequisites: any two previous MCM courses. Interested students who cannot pre-register should come to the first day of class to fill out an application for admission by instructor permission.

1700M. *Techniques of Surveillance*
Surveillance has been an object of cultural fascination since the mid-twentieth century. At first, it was seen as a menacing specter of government or corporate power, but in recent years surveillance has begun to appear increasingly harmless, friendly, even desirable. Surveillance is now represented not only as a technology of military and police control but also as a form of entertainment (reality TV) and as a way of making life more convenient (dashboard GPS devices). This shift has paralleled a dramatic rise in the sophistication and pervasiveness of surveillance through such technologies as Web cams, biometric identification systems, geographic information systems, and data mining. This production seminar investigates surveillance as subject matter and as means of production in various cultural forms, including literature, cinema, reality television, social software, and media art. Students give in-class presentations and produce independent and collaborative art projects. Readings include Phil Agre, Mark Andrejevic, Gilles Deleuze, Michel Foucault, Laura Mulvey, and George Orwell. Screenings include the television series Big Brother and the films Rear Window, The Conversation, and Enemy of the State. Prerequisite: one MCM course. Enrollment limited to 20. M. A. TRIBE.

1700N. *Open Source Culture: Art, Technology, Intellectual Property*
Where do we draw the line between sampling and stealing? This course explores the tension between artistic appropriation and intellectual property law, considering open source software as a model for cultural production. We will trace a history of open source culture from Cubist Collage and Marcel Duchamp's Readymades through Pop art and found footage film to Hip Hop and video mashups. Students give presentations and produce media art projects. Readings include Rosalind Krauss, Nicholas Bourriaud, and Yochai Benkler. Enrollment limited to 20. M. A. TRIBE.

1700P. *Radical Media*
Walter Benjamin wrote that in the age of mechanical reproduction art ceases to be based on ritual and "begins to be based on another practice--politics." What is the relation between art and politics in an age of digital distribution? This production seminar examines historical examples of radical media art from Dada to Hacktivism, developing a critique of these practices based on readings including Hakim Bey, Bertolt Brecht, and Critical Art Ensemble. Students respond to this material by producing media art projects. Enrollment limited to 20.
1700Q. Approaches to Media Form
A production seminar for advanced students, organized around the completion of a substantial film or video project. Screenings and discussions will emphasize alternative approaches to media practice. Students will conduct a series of presentations on their own work as it progresses. Intermediate level production class required. Decisions will be posted on the MCM office door two days after first class meeting. Enrollment limited to 20. Instructors permission required. S/NC. L. THORNTON.

1700R. Curatorial Practices
It is sometimes said in contemporary art circles that curators are the new artists. Curating involves a wide range of activities, including research, selection, critical writing, and presentation. This production seminar considers curatorial practice as a form of authorship. Particular attention is paid to questions of audience and institutional context. Readings include Mieke Bal, Douglas Crimp, Okwui Enwezor, and Hans Ulrich Obrist. Students give presentations on recent exhibitions and curate their own shows. Enrollment limited to 20.

1970. Directed Research: Modern Culture and Media

1990. Honors Thesis/Project in Modern Culture and Media
Primarily for Graduates

2100. Studies in Cultural and Social Theory

2100A. Contemporary Feminist Theory and the Problem of the Subject
Recent feminist theory represents the persistence of identity politics and the problem of the subject in various forms: through the “intersectionality” of race, class and gender; in the idioms of psychoanalysis; in terms of the “queer” subject. We will examine these often conflicting theories and the subjects of feminism they invoke with particular attention to the modes of address. E. F. ROONEY.

2100B. Criticism and Culture in Marxist Theory
Major texts in 20th century Western Marxist cultural and literary theory, from Lukâcs to the present. Focus on problems in the conception and reading of culture and cultural texts. Where appropriate, consideration of interaction with other major theoretical frameworks (e.g., aesthetics, phenomenology, semiotics, psychoanalysis, feminism, media studies, postcolonial criticism, globalization theory, etc.) P. ROSEN.

2100C. Michel Foucault, Historians, Historiography
This course will examine the relationship between Michel Foucault's critical history (his concept of "critique") and mainstream historiography. It aims to understand the ways in which historians have adapted his work as well as the impediments to doing so. We will thus explore the epistemological differences between standard historiography and its evidentiary standards and those represented by Foucault's own philosophically and theoretically inflected work. We will also look at other historical works that challenge mainstream conventions.

2100D. Freud and Deleuze: The Schreber Material
An examination of the competing claims of psychoanalysis and schizanalysis on the writing of Daniel-Paul Schreber. Central texts will be Schreber’s “Memoirs of My Nervous Illness,” Freud’s “From the History of An Infantile Neurosis,” Lacan’s “Seminar III (“On the Psychoses”),” and Deleuze/Guattari’s “Anti-Oedipus.” Work
by Mannoni, Artaud, Laplanche, Zizek and others. One long paper and class reports. J. M. SILVERMAN.

2100E. Mimeticism/Cross-Cultural Representation
Though much criticized and discredited especially since poststructuralism, mimeticism as a theoretical problem has lost none of its critical interest. This course revisits aspects of well-known debates on the mimetic, examines ideologically related issues, and explores mimeticism's relevance in cross-cultural representation as well as in literary studies. Preference given to graduate students in Modern Culture and Media, Comparative Literature, English, and other disciplines to which mimeticism is of relevance. All others seek permission from the instructor.

2100F. Althusser
Concentrating on the relation between theory and politics, with emphasis on Althusser's foundational anti-humanism, his evolving anti-Stalinism and his complex relationship with Lacan and psychoanalysis. Enrollment limited to 20. Primarily for MCM graduate students; other qualified graduate students and MCM seniors must obtain permission from the instructor.

2100G. Freud and Lacan
Readings of major texts by Freud and Lacan will stress the relations between language, subjectivity and sexuality and the feminist use and/or critique of psychoanalytic concepts. We will also look at texts by other theorists (e.g. Melanie Klein, Heinz Kohut) and investigate the clinical implications of various approaches. Familiarity with semiotic and poststructuralist theory required. Enrollment limited to 20. Primarily for MCM graduate students; other qualified graduate students and MCM seniors must obtain permission from the instructor.

2110. Studies in Textual and Critical Theory
2120. Studies in Media Theory
2120A. Media Archaeology
Provides an intellectual history of "Media Archaeology," focusing on contributions by the 'SophienstraBe' departments of Humboldt University in Berlin and on the importance of Marshall McLuhan and Michel Foucault, amongst others, to its development. Readings by Friedrich Kittler, Wolfgang Erst, Cornelia Vismann. W. H. CHUN.

2120B. New Media Theory
An interdisciplinary investigation of "New Media Theory," bringing together historically significant texts from the fields of media, film, literary, music, visual, HCI and cultural studies, with more recent texts in new media studies. As well as exposing students to the canon (from hypertext theory to software studies, HCI to media archaeology), the course will also address the question: what is at stake in the creation of this canon and this discipline? Preferences given to Seniors and Graduate Students in Modern Culture and Media, Art-Semiotics, Modern Culture and Media-German, Modern Culture and Media-Italian, Semiotics-French, English, Comparative Literature, German, Literary Arts, Music, and Science and Technology Studies. All others seek permission from the instructor. M. A. DOANE.

2120C. Cinema, State Violence and the Global
Theoretical and political conceptions of state and global violence posed against the theory and history of cinema, as representational apparatus and as instruction. Special attention to the establishment of film as global medium around World War I; current
issues around the global, state, and biopower; "postmodern media culture;" etc. Readings from sociopolitical theorists (e.g. Weber, Schmitt, Arendt, Foucault, Agamben, Hardt and Negri, etc.) and media scholars/theorists (e.g. Virilio, Prince, L. Williams, Miller, etc.) Enrollment limited to 20. Permission required for undergraduates only.

2300. Studies in Styles, Movements, and Genres

2300A. Real TV
This course will investigate the construction of reality on U.S. television, considering not only specific reality genres (news and ‘magazine’ programs, crisis coverage, docudrama, talk and game shows) but the discursive and representational modes that define the ‘reality’ of commercial television as a whole. Issues include: ‘liveness’; social relevance; therapeutic discourse; TV personalities; media simulation; independent television; and new technologies/realisms. L. R. JOYRICH.

2300B. Television, Gender and Sexuality
This course investigates how television produces and reproduces constructions of gender and sexuality through its institutional form (as it maps relations between the public and the private, the domestic and the social, the inside and the outside), narrative patterns (as it circulates family romances, links gender and genre, and mediates sexual and social tensions), and spectatorial relations (as it variously addresses viewers as sexed and gendered subjects, consumers and commodities, familial and defamiliarized viewers). Enrollment limited to 20. Preference given to graduate students, and then to seniors and juniors in Modern Culture & Media, Art-Semiotics, MCM-German, MCM-Italian, Semiotics French and Gender and Sexuality Studies. Instructors permission required for all undergraduate students. Interested students who cannot pre-register should come to the first day of class to fill out an application for admission. L. R. JOYRICH.

2310. Studies in Textual Formations

2310C. Einstein and Political Modernism
Eisenstein's theories and films are a formative moment in cinema and media history, bringing together the ambitions of politicized film and modernist aesthetics. From the first, they were invoked by a range of radical theorists and filmmakers all the way from Brecht and Benjamin to Metz and Deleuze, as well as a variety of filmmaking practices such as militant documentary, third cinema and Godard. In this seminar, we will intensively study Eisenstein's theories, filmic practices and shifting historical contexts, from the heady days of the politically and aesthetically avant-garde 1920s, through the transformations of his theories in the 1930s and 1940s (many only available posthumously) and of his later film projects (several unfinished). We will also trace out some filiations and rereadings of Eisenstein within the history of politically conversant modernist film practices and theories. Permission required for undergraduates only; undergraduates seeking permission must attend the first class session.

2310D. The Idea of a Medium
What is a "medium" (a term we often seem to take for granted)? An examination of issues of medium specificity, intermediality, convergence, formalism and the idea of a "post-medium era," in relation to the media of print, photography, film, television, and digital media. We will also investigate the role of the museum and alternative screening or exhibition spaces as well as "virtual space" in delineating reception of the
media. Enrollment limited to 20. Primarily for MCM graduate students; other qualified graduate students and MCM seniors must obtain permission after the first class.

2310E. _TV Space and Time_
Explores television's temporal and spatial construction, considering how television demarcates time (regulating it through flow and segmentation, articulating work and leisure times, marking familial and national events, encouraging rhythms of reception) and space (mapping public and private space, defining a "global media culture" through local viewings, representing and enacting travel and exchange, creating imaginary geographies and communities). Enrollment limited to 20. Preferences given to graduate students. All others seek permission from the instructor.

2310F. _The Problem of Mimesis in Modern Literary and Cultural Theory_
Though much criticized and discredited since poststructuralism, mimesis as a theoretical problem has lost none of its critical interest. This course revisits aspects of classical debates on the mimetic, examines key anti-mimetic writings in modernism, and explores mimesis' relevance to cross-cultural representational politics. Preference given to graduate students in Modern Culture and Media, Comparative Literature, English, and Performance Studies. Instructor's permission required.

2310G. _Cultural Studies and the Problem of Form_
This course examines the emergence and contemporary practice of "cultural studies" with a focus on concepts of form. We will consider cultural studies critiques of disciplines, canons, and the aesthetic; the politics of form; theories of reading and spectatorship; "popular" and "mass" forms; and competing definitions of culture as form arising in fields from visual and media studies to postcoloniality and queer theory. Readings from Williams, Hall, Mulvey, Althusser, Spivak, Deleuze, Hartman, Agamben, Sedgwick, Galloway. Permission required for undergraduates only. All students seeking permission must attend first class.

2500. _Studies in the History of Media_

2500A. _Film and Modernity_
An examination of films and film movements from 1895 through the 1930s in relation to the rise of modernity, modernization, and modernism. We will analyze the films through the lenses of theories of technology, temporality, the avant-garde, and the emergence of mass culture. Readings in Gunning, Bergson, Simmel, Kracauer, Benjamin, Jameson, Hansen, and others. M. A. DOANE.

2500B. _Mourning and Melancholy: Readings in Psychoanalysis and Politics_
We will examine a range of films, poetry, painting and theoretical texts in order to describe a range of affective conditions which function as responses to loss and trauma, both public and private. Melancholy will be read both as a cause for and hindrance to political action. Texts by Freud, Benjamin, Arendt, Kristeva, Derrida, Butler and others; films by Godard, Kotai, Wajda, Tarkovsky, Sokurov, Sirk, Wyler, Bilge Ceylan and others. Permission required for undergraduates only.

2500C. _Media Archaeology_
Provides an intellectual history of "Media Archaeology," focusing on contributions by the "Sophienstraße" departments of Humboldt University in Berlin and on the importance of Marshall McLuhan and Michel Foucault, amongst others, to its development. Readings in Friedrich Kittler, Wolfgang Erst, Cornelia Vismann. Permission required for undergraduates only.
2510. *Studies in Nationality and Transnationality*

2510A. *Art Cinema as Transnational Textual Strategy*
In the 1960s, Antonioni, Bergman, Buñuel, Fassbinder, Fellini, Godard, Resnais, etc. achieved *international, global*, prominence by bending mainstream narrative cinema conventions in the name of original *national* and artistic subjectivities. But such ‘art cinema’ has pervaded film history, from the 1920s (e.g. German Expressionism) to the present (e.g. New Iranian Cinema). Investigations of art cinema’s textual strategies, conceptual underpinnings, and historical functions. P. R. ROSEN.

2510B. *Cinema, State and Global Violence*
Theoretical and political conceptions of state and global violence posed against the history of cinema, as representational apparatus and as institution. Special attention to the establishment of film as a global medium through World War I, and current work around ‘globalization,’ ‘postmodern media culture,’ etc. Readings from sociopolitical theorists (e.g. Weber, Arendt, Angabem, Hardt and Negri, Foucault) and cinema/media scholars (e.g. Virilio, Prince, L. Williams, Miller). P. R. ROSEN.

2800. *Special Topics in Modern Culture and Media*

2980. *Independent Reading and Research in Modern Culture and Media*
Individual reading and research for doctoral candidates. Not open to undergraduates.

2990. *Thesis Preparation*
No course credit.

**Music**

Professors Baker, Bergeron, Josephson, Shapiro, Steinberg, Subotnik (Emerita), Titon; Associate Professors Gooley, Perlman, Rovan, Winkler; Assistant Professor Miller Senior Lecturers Jodry, McGarrell, Phillips; Adjunct Lecturer Cole; Lecturer Steinbach; Teaching Associate Obeng.

The courses of study in music permit areas of specialization in theory and composition, musicology, ethnomusicology, and computer music and multimedia. Students are encouraged to become involved in all areas of the music curriculum including performance. Each student develops a program of study in consultation with a faculty advisor.

**Undergraduate Program**
For a complete description of our concentration program, please see our website: [www.brown.edu/music](http://www.brown.edu/music) or [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

**Graduate Programs**
For detailed information about our Master’s and Ph.D. programs, please see our website: [http://www.brown.edu/Departments/Music/](http://www.brown.edu/Departments/Music/).
Courses of Instruction

Primarily for Undergraduates

0010. Introduction to Western Music
A study a thousand years of music of Europe and America through CDs, DVDs, and YouTube. We'll explore how individuals, institutions, and societies create music, use it, experience it, pay for it, and control it. We'll discuss music and time, music and politics, music and identity. Still, the heart of the course is listening to great music, and learning how it works. D. JOSEPHSON.

0020. Popular Music in Society
Critical survey of a variety of contemporary American popular music styles (including rock'n'roll, folk revival, heavy metal, progressive rock, reggae, punk, rap, world beat) and their sociocultural contexts. Aural analysis of musical examples and critical reading of media texts, with study of the music's relationship to commerce, racial and ethnic identity, subculture, gender, and politics.

0021. First Year Seminars
A seminar designed for students interested in music who are in their first year at Brown. No special musical background is required. All students welcome. In order to preserve an intimate environment for dialogue, and to promote active participation of all students, enrollment will be limited to 20.

0021A. The Changing Broadway Musical
Can the history of the musical on (or near) Broadway provide useful insight into changing American values? Starting with Show Boat (1927), this course offers a multi-faceted analysis of one significant musical from each subsequent decade. Students choose the examples and direct the analysis of shows from the 1980's, 1990's, and if time permits, the 2000's. Enrollment limited to 20.

0021B. Reading Jazz
This course will explore the musical aesthetics of jazz in texts about its world. Students will listen to music and read poetry, fiction, autobiography and criticism to investigate techniques (including improvisation, rhythm, timbre and articulation), which authors such as Langston Hughes, Ralph Ellison, Charles Mingus, Stanley Crouch and Jack Kerouac employed to describe and support a creative community. Enrollment limited to 20. M. R. MCGARRELL.

0021C. Bach
The course will explore the life and work of J. S. Bach, with an emphasis on his place in the Baroque era, and his influence on later composers. Topics will include issues of performance practice, surviving source material, and performance issues in our own time. Students will listen to music, live and recorded, compare several biographies, and explore the world of Bach criticism. Enrollment limited to 20 first year students.

0021D. Latino Diaspora Music
Explores the discipline of ethnomusicology and the cultural diversity of the Americas through the lens of Latin American music. Readings focus on popular music and dance genres that originated in the Caribbean and Mexico and are now practiced in North American diaspora contexts. Students will undertake individual ethnographic projects on Latino diaspora music traditions, to be documented in research blogs. Recurring course themes include migration, cultural hybridity, youth culture, and musical collaboration/appropriation. The seminar will facilitate an understanding of the
historical development and transnational pathways of musical traditions. No formal background in music is required. Enrollment limited to 20 first-year students.

0021E. Good Vibrations: The Music of Everyday Objects
This seminar will investigate the sonic properties of everyday objects and environments, and how they can transform into musical expression. Through a focus on listening and experimentation, the seminar will explore resonance, reverberation, field recording, feedback, circuit bending, archaeological acoustics, and other topics. Students will create individual and collaborative compositions and performance situations. No formal music background is required. Enrollment limited to 20 first-year students.

0030. History of Jazz
The development of jazz from its roots to the present. Focuses on the study of style types (including New Orleans style, early piano jazz, swing, bebop, and cool jazz) and their major instrumental and vocal exponents. Jazz as a social phenomenon is studied in relation to contextual aspects of folk, popular, and art music traditions in the U.S. M. R. McGarrell.

0040. World Music Cultures (Africa, America, Europe, Oceania)
A survey of a variety of musical styles from Africa, the Americas, Europe, and Oceania outside the Western art music tradition. Introduces these musics in their historical, social, and cultural context, in an attempt to understand them in their own theoretical systems and aesthetic frameworks. J. T. Titon.

0041. World Music Cultures (Middle East and Asia)
Introductory survey of several of the world’s musical traditions, with an emphasis on East, South, and Southeast Asia. Expands powers of musical appreciation through lectures, guided listening, and active participation in music-making. Focuses on traditional music and its relations to dance and theatre, and to its social, religious, and historical contexts, but also includes popular music and the effects of modernization. No prerequisites. M. A. Perlman.

0042. World Music Cultures: Diaspora Music in the Americas
A comparative approach to musical practices in diaspora contexts in the Americas. We will engage with the critical literature on ethnicity, globalization, hybridity, and identity in connection with ethnographic case studies of particular diaspora communities (including African, Jewish, Asian, Arab, and Latino diasporas). Students will conduct ethnographic projects and investigate music's role in the American “ethnic media.” No prerequisites.

0050. Masters of Music
The study of the life and work of a major composer. Composers recently studied: Bach, Beethoven, Brahms, Coltrane, Haydn, Mozart, Stravinsky. Two-hour listening session per week.

0051. Mozart
Mozart's life and music from soup to nuts. While we'll read some of the rich correspondence that anchors his biography, the heart of the course is a study of his glorious music, from intimate private piano pieces to public operas and ending with the Requiem. A rudimentary ability to read music is necessary. We'll offer an optional listening section.

0052. Beethoven
A study of Beethoven's life and music.

0059. Jazz Masters
Examines recordings, scores, films, autobiographies, interviews, oral histories, and other primary source materials as well as biographical, theoretical, and analytical readings to study the life and work of a major jazz figure. His or her career as performer, band leader,
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and composer is examined in the context of his predecessors and contemporaries. Tutorials in the rudiments of theory, score reading, and ear training are available. Prerequisite: MUSC 0030 or permission of instructor. M. R. McGARRELL.

0060. Bluegrass, Country, and Old-Time Music
Folk songs, fiddle tunes, lined-out and shape-note hymnody, bluegrass, and country music, mainly in Appalachia and the South. Historical development, musical design, and how the musics construct working-class and regional identities, religious experience, gender, and rural values, with attention to commodification and the rise of the national country music industry. J. T. TITON.

0061. Blues
Down-home, classic, “Chicago,” and urban blues. History, musical structure, musical styles, singers' lives, and meanings of blues lyrics. The current blues revival, blues and tourism, race and revisionist blues scholarship, and the relation of blues to African-American poetry and fiction. Artists such as Ma Rainey, Charley Patton, Robert Johnson, Lightnin' Hopkins, Muddy Waters, B. B. King, Buddy Guy, Robert Cray. Enrollment limited to 60. J. T. TITON.

0062. Musical Youth Cultures
A cross-cultural examination of music-oriented youth subcultures. Topics will include youth-produced vs. youth-consumed music, club culture and associated media technologies, online communities, activist musical collectives, student organizations, and concepts of the mainstream vs. the underground. Students will undertake ethnographic projects and will use web-based multimedia to present their findings. No prerequisites.

0071. Opera
A study of opera from Monteverdi to the present. Also examines the concepts of opera as drama, the literary and dramatic scores for librettos, and writings on the changing aesthetic principles underlying opera during the past four centuries. D. GOOLEY.

0075. Jazz and American Culture
Explores jazz in relation to American history, discussing how economics, war conditions, regional differences and race relations shaped the music and its public reception. With readings from A. Baraka, L. Levine, R. Ellison, L. Erenberg, E. Lott, G. Early, S. DeVeaux and others, we address how jazz embodies social and political values or expresses national character. Open to non-musicians. Music proficiency preferred but not required. Enrollment limited to 60. D. GOOLEY.

0120. Words About Music: Discovering Music Through Writing
This seminar will explore the elusive meanings of music and the challenges of representing music in text. Exploring a variety of musical genres and approaches to the study of music, we will examine how authors treat music in text, and develop strategies for the analysis of musical performance in its cultural and social context. Enrollment limited to 20.

0200. Computers and Music
An introduction to the field of computer music, focusing on the use of electronics and computers in music and performance. Investigates basic acoustics, perception of sound, the history of music technology, and musical applications. Extensive listening assignments illustrate the impact of technology on popular and experimental genres. No prerequisites, though some experience with computers and some knowledge of music is very helpful. Significant hands-on experience with computer music systems. Enrollment limited to 50 students. Permission will be granted based upon a questionnaire given in the first class. J. W. ROVAN.

0210. Topics in New Media Theory and Production
0210A. Introductory Topics in Interactive Performance and Composition: Performing with Media
This studio course is for choreographers, directors, film-makers, designers or anyone interested in the collision between new media and performance. Through the creation of new works we will explore practical issues, compositional strategies, and aesthetic aspects of hybrid performance. Students will create collaborative and independent multimedia works. Some instruction in video, sound, and advanced media software will be offered.

0210B. Real-Time Systems
A study of works employing electronic media, including music on CD, multimedia, and live performance. Technical aspects of the course focus on programming and signal processing using Max/MSP to create interactive projects and algorithmic compositions. Prerequisite: MUSC 0200 or equivalent. Enrollment is limited to 18. Written permission required.

0220, 0221. Electroacoustic Improv Ensemble
An ensemble devoted to free improvisation with new media. Experimental approaches to sound and focused listening techniques are explored with acoustic instruments, live electronics, real-time video, together with networked improvisation, and more. Enrollment limited to 12; by audition. S/NC. Half credit. J. W. ROVAN.

0400. Introduction to Music Theory
An introduction to musical terms, elements, and techniques, including notation, intervals, scales and modes, triads and seventh chords, modulation, melody writing and harmonization, analysis, and composition. Ear-training and sight-singing are included. For students with some musical training. L. F. JODRY, A. M. COLE.

0450. On Songs and Songwriting
A study of the art and craft of song from the perspective of the listener, the critic, the writer, and the performer. Students will examine a large range of music, from the middle ages to the present. Topics to include: song and memory; voice and literary register; declamation and delivery; melody and melodrama; rhyme and rhythm; phrasing and form. Emphasis will be on both criticism and creation, as students perfect their ear, hone their analytical skills, and try their hand at writing music. Some prior knowledge of music desirable. Course will feature at least one visit by a living songwriter, and will culminate in a performance and a recording of original songs by students enrolled in the class. Enrollment by audition and limited to 25. Instructor permission required.

0500. Thinking About Music
Designed for students who can read music, this course introduces ways of conceptualizing our musical experience. Many different repertories—from Beethoven to the blues—form the basis for explorations of musical time, gesture, and color, and raise questions of expression and meaning. How is our understanding of music shaped by language, rhetoric, performance? Non-concentrators welcome. Enrollment limited to 50. K. BERGERON.

0510. Harmonic Convergence: Music’s Intersection with Science, Mathematics, History and Literature
An investigation into music's relationship to science, mathematics, history and literature. Students will examine connections between music and the brain; parallels between Bach's music and Gödel's Theorem, Kepler's advances in mathematics and astronomy, and modern DNA research; the creative process of music composition; and the application of musical form to literature. They will read fiction in which music occupies an essential role, studying compositions by Mozart, Beethoven, Shostakovich and Schoenberg associated with those novels, plus related works by Debussy, Schumann, Brahms, Wolf, Hindemith and others.
Principal readings are by Sachs (Musicophilia), Levitin (The World in Six Songs), Hofstadter (Gödel, Escher, Bach), Rothstein (Emblems of Mind), Powers (The Gold Bug Variations), Mörike (Mozart's Journey to Prague), Burgess (A Clockwork Orange, Honey for the Bears) and Mann (Doctor Faustus). Although musical ability is not a prerequisite for this course, students with musical backgrounds will be encouraged to perform relevant works in class. Enrollment limited to 16.

0550, 0560. Theory of Tonal Music
For students with keyboard ability and knowledge of the rudiments of music. Prerequisite to the music concentration. Intensive study of tonal harmony, voice leading; analysis, ear training, sight-singing, keyboard exercises. Students interested in MUSC 0550 must take a placement test administered during the first regular class meeting. Instructor permission required. MUSC 0550 is prerequisite to MUSC 0560. A. M. COLE, J. M. BAKER, P. S. PHILLIPS, and M. F. STEINBACH.

0600, 0601. Chorus
Half credit each semester. A practical study of choral literature, techniques, and performance practice from Gregorian chant to the present, offered through rehearsals, sectionals, and performance. Reading and listening assignments may be required. Enrollment is by audition, based on voice quality, experience, and music-reading ability. May be repeated for credit. Written permission required. S/NC. Half credit. L. F. JODRY.

0610, 0611. Orchestra
Half credit each semester. A practical study of the orchestra repertory from Bach to the present, offered through coaching, rehearsals, and performances. Enrollment is by audition. Students will be notified of audition results within the first 10 days of the semester. Restricted to skilled instrumentalists. May be repeated for credit. S/NC. Half credit. P. S. PHILLIPS.

0620, 0621. Wind Symphony
Half credit each semester. A practical study of the wind band repertory from Mozart to the present, offered through coaching, rehearsals, and performances. Enrollment is by audition. Restricted to skilled instrumentalists. May be repeated for credit. Written permission required. S/NC. Half credit. M. R. MCGARRELL.

0630, 0631. Jazz Band
Half credit each semester. A practical study of jazz from the 1920s to the present through coaching, rehearsals, and performance. Seminars on arranging, ear training, and improvisation are conducted for interested students but the focus is on performance. Enrollment is by audition. Restricted to skilled instrumentalists and vocalists. May be repeated for credit. Written permission required. S/NC. Half credit. M. R. MCGARRELL.

0640, 0641. Ghanaian Drumming and Dancing Ensemble
Half credit each semester. A dynamic course in the performance of contemporary drumming and dancing styles of West Africa. Students learn to perform diverse ceremonial and recreational music from Ghana through rehearsals, discussions, readings and listening. No prerequisites. May be repeated for credit. Enrollment limited to 15. Written permission required. S/NC. Half credit. M. K. OBENG.

0650, 0651. Javanese Gamelan
Half credit each semester. Instruction, rehearsals, and performances in the gamelan music of Java, on instruments owned by the department. No prerequisites. May be repeated for credit. Enrollment limited to 18. Written permission required. S/NC. Half credit. M. A. PERLMAN.
0660, 0661. **Sacred Harp/Shape-Note Singing**
Half credit each semester. Students will learn the traditional performance practices associated with the shape-note tunebook *The Sacred Harp*, a compilation of American vernacular hymnody first published in Georgia in 1844. This is an unaccompanied, four-part, participatory singing tradition. Ability to read Western music notation helpful but not required. No concert performances. No prerequisites. Repeatable for credit. S/NC.

0670, 0671. **Old-Time String Band**
Half course each semester. Instruction and ensemble playing. Music taught by ear. American (southern Appalachian Mountain) traditional music on violin (fiddle), 5-string banjo, mandolin, and guitar. May be repeated for credit. Enrollment limited to 20. Written permission required. S/NC. Half credit. J. T. TITON.

0680, 0681. **Chamber Music Performance**
Half credit each semester. The practical study of the literature of chamber music through participation in a small ensemble. Regular rehearsals, coaching by department staff, and performances are required. Enrollment is by audition. Students will be notified of audition results within the first 10 days of the semester. Restricted to skilled instrumentalists. May be repeated for credit. S/NC. Half credit. P. S. PHILLIPS.

0810. **Applied Music Program: Instruction in Vocal or Instrumental Music**
Half credit each semester. Restricted to skilled musicians. Openings are limited. Enrollment and re-enrollment is by audition and jury. Lessons are given by consultants to the Applied Music Program. A fee is charged for enrollment. Copies of the Applied Music Program Guidelines giving detailed information are available online at www.brown.edu/music. May be repeated up to four times for credit.

0910. **Medieval and Renaissance Music**
A history of western European music to Monteverdi’s *Orfeo* (1607), with emphasis on the analysis of individual works supported by reading and listening. Among the major composers studied are Byrd, Dufay, Josquin, Machaut, and Palestrina. Strongly recommended for freshmen and sophomores considering a concentration in music. Limited to students who can read music. Prerequisite: MUSC 0550 or permission of instructor. L. F. JODRY.

0920. **Baroque and Classic Music**
A history of music in European society from Monteverdi’s opera *Orfeo* to Beethoven's *Ninth Symphony*, studied through texts, scores, CDs, DVDs, and YouTube. We’ll spend two-thirds of our time on five composers: Bach, Handel, Haydn, Mozart, and Beethoven. Prerequisite: MUSC0550 or equivalent. D. JOSEPHSON.

0930. **Romantic and Modern Music**
A history of European and American art music from Beethoven’s *Ninth Symphony* to the Postmodernists. Prerequisite: MUSC 0550 or permission of instructor. R. R. ŠUBOTNIK.

**For Undergraduates and Graduates**

1010. **Advanced Musicianship I**
Training in advanced musicianship skills relevant to Western art music from the 16th century to the present, including sight singing, ear training, score reading, keyboard harmony, improvisation, and musical transcription. Prerequisite: MUSC 0560 with a grade of B, or permission of the instructor. Half credit. A. M. COLE.

1011. **Advanced Musicianship II**
Continuation of MUSC 1010. Prerequisite: MUSC 1010 or permission of the instructor. Half credit. A. M. COLE.
1020. Modal Counterpoint
An introduction to contrapuntal techniques of the 16th century with particular attention to
the music of Lassus and Palestrina. Two hours per week of ear training and sight singing.
Written permission required. G. M. SHAPIRO.

1030. Tonal Counterpoint
The contrapuntal techniques of the 18th century with emphasis on music of Bach. Written
exercises in and analysis of several genres including fugue. Prerequisite: MUSC 0560 or
permission of instructor. Written permission required. G. M. SHAPIRO.

1040. Advanced Music Theory I
A study of chromaticism and advanced tonal techniques, with a focus on 19th-century Eu-
ropean art music. Assignments will include exercises in analysis and composition and in-
class presentations. Prerequisite: MUSC 0560 with a grade of B, or the equivalent. J. M.
BAKER.

1050. Advanced Music Theory II
A study of theories of 20th-century music. Exercises in analysis and composition, focusing
on works of Debussy, Stravinsky, Schoenberg, Webern, Bartok and Ives. Students give pre-
sentations on selected later composers. Prerequisite: MU 0560 with grade of B, or the
equivalent. J. M. BAKER.

1060. Analysis and Performance of Music
Study of the implications of musical analysis for performance. Students prepare solo or
chamber works for performance in a formal concert presented at the end of the course. Fo-
cuses on problems of interpretation and their resolution through analysis of musical struc-
ture. Short analytical assignments and an extended analytical project required. Prerequisite:
MU 0560 or permission of the instructor and proficiency on a musical instrument. Enroll-
ment limited to 20. Written permission required. J. M. BAKER.

1070. Music After 1945
A study of the most important composers and styles of European and American concert mu-
sic since the end of the second World War. Assignments will include readings from theo-
etical and critical writing of the period; score study, analysis and performance of represen-
tative works; and compositions in the style of selected composers. Prerequisite: MUSC
0560 plus one course numbered between MU 103 and MU 108. Written permission re-
quired. G. M. SHAPIRO.

1100. Introduction to Composition
Composition students begin by using technical resources developed in their previous theo-
etical studies. Analysis and discussion of contemporary music provides examples of alter-
natives to traditional compositional strategies, which students integrate into later assign-
ments. A study of contemporary notational practices and computer-based manuscripting
and sequencing is also included. Prerequisite: MUSC 0560 or permission of the instructor.
Enrollment limited to 20 students. G. M. SHAPIRO.

1110. Seminar in Composition
Finding a personal voice as a composer. Assignments develop familiarity with large forms
and increasingly complex structures. Analyses of contemporary compositions elucidate is-
sues of aesthetic and political stance inherent in compositional activity and teach technical
facility and range of expression. Problems of rehearsal and performance for new music are
considered. Prerequisite: MU 1100 or permission of the instructor. Enrollment limited to
20 students. G. M. SHAPIRO.

1120. The Technique of Orchestration
Introduction to standard instrumentation; exercises in basic principles; analysis of styles of
scoring. Prerequisite: MUSC 0560 or permission of instructor. G. M. SHAPIRO.
1130. **Jazz Composition and Arranging**
A review of jazz theory topics, including rhythmic structures, scales and modes, harmonic progressions and substitutions, improvisation techniques, forms and development. Weekly writing assignments for two to five parts with rhythm section accompaniment. Students compose and orchestrate three works for small and large jazz ensembles. Guest composers review students’ compositions and various Brown jazz bands rehearse and record them. Prerequisites: MUSC 0560, MU 75. Enrollment limited to 18. Written permission required. M. R. McGARRELL.

1140. **Classical Improvisation**
A historical and practical study of improvisation in western classical traditions from the middle ages to the 19th century, with emphasis on the common practice period 1700-1850. Students will apply theoretical knowledge in harmony and counterpoint to in-class improvisations, learning such skills as melodic ornamentation, chaconne-bass elaborations, variations, preluding, and free improvisation starting with simple exercises and gradually elaborating more complex pieces. These practices will be studied in relation to their historical contexts and shifting aesthetic purposes. Historical topics include cadenzas, harmonic experimentation, the relationship between oral and written transmission, and the social contexts of performance. MUSC 0560 and consultation with instructor recommended. Prerequisite: MUSC 0550. Enrollment limited to 15.

1200. **Seminar in Electronic Music: Recording Studio as Compositional Tool**
A study of advanced studio techniques taught in parallel with topics in psychoacoustics. Students will create original studio work while developing listening and technical skills for audio production. Technical topics include recording, signal processing and mixing software, microphone technique, and live sound engineering. Permission of instructor required. Preference will be given to students who have completed MUSC 0200. Others will be evaluated for potential future work in the ME ME program (Multimedia and Electronic Music Experiments) and past participation in MEME. Admission is determined by an entrance questionnaire completed at the first class meeting. Instructor's permission required. Prerequisite: MUSC 0200. J. R. MOSES.

1210. **Seminar in Electronic Music: Real-Time Systems**
A study of music employing electronic media, including real-time digital signal processing, multimedia, and live performance. Technical aspects of the course focus on programming using Max/MSP to create interactive projects and algorithmic compositions. Permission of instructor required. Interested students must come to the first class. Preference will be given to students who have completed MUSC 0200. J. W. ROVAN.

1220. **Interactive Installation**
Production class exploring ideas and techniques using multiple digital media to create audio-video installations. Technical issues focus on programming with Max/MSP/Jitter and using various types of sensors for human-computer interaction. Collaborative projects may combine performance, sculpture, computer music, hypertext, live video processing, and graphics in order to stimulate experimentation with new integrated art-forms. Enrollment is limited to 14. Preference will be given to students who have completed Music 200. Others will be evaluated for potential future work in the MEME program (Multimedia and Electronic Music Experiments) and past participation in MEME. Admission is determined by an entrance questionnaire completed at the first class meeting. May be repeated for credit. S/NC

1230. **Sound/Image Composition**
Examines various ways that image and sound can be combined in unified artworks. The course will include extensive reading assignments and analysis of preexisting works, as well as the creation of new mixed-media works. Some experience with music composition
required and knowledge of current video editing, animation and/or image processing tech-
niques also highly recommended. Course admittance is by permission of the instructor. For
graduate and advanced undergraduates (with prerequisite MUSC0200).

1240. **Topics in New Media Theory and Production**
Topics may vary from year to year. Enrollment limited to 14 students. May be repeated for
credit.

1240A. **Sonic Psychogeography**
Psychogeography loosely describes a cluster of art practices that explore the effects of
the geographical environment on the emotions and behaviors of individuals. How can
sound, uniquely powerful in triggering memory and connecting us to the present
moment, be used in psychogeographical work? Traveling, mapping, walking, and
otherwise getting around both urban and rural landscapes will inspire class projects:
audio collages, video works, headphone tours, interactive installations, public
interventions. Come prepared to walk, to read, to listen, to look, and to make. Some
experience with sound or video editing required. Permission will be granted based
upon a questionnaire given in the first class. Enrollment limited to 14 students.

1240B. **Immersion and Engagement**
Enrollment limited to 14.

1250. **Sound Design**
This production seminar is a study of techniques and aesthetics used to create sonic envi-
ronments and effects that enhance a variety of media including video, radio and audio art,
new media, theater, and installation art. Technical topics include audio production in multi-
channel formats, advanced audio editing and mixing techniques, and audio system design.
Permission of instructor required. Enrollment limited to 12 students. Preference will be giv-
en to students who have completed MUSC 1200 and MUSC 1210. Others will be evaluated
for potential future work in the MEME program (Multimedia and Electronic Music Exper-
iments) and past participation in MEME. Enrollment Limited to 12. Admission is deter-
mined by an entrance questionnaire completed at the first class meeting. Prereq: MUSC
1210.

1440. **Topics in Conducting**
Explores the art of reading, analyzing, and conducting a musical score. Prerequisite:
MUSC 0560. May be repeated for credit. Written permission required.

1500. **Major Masters and Repertoires of Music**
The advanced study of the music of selected composers. Prerequisites: MUSC 550 or per-
mission of the instructor.

1500A. **Major Masters and Repertoires of Music: Bach**
An examination of the life and work of Bach, including its place in German church
music, views of his contemporaries and explanation of hi manuscript and publishing
history.

1510. **Baroque and Classic Music**
A history of western music from Monteverdi's *Orfeo* (1607) to Beethoven's *Ninth Sympho-
ny* (1824). Prerequisite: MUSC 0560 or equivalent.

1600. **Music and Critical Theory**
Studies of critical theory and related literary, philosophical, and historical disciplines in
terms of music. May be repeated for credit. Enrollment limited to 20.
1600A. **Seminar in Music and Critical Theory: Adorno on New Music**
A close study of Adorno's Philosophy of New Music, in the new translation by Robert Hullot-Kentor, and selected secondary readings relevant to this work. The course emphasizes notions of canon (the Western musical canon starting with Beethoven); of modernism (as exemplified in music by Schoenberg and Stravinsky); and of an avant garde. It also focuses on relationships between art traditions and popular music; and on problems of writing legitimate (or so-called "authentic") music of any kind in a post-canonic age. An interdisciplinary student body enriches this course; thus, students from all backgrounds with a scholarly interest in any type of music since 1900 or in any of these issues are encouraged to enroll. Enrollment limited to 20.

1600B. **Adorno and Jankelevitch in Dialogue**
Philosophers Theodor Adorno and Vladimir Jankelevitch were both leading philosophers of the mid-20th century (in Germany and France respectively). Both were also avid pianists who produced several philosophical books on music. This course examines their musical writings both independently and comparatively. Jankelevitch's ethical and metaphysical questions, together with Adorno's sociological and historical ones, will be studied in relation to the philosophical traditions they inherited and transformed. Their work will also be evaluated in the volatile European context of the period 1930-70. Enrollment limited to 20 students.

1610. **Writing about Music**
A study of music criticism through three intertwined enterprises: analyzing classic 19th- and 20th-century writings on Western art music; analyzing representative writings on popular music in recent newspapers and magazines; and writing short critical pieces on a mixture of art and popular music, some assigned, some chosen by the student. Non-music concentrators welcomed. Prerequisite: MUSC 0550 or instructor permission. Enrollment limited to 15. Instructor permission required.

1612. **Seminar in Music Criticism**

1612A. **Writing about Music**
A study of music criticism through three intertwined enterprises: analyzing classic 19th- and 20th-century writings on Western art music; analyzing representative writings on popular music in recent newspapers and magazines; and writing short critical pieces on a mixture of art and popular music, some assigned, some chosen by the student. Non-music concentrators welcomed. Prerequisite: MU 55 or written permission.

1620. **Seminar in American Music: The Great American Songbook (Part II: Performers)**
Emphasizes the musical and cultural effects of various styles of vocal performance on American standards written between 1914 and 1960. Possible singers include Louis Armstrong, Bing Crosby, Fred Astaire, Ethel Waters, Ella Fitzgerald, Billie Holiday, Frank Sinatra, Nat King Cole, and Tony Bennett. More recent jazz and cabaret singers also receive consideration. Course ends by considering changes represented by Elvis Presley and Bob Dylan. This course complements another that emphasizes the songs of this period in themselves. Students from all backgrounds are welcome. Prerequisite: MUSC0550 or written permission.

1622. **Seminar in Music and Theater**
Students compare selected Broadway musicals with their principal sources (novels, short stories, dramas, films, another musical) and, in some cases, their subsequent transformations (a film, another musical). Emphasis is on primary sources; students largely determine and run the film component of the course. The class is likely to study Porgy and Bess; Pal
Joey; Kiss Me Kate; My Fair Lady; Flower Drum Song; Cabaret; and Wizard of Oz / The Wiz / Wicked. Students may choose other works for individual projects. Majors and non-majors are encouraged to enroll. Prerequisite: MUSC0550 or written permission. May be repeated for credit.

1630. Seminar in Music and Theater

1640. Seminar in Opera Studies
An advanced seminar dealing with critical, historical and aesthetic questions surrounding opera as a genre. Topics which will vary from semester to semester, include: the social meaning of opera; staging and its vicissitudes; opera criticism; music as spectacle; voices and vocalists; opera on film. Prerequisites will vary according to the instructor. Enrollment limited to 20 students.

1640A. Opera, Politics, History, Gender
The will to social order and the desire to trangress it: this conflict in modern culture has been negotiated dramatically in opera. This seminar concentrates on operas by Mozart, Wagner, Verdi, Debussy, and Puccini. Each opera will be placed into dialogue with historical and theoretical texts and analyze how opera engages power in relation to gender, nationalism, modernism, and crises of representation. Enrollment limited to 20. M. P. STEINBERG and S. STEWART-STEINBERG.

1640B. Performance Analysis and Opera
The seminar will explore current tendencies in (radical) opera productions in Germany and elsewhere as well as methods to analyze opera in performance. Based on the premise that the performative dimension of opera is to be understood as the ephemeral and reciprocal process between performing actors/singers and recipients, this seminar will raise the question of how this special relationship can be theorized and analyzed. Enrollment limited to 20.

1640C. Wagner's Ring
This seminar will pursue a rigorous musical, textual, historical, and political analysis of Wagner's tetralogy The Ring of the Nibelung. It will include an analysis of production styles, with specific attention to the production currently in joint development at the Teatro alla Scala, Milan, and the Berlin State Opera, to be directed by Guy Cassiers. We will address themes such as globalization and its discontents, the interplay of music drama and visual technologies, and the contextual importance of serial novels such as those of Marcel Proust, Robert Musil, and Hermann Broch. Enrollment limited to 20 students. M. P. STEINBERG.

1650. Adorno Goes to the Opera
"Of all the tasks awaiting us in the social interpretation of music", wrote T.W. Adorno, "that of Mozart would be the most difficult and the most urgent." Using writings by Adorno on opera as a point of departure, this course goes on to a critical examination of selected Italian, German and French operas between Fidelio and Wozzeck. Finally, it takes up Adorno's challenge by reconsidering some of Mozart's mature operas, from Figaro though The Magic Flute, in terms of later opera history and theory.

1660. Seminar in Classic and Romantic Music

1660A. Mahler's Century
This seminar will explore key works of Gustav Mahler in multiple contexts, including critical/interpretive traditions, conducting and performance practices, and the contexts of political, cultural, intellectual, and aesthetic history. Readings will include work of Sigmund Freud, Theodor Adorno, Carl Schorske, Julia Kristeva, Judith Butler, and
others; we will think about problems such modernism, orientalism, Jewishness, montage, noise, shock, and melancholy.

1661. Death and Dying
A study of the cultural treatment of death in Europe and America from the French Revolution to the Vietnam War. Using CDs, DVDs, and YouTube, we'll listen to operas, songs, Requiems and oratorios, and instrumental and orchestral works, from Mozart's *Don Giovanni* to Crumb's *Black Angels*. We'll also read short stories, novels, and poems; watch war films; and study art, architecture, cemetery sculpture and design, mourning rituals, and state funerals.

1670. Seminar in Twentieth-Century Music
Topic to be announced. Recent topics have included Schoenberg, Stravinsky, and Adorno; musicians in exile from Fascism. Written permission required.

1671. Great Conductors of the Twentieth Century
Conducting has played a critical role in modern musical life. This seminar will examine the history, craft, status, and influence of celebrity conductors through sound recordings, videos, memoirs, biographies, scores, and manuals. Among those we shall study are Barenboim, Beecham, Bernstein, Dudamel, Furtwängler, Karajan, Kleiber, Klemperer, Koussevitzky, Monteux, Stokowski, Szell, and Toscanini.

1672. Hitler's Gift
The flight of musicians from Europe in 1933-45 exile changed the face of Western music, and it changed them. Among them were many of the great musicians of the 20th century, including Bartok, Casals, Klemperer, Rubinstein, Schoenberg, Toscanini, and Weill. We examine patterns of emigration, settlement, and adaptation through memoirs, letters, essays, newspaper articles, biographies, recordings, and videos. D. S. JOSEPSON.

1673. Interpreting Debussy
A study in musical poetics. Debussy forms the launching point for a discussion of pleasure and liberty in harmony, melody, rhythm and form; of orchestral impressionism and of music’s links to poetry and painting. Close readings of scores and recorded performances will yield different approaches to interpretation, leading to two analytical papers and a final class concert. MUSC 0560 or permission of the instructor. Written permission required. K. BERGERON.

1690. Seminar in Jazz Studies
Surveys contemporary musicology, ethnomusicology, and cultural studies of jazz, combining music with analytical and ethnographic perspectives. May be repeated for credit. Enrollment limited to 20.

1690A. Miles Davis: An Evolution in Jazz
This seminar examines the life, music, and iconic status of Miles Davis, the most complex and varied figure in the history of jazz. From the mid-40s, when he emerged as a sideman to bebop virtuoso Charlie Parker, to his death in 1991, Davis was often on the cutting edge of jazz's evolution, spurring on the development of cool jazz, hard bop, progressive jazz, modal jazz, post-bop, and various forms of fusion. He was at the same a powerful though elusive personality who continues to inspire critical controversy. We will examine his creative evolution in the context of the history of popular music taste, race relations, gender roles, and social class in America. Readings include biographies, studies of his music, and collections of critical essays. There will be extensive listening assignments and occasional required video screenings.
1700. **Score Reading and Conducting**
The art of reading, analyzing, and conducting a musical score. Studies in clef reading, transposition, ear-training, and structural analysis to develop the skills needed for full comprehension of an orchestral score. Introduces the theory and technique of conducting with practice in the art of physical gesture. Selected repertoire from the Baroque through contemporary periods are studied and conducted in class. Prerequisite: MUSC 0550 or permission of the instructor. May be repeated for credit.  P. PHILLIPS.

1710. **Choral Conducting**
An introduction to the art of conducting, with emphasis on choral training. A study of the relationship of gesture to sound will be combined with a survey of the choral repertoire, beginning with Gregorian Chant and covering renaissance motets, masses and madrigals, Baroque works with instruments, excerpts from Mozart's vespers, 19th-century Romantic part songs, and selected 20th-century. Issues of basic vocal production, warm-ups, rehearsal planning, editing, programming and concert production will also be included. Prerequisite: MUSC 0400 or 0550. Written permission required. May be repeated for credit. L. JODRY.

1810. **Applied Music Program: Advanced Instruction in Vocal or Instrumental Music.**
Half credit each semester. Restricted to skilled musicians. Restricted to skilled musicians demonstrating mastery of an advanced repertory in their fields. Openings are limited. Enrollment and re-enrollment is by audition and jury. Lessons are given by consultants to the Applied Music Program. MUSC 0830, 0840 is prerequisite to this course. A fee is charged for enrollment. Copies of the Applied Music Program Guidelines giving detailed information are available online at www.brown.edu/music. Prerequisite: MUSC 0400, or MUSC 0550, MUSC 0560. Written permission required. May be repeated up to four times for credit.

1900. **Introduction to Ethnomusicology**
The study of people making music. Ethnographic research and writing on musical practices; history of ethnomusicology; musical case studies from around the world highlighting such issues as authenticity, tradition, commercialism, amateurism, postcolonial politics, and the ethics of fieldwork. Prerequisite: MUSC0550 or written permission.

1905. **Studies in Ethnomusicology**
Explores a particular subject within ethnomusicology. May be repeated for credit.

1905A. **Music and Cultural Policy**
What is to be done about music and the people who make it? All over the world, individuals, governments, NGOs, and other groups are making plans for music: to ensure its survival, to make it known to a wider public, or to use it as an engine of economic growth. This course will examine various social engineering projects involving music. Topics will include media and internet regulation; ownership of music and intellectual property law; the role of institutions such as UNESCO; music in war and peace; music, heritage, and cultural tourism; and conservation, stewardship, and sustainability. No prerequisites.

1910. **Music and Mind**
Explores music perception in terms of auditory and cognitive processes such as auditory perception, memory, and learning. Lectures, discussions, and demonstrations review and analyze a body of scientific research on the psychology of music. Problem sets and a collaborative laboratory project. Prerequisites: PSYC0010 and MUSC 0010 or permission of the instructor.

1920. **Music and Modern Life**
Examines topics related to the everyday use of music: popular music and the music industry; the impact of technology; the determinants of musical taste; fandom; record collectors;
and music-based subcultures (e.g., Deadheads). The reading of empirical studies (and original field research by class members) are combined with theoretical readings drawn from sociology, ethnomusicology, and cultural studies. Enrollment limited. Written permission required. M. A. PERLMAN.

1930. Music of Indonesia
The traditional music of Java, Bali, and Sumatra, with special attention to the bronze percussion orchestras (gamelan) and their use in ritual, dance, and drama. Topics include: music and trance; the impact of colonialism; nationalism, modernization, and tourism; and Indonesian music and “world beat.” Theory and practice are integrated through extensive instruction on Brown’s gamelan instruments. Enrollment limited to 20. M. A. PERLMAN.

1931. Music of Ireland
An introduction to the traditional music of Ireland through readings, lectures, listening, and participation. The historical and cultural context of the music is considered as well as the instruments, genres, and styles.

1932. American Roots Music
Case studies in African American, British and Irish American, Euro-American, Native, Latino, and Asian American traditional musics from the mid-19th century to the present. Prerequisite: MUSC 0560 or permission. J. T. TITON.

1933. Music of India
A survey of the music cultures of India. Intensive study of the classical traditions as well as an introduction to folk, tribal, and urban popular musics. Reading, listening, and class discussions focus on theory, history, and aesthetics. Improvisation; music and the dramatic arts; the social organization of music-making; and music as an expression of class, culture, and subculture in modern India. Prerequisite: MUSC 0560 or permission.

1940. Applied Ethnomusicology
Theory and practice in applying the cultural study of music outside the academic world and in the public interest. Students will research, document, interpret and present music from local and regional ethnic communities. Prerequisite: MUSC 0050, 0060, 1200, graduate standing, or written permission from the instructor.

1950. Transcription and Analysis of Jazz
Transcriptions from major jazz recordings are made by the students. The personal styles of the musicians are defined through analysis in the context of the various trends in jazz history. The transcriptions are analyzed within the parameters of rhythmic and harmonic structures, tone quality, motivic design, and idiomatic performance. Singing, ear-training, and dictation are used to develop transcription skills. Written permission required. M. R. MCGARRELL.

1960, 1961. Advanced Ghanaian Drumming and Dancing Ensemble
Students with experience in African and related musical traditions perform drumming, dancing, and singing of Ghana and the diaspora. Focus on a more challenging repertoire with emphasis on multi-part, lead, and improvisational playing. Prerequisite: audition. May be repeatable for credit. Written permission required. Enrollment limited to 15 students. S/NC. Half credit. M. K. OBENG.

1970. Individual Independent Study
Directed undergraduate research for advanced students. Prerequisite: permission of the instructor.

1980. Group Independent Study
Directed undergraduate research for advanced students. Prerequisite: permission of the instructor.
Primarily for Graduates

2000. History of Ethnomusicological Thought
A history of thought about music outside the Western art music tradition. Three historical paradigms—comparative musicology, musical folklore, and ethnomusicology—and the search for a new approach to ethnomusicology in the postcolonial era. Prerequisite: MUSC 1200 or consent. J. T. TITON.

2010. Field Research in Ethnomusicology
Introduction to the theory and practice of fieldwork with people who make music. Project design, interviewing, still and video photography, recording, ethics, the researcher’s roles, relations with human subjects, and strategies for documenting music in its human context. Prerequisite: Graduate standing or written permission. J. T. TITON.

2020. Interpretation in Ethnomusicology
How to think and write about people making music. Ethnomusicological representation and authority; analytical, interpretive and experiential approaches; postmodern and postcolonial considerations; hypertext multimedia representations. Prerequisite: Graduate standing or written permission. J. T. TITON.

2030. Modernizing Traditional Music
This course examines two types of modernization: changes in the sounds of traditional music, and changes in its social-ideational contexts. We examine general theories of modernity, and the association of modernity with the urban, rational, secular, mobile, and technologically advanced. We then inspect the processes of modernization at work in four case studies taken from four very different societies. Prerequisite: Graduate standing or written permission.

2040. Current Directions in Ethnomusicology
The field of ethnomusicology has become increasingly interdisciplinary over the past decade, drawing inspiration from cultural studies, gender studies, popular culture studies, performance studies, psychology, phenomenology, postcolonial studies, and science and technology studies. In this seminar we will read major works of musical scholarship (most from the past ten years) that illustrate the key theoretical approaches alive in ethnomusicological research today.

2050. Musical Thinking
An ethnomusicological approach to the analysis of musical structures and processes. Case studies include jazz, Irish music, French-Canadian fiddling, North Indian singing, Javanese gamelan, African drumming, and Japanese court music. Topics include linguistic, psychological, and oral-formulaic theories; historical change; cross-cultural modal theory; improvisation; the nature of African rhythm; “insider” versus “outsider” accounts. Readings, discussion, and first-hand experience of selected musics. Facility with Western staff notation required.

2070. Music and Identity
From 19th-century European nationalism to 20th-century American multiculturalism, people have used music to affirm their identities. Drawing on anthropological and sociological theory, we examine the variety of connections between music and identity in several case studies. We consider the possible contributions of music to cross-cultural understanding, and discuss the ethics of musical border-crossing.

2080. Seminar in Ethnomusicology
An intensive study of a single topic in ethnomusicology. Written permission required for undergraduates.
2080A. Music and Technoculture
This seminar investigates ethnographic approaches to technologically-mediated musical practices. Case studies will focus on recording studios, electronic dance music, broadcast media, digital gameplay, virtual-reality spaces, and popular music reception. Theoretical readings will draw on anthropology of the media studies, performance studies, and media design/production texts, in addition to contemporary work in ethnomusicology. Students will conduct ethnographic projects. Prerequisite: graduate standing or written permission.

2080B. Ethnography of Popular Music
This seminar explores ethnographic work on popular music, including scholarship rooted in ethnomusicology, sociology, and performance studies. We will discuss case studies from around the world and will compare contemporary ethnographic research with other approaches to popular music (e.g., Frankfurt School critical theory, Birmingham School cultural studies, and text-oriented popular music studies). Prerequisite: graduate standing or written permission.

2080C. Music and Memory
This graduate seminar will investigate how music is bound up with human memory (individual and collective, cultural and cognitive). Readings will draw on scholarly work in ethnomusicology, anthropology, history, and cognitive science. Key themes include diaspora, nostalgia, oral and written transmission, ritual commemoration, and music's place-making potential. Students will undertake individual research projects. Prerequisites: graduate standing or written permission.

2080D. Music, Nation, and Nationalism
This course explores the relation between music and nationhood, as a historically particular form of collective identity, and a dominant political category in late modern societies. Students will work with key texts in the study of nationhood and nationalism, applying them to musical case studies from different world regions. Touching upon art and popular music, these cases will explore the use of nationalist rhetoric to draw citizens into state projects; the appropriation of minority expressions in defining a national self; efforts by postcolonial societies to forge national sentiment from the fragments left by decolonization; and the nation's fate after globalization.

2090. Seminar in Ethnomusicology
An intensive study of a single topic in ethnomusicology. Written permission required.

2090A. Hypertext, Multimedia
Instruction in, and critical discussion of, computer-based hypertext and multimedia representation and interpretation of people making music. Sounds, pictures, texts, animations, movies. Students will complete a non-linear, reflexive hypermedia project to take advantage of "the experimental moment" in musical ethnography. Prerequisite: graduate standing or permission of instructor.

2090B. World Music in Theory and Practice
This seminar investigates "world music" as a contested term in ethnomusicology, a music-industry marketing category, and a college classroom subject. We will read critical accounts of the development and significance of the "world music" concept, compare several world music textbooks, experiment with teaching the exercises/assignments therein, and explore the scholarly literature on multiculturalist pedagogy. Prerequisite: graduate standing or written permission.
2100. Seminar in Music Theory
An intensive study of a single topic in music theory. Written permission required. J. M. Baker.

2100A. The Instrumental Sonatas of Beethoven
An analytic survey of Beethoven's sonatas for piano, violin and piano, and cello and piano from a variety of perspectives, including: topical, semiotic, and hermeneutic analysis; Schenkerian analysis; historical and critical studies; and recent developments in theory of sonata form. Students who have taken MUSC 1040 may request permission to enroll in this course. Written permission required.

2200. Composition Seminar
A forum for graduate composers to share and critique current projects. Visiting artists and analysis of relevant outside repertoire will augment the group and one-on-one meetings. Enrollment is limited. Written permission required. May be repeated for credit. J. W. Rovan.

2210. Digital Performance
A production seminar examining the artistic impact and creative potential of digital media in the context of live performance. Readings and analysis of work examine innovations in performance practice from dance, theatre, performance art and music. Collaborative assignments investigate video projection, sound design and interactive sensor technology, culminating in a final large-scale performance. Permission will be granted based upon a questionnaire given in the first class. T. E. Winkler.

2220. Designing and Playing Alternative Controllers
This seminar will explore the science and aesthetics of designing alternate controllers for musical performance. Topics will include basic electronics and hardware prototyping, instrument construction, theories of gesture, human-computer interface issues, and the challenges of mapping sensor data to meaningful musical parameters. Previous experience with MaxMSP or other real-time programming required. Permission of instructor required.

2221. Seminar in Computer Music and Multimedia Composition
A weekly forum for graduate composers to share and critique current projects. Visiting artists and analysis of relevant modern repertory will augment class discussion of student work. Individual private lessons - taught in addition to the three-hour seminar - help students focus on compositional technique and other problems of expression specific to their own projects.

2230. Composing for Real-Time Systems
This seminar will explore the use of interactive systems from the point of view of the programmer/performer. Using improvisation as a starting point, we will explore the aesthetics and philosophy of performance, designing real-time systems that enhance the relation between action and event. The immediacy of improvised performance will then offer a perspective on the actions implied in composition itself. Systems designed for the individual performer become the basis for a large-scale real-time composition. Previous experience with MaxMSP or other real-time programming required. Permission of instructor required.

2240. Composing and Improvising with Real-time Systems
This seminar will explore the use and creation of interactive computer music systems from the point of view of the performer/programmer. Using improvisation as a starting point, we will explore the aesthetics and philosophy of performance, designing real-time systems in MaxMSP that enhance the relation between action and event using network strategies. J. W. Rovan.
2260. *Topics in Computer Music Theory and Analysis*
Explores the science and aesthetics of designing alternate controllers for musical performance. Topics include basic electronics and hardware prototyping, instrument construction, theories of gesture, human-computer interface issues, and the challenges of mapping sensor data to meaningful musical parameters. Written permission required.

2270. *Topics in Digital Media Research and Production*
May be repeated for credit.

2280. *Designing Large-Scale Multimedia Projects*
A production seminar designed for students working on a single, large project in Multimedia and/or Computer Music. The course covers planning and implementation strategies, with group critiques of proposals and works-in-progress. The class structure includes individual lessons for students working on a graduate or undergraduate thesis project. Permission will be granted based upon a questionnaire given in the first class. T. E. WINKLER.

2600. *Seminar in Critical Theory*
An intensive study of writings by selected scholars and thinkers in disciplines such as critical theory, literary theory, cultural studies, and philosophy in relation to the study of music. Written permission required.

2970. *Preliminary Examination Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. *Reading and Research*
Directed graduate research. Section numbers vary by instructor.

2990. *Thesis Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

**Neuroscience**

Neuroscience program descriptions and course offerings are listed under the *Biology and Medicine* section on page 234.

**Pembroke Center for Teaching and Research on Women**

The Pembroke Center supports interdisciplinary research on the ways gender systems—understood as systems of meaning—structure both the concrete and the symbolic organizations of social and cultural life; and the ways gender systems intersect with other systems of difference such as ethnicity, race and class. Faculty associated with the Center are available to advise students, who may concentrate in gender and sexuality studies or who may develop a cluster of gender and sexuality studies courses to enrich a standard concentration. In addition to its curricular interests, the Pembroke Center funds postdoctoral fellows for a year of research in residence at Brown, conducts an annual two-semester research seminar, and sponsors numerous research initiatives. For additional information, please see the Center’s website at: [http://www.pembrokecenter.org/](http://www.pembrokecenter.org/)
**Philosophy**

Professors Ackerman, Dreier, Estlund, Gill, Heck, Hill, Kim, Larmore, Reginster Associate Professors Arpaly, Broackes; Assistant Professors Dunlop, Kutach, Schechter.

**Undergraduate Program**

For a complete description of the standard concentration program leading to the A.B. degree, please visit: [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html), or the department’s website at: [http://www.brown.edu/Departments/Philosophy/](http://www.brown.edu/Departments/Philosophy/).

**Graduate Programs**

*Doctor of Philosophy.* The preliminary requirements may be satisfied by demonstrating competence in logic, philosophy of science/language/mind, ethics, epistemology, metaphysics, and history of philosophy. This may be done either by passing prescribed courses with a quality grade or through satisfactory completion of an individually tailored major-minors program, planned in consultation with the graduate advisor and submitted to the department for approval. Within seven semesters of full-time or equivalent residency at Brown, the student must gain admission to candidacy. Admission to candidacy is granted after satisfaction of the preliminary evaluation and distribution requirements and upon approval of a dissertation prospectus by a dissertation committee. An oral defense of the dissertation is required.

**Courses of Instruction**

Primarily for Undergraduates

0010. *The Place of Persons*

Some main philosophical problems about persons and their place in the world: the nature of persons and personal identity; mind and body; persons as free agents in a deterministic world; the subjectivity of personal values and the objectivity of moral requirements; the meaning of life. A main objective is to facilitate the student’s own thinking about such issues.

0020. *Mind and Matter*

This course will examine the relationship between the mind and the material world through a careful historical survey of prominent accounts of this relationship in Western thinking, beginning with Descartes’ "substance dualism." We will then move on to look in detail at behaviorism, mind-brain identity theory, functionalism, panpsychism, and eliminativism. While examining these theories we will encounter a number of related topics, such as personal identity, mental causation, consciousness, and intentionality.

0030. *Skepticism and Knowledge*

What is knowledge? What is the extent and basis of one’s knowledge about physical objects, other people, oneself, the future, morality, and religion? F. N. Ackerman.

0040. *Reason and Religion*

This is an introductory course in the philosophy of religion. We will be considering central questions in the philosophy of religion, e.g. the existence of God, from a contemporary analytic perspective. As this is a course in analytic philosophy, we will be addressing these issues in a way that stresses clarity and rigor.
0050. Philosophy of Art
This course is an introduction to philosophy through the lens of philosophical issues surrounding art. Students will explore in detail some of the basic issues in aesthetics, including representation, expression, the definition of ‘art’, and conceptions of individual artworks, from a contemporary analytic perspective. Readings and examples are drawn from all artistic fields.

0060. Modern Science and Human Values
Devoted to the critical study of moral problems that have been raised or affected by modern science and technology. Possible topics include animal experimentation, euthanasia, organ transplantation, and moral and legal issues raised by the computer revolution. More generally, we discuss what is and ought to be the role of the scientific community in deciding moral and social issues.

0070. The Individual and the State
In this course, we shall read several of the major political philosophers of the past several centuries, beginning with Plato and ending with contemporary thinkers. We will be reading primary sources and paying particular attention to the philosophers’ take on the proper relation between men and the societies in which they live. There are no prerequisites for this course.

0080. Existentialism
An introduction to philosophical thinking through the study of existentialist themes, including being oneself, loving others, the limits of morality, and the meaning of life in the face of suffering and death. Readings are drawn primarily from Schopenhauer, Dostoyevsky, Nietzsche, Kierkegaard, Heidegger, Sartre, de Beauvoir, and Camus. Enrollment limited. Written permission required. B. REGINSTER.

0090. Philosophy East and West
Investigates themes associated with what is known as the “Western” philosophical tradition—e.g., idealism, skepticism, and the limits of understanding—as they arise in various philosophical traditions in the East (including Upanishadic, Buddhist, and Taoist traditions). The “Western” philosophers studied include key historical figures such as Wittgenstein, Kant, and Plato, as well as more recent philosophers.

0100. Critical Reasoning
A study of the techniques and principles of correct reasoning and effective communication. Topics may include deduction and induction, meaning and definition, fallacies in reasoning, the basic logic of propositions and predicates, and the essentials of inductive reasoning.

0110. The Nature of Fiction
This course is concerned with philosophical questions arising from the concept of fiction. Topics will include: What makes a story a fiction? What are fictional characters? Are fictions “created”? Are fictions physical things, like books? How do fictions make us care about things we don’t even believe in? How do fictions affect our moral beliefs?

0120. Freedom and Responsibility
An introduction to philosophy by way of consideration of such issues as: whether we are, can be, or ought to be free to think and act as we choose; whether we are or can be responsible (morally or legally) for our thoughts or actions or their consequences; and whether we ought to be punished for any of our thoughts or actions or their consequences. Readings from classical and contemporary sources.

0130. Introduction to Analytic Philosophy
This course will be an introduction to some of the main issues and methods in contemporary analytic philosophy. We will look at work on free will, the mind-body problem, knowledge and skepticism, truth and relativism, morality, and value. We will also take note of some of
the main methodological tools employed in that work, such as reflective equilibrium, use of counterexamples, appeal to the best explanation, and thought experiments.

0180. Feminist Philosophy
This course is designed to examine core issues of feminist philosophy. Questions central to the course include the essential nature of woman, whether there is a distinctly female method of reasoning, whether philosophical methodology is gender biased, and the moral impact of pornography and prostitution. Each of the four sections of the class will be devoted to one of these topics.

0190. Contemporary Moral Problems
This course will address issues of contemporary moral concern. These will include topics from the public sphere, such as environmental concerns, capital punishment, and affirmative action, as well as issues from the private sphere, including sexuality, drugs, and abortion. The course will present the arguments of various philosophers, but the main emphasis will be on developing the critical and philosophical tools necessary to think through these matters: the identification and evaluation of arguments, and the construction of careful and rigorous arguments. No background in philosophy is required.

0200. First Year Seminar.
Enrollment limited to 20 first year students. S/NC. Recent topics include:

0200A. Consciousness
This course will provide an introduction to the main philosophical theories of consciousness, and also to the relevant experimental work in neuroscience and cognitive psychology. Among the issues to be considered are: the different forms of consciousness, the relationship between consciousness and attention, the role of consciousness in perception, and the "hard problem" of consciousness (that is, the problem of determining how "qualitative" psychological characteristics like pain and the taste of lemons are related to neurobiological characteristics of brain states). Enrollment limited to 20. S/NC.

0200B. Time Travel
Although time travel is a commonplace of popular fiction, considering it closely reveals some interesting paradoxes. Studying these paradoxes provides a natural introduction to many core topics in metaphysics, including causation, possibility, personal identity, free will and the relationship between philosophy and physics. For first year students only. Enrollment limited to 20. S/NC.

0200C. Personal Identity
What makes me the same person over time? How can we decide whether a person at a time is identical with a being alive at another time? We will consider the continuing existence of the body, the ability to remember experiences, and other criteria. Readings from classic (17th and 18th century) and contemporary sources. Enrollment restricted to first-year undergraduates. Enrollment limited to 20. S/NC.

0210. Science, Perception and Reality
It is implausible that scientific discoveries could make us give up commonsensical beliefs. It is even less plausible that commonsense could make us reject established scientific theories. So when science and commonsense appear to clash, as they do over colors, solidity, mental content, values, and death, serious philosophical problems arise. We will investigate possible responses to these problems. D. Kutach.

0220. Introduction to Philosophy
An introduction to basic methods of philosophical inquiry and their application to some traditional problems in philosophy. Topics include arguments and their place in philosophy,
philosophical thought-experiments and the method of counterexamples, the analysis of knowledge, skepticism, the mind-body problem, free will, and the existence of God.

0230. Human Knowledge and Truth
We consider the concepts of knowledge and truth, given the contemporary notion that conflicting views about the world can both "be correct". Issues covered will include: realism and anti-realism, pluralism and relativism, conceptual relativity, and objectivity. Readings will come from contemporary analytic philosophers, including Devitt, Rorty, Putnam and Nagel.

0240. Dreams
This course is concerned with philosophical questions arising from dreams and dreaming. We will be dealing with contemporary and historical philosophers' work in an exploration of this mysterious and fascinating, yet extremely widespread, activity.

0250. The Meaning of Life
This is an introductory course in ethics, with a focus on the question of what is the nature of the human good, or of a life lived well. Readings will be from classical sources (Aristotle, Epicurus, Kant, Nietzsche, Camus) as well as from contemporary authors. In investigating this question, the course will also introduce students to some of the main problems and positions in moral philosophy. Central concepts such as obligation, responsibility, pluralism, moral knowledge will be discussed, but in the larger context of what is the nature of the good life. No prior work in philosophy will be presupposed.

0350. Ancient Philosophy
We will discuss the ethics, epistemology, and metaphysics of the principal figures in ancient philosophy from the Presocratics to Aristotle. Emphasis is given to understanding the problems the philosophers were trying to solve and to assessing the arguments for their various positions. Primary readings are from the original sources in translation. M. L. Gill.

0360. Early Modern Philosophy
An introduction to central themes in Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. Major topics include: reason, experience, and knowledge; substance and the nature of the world as it really is; induction, causation, and the origin of our ideas; skepticism, realism, and idealism. Connections are made with the scientific revolution of the 17th century. J. Broackes.

0400. Marxism
In the first part of the course, we will examine Marx's economic, political, and philosophical writings, focusing on his analysis of capitalism, his critique of liberal democracy, and his theory of history. Then in the second part, we will look at some recent attempts to renew and extend the Marxist tradition.

0410. Marxism after Marx
A study of current debates in Marxist theories concerning such issues as dialectic market socialism; class, race, and gender; and democracy. Prerequisite: PHIL 0400 or permission of the instructor.

0500. Moral Philosophy
A systematic introduction to the main branches of moral theory, including questions about the nature of value and morality and how it might be known, general theories of what morality requires, and applications of moral theory to concrete moral controversies such as abortion, euthanasia, ethics in war, and obligation to help the needy. N. Arpaly.

0540. Logic
An introduction to perhaps the most fundamental tool of rational thought: deductive logic. Course begins with basic sentential logic, then moves on to deduction, quantification, and
prediction. Argumentation and reasoning may also be addressed at times. No previous experience with logic or philosophy is required.

0560. Political Philosophy
An analytic investigation of some central problems and topics in political philosophy, including political obligation and civil disobedience, liberty, rights, equality, and democracy. Readings are drawn from recent work in the field, along with a few classics. D. ESTLUND.

0570. Environmental Ethics
In the first half of the course, we will ask what sorts of things have value. Does the realm of moral consideration extend past human beings to include animals, plants, and nature itself? How does environmental concern figure into the worthwhile life? What role do consumer goods play in a good life? How do we know? Good intentions are not enough to make good policy. Thus, in the second half of the course, we will try to determine what sorts of policies actually help to protect the environment. We will learn what economics and other social sciences tell us about human behavior and how to shape institutions. We will examine issues in wildlife management, human population, resource use, and more.

0660. Philosophy of Psychology
An introduction to philosophical issues concerning the foundations of psychology and the cognitive sciences. Possible topics include behaviorism and functionalism, mentality and neural processes, mental representation, the computational model of mind, the implications of artificial intelligence, the connectionist model, the role of consciousness in psychology, and the status of psychology as a science.

0700. Philosophy of Religion
This course will discuss a representative group of philosophical issues and problems that arise in connection with religious worldviews. Specific topics may include but are not limited to the following: concepts of a god, the existence and attributes of God, the problem of evil, miracles, religion and morality, faith and science, and the possibility of religious knowledge.

0770. Introduction to the Philosophy Mind
Examines three central mysteries in the philosophy of mind: the relationship between the mind and the body; the nature of thoughts; and the nature of consciousness. Prephilosophical and historical approaches, and discussion of the currently dominant themes.

0850. Philosophy of Language
Discussion of the nature of linguistic meaning and other topics, such as vagueness; metaphor; and language, thought, and culture.

0880. Philosophical Themes in the Contemporary American Short Story
Consideration of contemporary American short stories in terms of their treatment of such philosophical themes as love, loyalty, envy, belief, despair, and charity. Focuses on themes in moral philosophy, rather than themes in social and political philosophy. Enrollment limited to 20. Written permission required. F. N. ACKERMAN.

0990. Undergraduate Seminars
Seminars whose topics change annually. Enrollment in each seminar is limited to 20. Prerequisites are as noted. Enrollment limited to 20. Recent topics include:

09901. The Concept of Alienation
We will read texts concerning the concept of alienation from Hegel, Marx, Kierkegaard, Nietzsche, and Sartre with a view to developing a concept of alienation that proves useful for an understanding of contemporary conditions.
0990K. Topics in the Philosophy of Language
During the first half of the semester, we read several of the classic works that form the background for contemporary philosophy of language, including works by Frege, Russell, Ayer, Quine, and others. During the second half, we take up one or more topics of contemporary discussion, chosen from the following: vagueness, paradoxes of self-reference, the nature of truth, realism versus antirealism.

0990L. Moral Psychology
We all have our notions of good people, bad people, and ordinary people, but reality tends to defy these concepts. Many otherwise "nice," family loving, church going people voted for Hitler. On the other hand, people with very stupid or even evil views about what morality is sometimes turn out to be a lot better "in practice" than their smart counterparts who know Kant by heart. The same person may be very honest with her husband but very dishonest with the IRS and other authorities, brave in battle but scared of public speaking. This class will explore this complexity, touching upon topics like free will and rationality, and read attempts by contemporary philosophers to find some method in the mess.

0990M. Descartes' Meditations
This seminar will focus on the main arguments and overall goals of Decartes' Meditations, read in conjunction with the Objections and Replies and some of Decartes' other writings. Also discussed will be some philosophically engaging studies of the Meditations by contemporary writers such as Harry Frankfurt and Bernard Williams.

0990N. Moral Metatheory: What is Moral Theory Good For?
Moral theory investigates morality, but moral metatheory investigates moral theory. Some problems we'll consider include: Is moral theorizing worthwhile? What's the point of moral theory? What should good theories do? Does widespread disagreement or the reliance on questionable intuitions invalidate moral theorizing? What exactly does the moral theorist know? What counts as good philosophical methodology, and how do we know?

0990O. The Structure of Scientific Revolutions

0990R. Rational Belief
We'll examine a number of issues concerning rational belief. Specific questions will probably include: What is the relationship between rational belief and logic? Is what's rational for me to believe completely determined by my evidence? Does what's rational for me to believe depend on my practical interests? Can I be rational in holding opinions that are denied by others who are seemingly as smart, unbiased, well-informed, etc., as I am? We'll look at these questions from a couple of different perspectives, one which sees beliefs as all-or-nothing states (either one believes P or one doesn't), and the other which sees belief as coming in degrees.

For Undergraduates and Graduates

1250. Aristotle
A close study of Aristotle's major works: his metaphysics, philosophy of nature, philosophy of mind, and ethics. Readings from original sources (in translation) and contemporary secondary material. (Students wishing to read the texts in the original Greek should make arrangements with the instructor.) M. L. Gitl.
1260. **Plato**
A close reading of Plato’s major dialogues from a philosophical perspective. Topics may include his ethics, politics, metaphysics, epistemology, philosophy of mind, philosophy of language, or aesthetics. Readings from original sources (in translation) and contemporary secondary material. (Students wishing to read the texts in the original Greek should make arrangements with the instructor.) M. L. Gill.

1270. **Pragmatism**
Course examines the central themes of American pragmatism - the belief/doubt model of inquiry, assertibility theories of truth, the critique of philosophical dualisms - with some attention to their applications to social philosophy. The focus will be on the classical theories of Peirce, James, and Dewey, as well as on contemporary philosophers such as Quine, Rorty, and Putnam. C. Larmore.

1300. **Philosophy of Mathematics**
An introduction to the philosophy of mathematics. Topics include the nature of mathematical objects and the status of mathematical knowledge. In the first part of the course, we will consider historically-influential views, such as Formalism, Intuitionism, and Logicism. In the second, we will consider contemporary views of mathematics, such as Fictionalism, neo-Fregeanism, and Structuralism. J. Schechter.

1310. **Myth and the Origins of Science**
Examines explanations of the origin of the cosmos, human beings and issues of human concern, such as illness, death and the afterlife, with readings from literary, philosophical, and scientific sources from the ancient Near East and Greece. We will ask how we and the ancients distinguish science from non-science and how ancient science differs from our own. M. L. Gill.

1400. **Philosophy in the Novel**
Consideration of novels in terms of their treatment of such philosophical themes as death, courage, faith, betrayal, responsibility to others, and mercy. Focuses on themes in moral philosophy rather than themes in social and political philosophy. Half of the course deals with Malory, the other half with contemporary American novels. F. N. Ackerman.

1420. **Philosophy and Poetry**
An examination of philosophy and poetry as rival avenues to the apprehension of truth, as well as an introduction to the basic problems of aesthetics. Philosophical readings will range from Plato to Hegel to contemporary writers. The focus of the course will be three philosophical poems: Lucretius' *On the Nature of Things*, Wordsworth's *Prelude*, and Eliot's *Four Quartets*. One previous course in philosophy is recommended.

1430. **Feminist Philosophy**
A rigorous philosophical examination of five topics addressed in contemporary feminist writing: justice and gender; gender justice and developing countries; the social construction of gender, sexuality, and sexual orientation; the claim that women reason differently and have different ways of knowing and arguing; and radical feminism on pornography, rape, and intercourse. Prerequisite: one semester course in philosophy.

1450. **Aesthetics**
This course will treat Kant's contribution to philosophical aesthetics. We will study his theory of the beautiful as well as his theory of the sublime; the latter one has been particularly appreciated in post-modern debates. Our work will be centered upon two guiding issues: (1) Kant's distinction between aesthetics and ethics on the one hand, and his exploration of their deep-rooted connection on the other hand; (2) the importance of the reflective power of judgment within the scope of Kant's overall philosophical project. Both issues lead to the
question of what it means for human beings to be capable of approaching the world aesthet-
ically.

1500. **Methodology of Philosophy**
Does successful philosophical inquiry yield new facts or new ways of looking at old facts? Is philosophical truth absolute or relative? Relative to what? Why does philosophy lack not only a body of generally agree-upon truths, but even an established method of settling disputes? Must the results of philosophical inquiry accord with "common sense" and if so, why?

1520. **Consciousness**
Topics will include: forms of consciousness, physicalist and representationalist theories of qualia, pain and other bodily sensations, emotional experience, conscious thought, higher order representation theories of consciousness, self-representation theories, global workspace theories, blindsight and related phenomena, and the roles of attention and working memory in perceptual consciousness. Enrollment limited to 50. C. Hill.

1550. **Decision Theory: Foundations and Applications**
Decision theory is a formal apparatus for analyzing preferences and choices. Students learn the formal theory and then examine its foundations and philosophical implications. Specific topics: the role of causation in decision problems, the status of the axioms of the theory, problems of infinite utility, rudimentary game theory, social choice functions, utilitarianism as a theorem. J. Dreier.

1590. **Philosophy of Science**
Examines philosophical issues concerning science such as observational versus theoretical concepts, the nature of laws and theories, the logic of scientific explanation, reduction of concepts and theories, probability and confirmation, functional and teleological analysis, scientific changes and revolutions, and the realist versus irrealist interpretation of theories. D. Kutach.

1600. **Philosophy of Law**
Philosophical examination of the chief classical and contemporary theories of the nature and function of law. Topics include the definition of law, the nature of legal systems, the logic of legal reasoning, the analysis of basic legal conceptions (e.g., of right and duty), legal rules and principles, law and justice, and law and morality. J. Dreier.

1610. **Philosophy of Relativity Physics**
This course will examine how Einstein’s Special and General Theory of Relativity bears on important philosophical issues with a focus on whether spacetime constitutes a kind of substance and what spacetime structures are required to support explanations of physical phenomena. Also discussed are connections with logical positivism, cosmology, spacetime singularities, determinism, wormholes, time travel, causation, and the passage of time. D. Kutach.

1620. **Philosophy of Quantum Mechanics**
Course will analyze interpretations of non-relativistic quantum mechanics like the Copenhagen interpretation, Everett’s relative state interpretation, the many-worlds/many-minds interpretations, GRW-type collapse models, Bohm’s interpretation, and various modal interpretations. The focus will be the measurement problem, but we will also discuss connections with mental states, the contextual nature of measurement, non-locality and spacetime. D. Kutach.

1630. **Deductive Logic**
This course provides a rigorous introduction to the metatheory of classical first-order predicate logic. Topics covered include the syntax, formal semantics, and proof theory of first-order logic, leading up to the completeness theorem and its consequences (the compactness
and Lowenheim-Skolem theorems). Further topics may include modal logic, the logic of conditionals, basic set theory, and epistemic logic. There will be some discussion of philosophical issues, but the focus of the course will be on the technical material. PHIL 0540 or the instructor’s permission is required. J. SCHECHTER.

1640. *The Nature of Morality*
Investigates major theories and issues concerning the nature of moral value. Readings from 20th-century authors. Issues include naturalism, supervenience, moral motivation, subjectivity/objectivity of value, skepticism, moral relativism, and moral realism. J. DREIER.

1650. *Moral Theories*
A systematic examination of the main alternative normative moral theories: consequentialism; moral rights; moral duties; moral virtues. Focuses on the principal issues in the formulation of the different theories, on the main points of conflict between them, and on the critical evaluation of each. Readings are drawn mainly from contemporary work in moral philosophy. N. ARPALY.

1660. *Metaphysics*
Selections from the following topics: causation and determinism, identity and persistence, including personal identity, necessity and possibility, essence and essentialism, freedom and agency, ontology, substances and events, the nature of time, realism and antirealism. Prerequisite: two courses in philosophy. J. BROACKES.

1670. *Time*
Course will focus on two questions: “Does time flow?” and “What is the difference between the future and the past?” This involves issues of fate, our consciousness of time, the connection between time and motion, and time travel. We’ll discuss arguments from classical Greek and medieval Arabic philosophy and bring modern physics to bear on these questions. D. KUTACH.

1680. *Medieval Philosophy*
Since the Renaissance, medieval philosophy has often been unjustly dismissed as arcane and irrelevant, despite impressive innovations in ethics, philosophy of mind, metaphysics, and logic. Instead of surveying so vast a field, the course focuses on one or two sets of problems, such as the problem of evil, the freedom of the will, the existence of God, universals, substance, mind and meaning.

1690. *The Problem of Free Will*
This course is an investigation into how we should understand our free will if we have free will at all. Topics for reading and discussion will be selected from among: conditions for moral responsibility, praise- and blameworthiness, alternate possibilities, responsiveness to reasons, fatalism, determinism, and the possibility of meaning in a deterministic universe. Prerequisite: one previous course in philosophy, or permission of the instructor.

1700. *British Empiricists*
A detailed study, both historical and critical, of central issues in Locke, Berkeley, and Hume. Topics include a selection from: innate ideas; substance; personal identity; abstract ideas; theory of language; perception, materialism, and idealism; induction and causation; and skepticism. Also includes some discussion of later critics of classical empiricism. J. BROACKES.

1710. *17th Century Continental Rationalism*
A detailed study, both historical and critical, of selected writings of Descartes, Spinoza, and Leibniz, with special attention to their conceptions of substance, mind, knowledge, and freedom. Readings include contemporary discussions of these philosophers. Prerequisite: one course in philosophy.
1720. Kant: The Critique of Pure Reason
A detailed study of Kant's theoretical philosophy in the Critique of Pure Reason, which we will read in its entirety alongside contemporary secondary source material. Prerequisites: PHIL 0360, 1700, 1710 or instructor permission.

1730. Nietzsche
A systematic study of Nietzsche’s philosophy as it developed throughout his works. Substantial attention also given to Nietzsche’s major philosophical predecessors (e.g., Kant and Schopenhauer) as well as to the most significant recent secondary literature on his philosophy. Prerequisite: at least one prior course in philosophy. B. Reginster.

1740. Nineteenth-Century Philosophy
This course will treat 19th century German philosophy. We will examine the development leading from German Idealism to Nietzsche. Starting and focal point of all debates in 19th century German philosophy is the work of Immanuel Kant. Therefore basic ideas of Kant's philosophy will be discussed first. The German idealists criticized Kant for what they called his "dualism" which they thought splits up life's unity into unrelated aspects. A special concern brought up was Kant's alleged negligence of both what is different from reason and what is beyond its scope. In this context we will be reading Jacobi's famous letter to Fichte in which he raised the issue of impending nihilism, parts of Hegel's Faith and Knowledge, and Schelling's Philosophical Investigations into the Essence of Human Freedom. Arthur Schopenhauer passionately opposed the systems of German Idealism (though his own philosophy has quite a bit in common with them). He emphasized the limitations of reason's power. We will be studying selected pieces from his main work The World as Will and Representation. Thus prepared, we will move on to Nietzsche who reflects and criticizes all the tendencies of 19th century philosophy, casting doubt on traditional conceptions of reason, morality, truth, and religion. The threat of nihilism reappears, even stronger and even more provocative. We will be studying Nietzsche's analyses as well as his answers. B. Reginster.

1750. Epistemology
This course provides a survey of central issues in contemporary epistemology. We will discuss the nature of knowledge, justification, and rationality. Topics include: difficulties with the traditional analysis of knowledge, skepticism about the external world, the nature of empirical justification, the problem of induction, and the epistemology of the a priori. J. Schechter.

1760. Philosophy of Language
This course examines recent philosophical work in natural language semantics. The focus is on names and descriptions. We will consider which kinds of propositions sentences containing these terms express, and their truth conditions. We may also examine belief reports and vague terms, and other theoretical issues. Prerequisite: PHIL 0540 or 1630. Written permission of instructor is required of all students. C. Hill.

1770. Philosophy of Mind
Questions concerning the nature of mentality and its relation to the body. Selections from the following topics: mind and behavior, mind as the brain, mind as a computing machine, thought and language, action and mental causation, intentionality and consciousness, emotion and volition, the nature and possibility of a science of mind. Prerequisite: at least one course in philosophy (2 or more preferred) or a background in cognitive science. J. Kim.

1780. Philosophy of Biology
General problems in the philosophy of science as they apply specifically to the biological sciences. Issues include the status of biological and neurobiological laws, "property reductionism" and emergentism in relation to the thesis of vitalism, evolutionary explanation,
ethical and cultural influences on genetic research, and gender bias in scientific theorizing and gender research in the biological sciences.

1790. Philosophy of the Social Sciences
An examination of philosophical questions raised by the idea of distinctively social sciences such as economics, political science, sociology, history, and psychology. Readings from traditional and contemporary philosophers on such topics as individualism, rationality, interpretation, and value neutrality. Three short papers and weekly (very) short writing assignments.

1800. Topics in Political Philosophy

1800A. Anarchism, Libertarianism, and Authority
Examines arguments challenging the idea that state power is ever morally justified, and the idea that there is any obligation to obey the law. Also considers a more moderate class of views that holds that state power is justified only for very narrow purposes such as keeping peace, but not including most of the things that modern states do. A previous course in moral or political philosophy is recommended.

1810. Topics in Philosophy of Language
Prerequisite: One course in Logic.

1820. Philosophy and Psychoanalysis
The course proposes a philosophical examination of a variety of psychoanalytical theories beginning with classical Freudian theory and including ego psychology, various relational theories (object relations, intersubjectivity, and attachment theories), and self psychology. The course might also consider some of the philosophical sources of psychoanalytic theory, its interaction with recent developmental research, and its applications in literary and cultural studies. B. Reginster.

1830. Twentieth-Century Analytic Philosophy
This course will cover major philosophers and movements of the 20th century philosophy in the analytic tradition, from the early ground-breaking works of Frege, Russell, and Wittgenstein through Logical Positivism, “ordinary language” philosophy, Quine, and the later developments. Philosophical issues discussed concern philosophy of language, metaphysics, epistemology, philosophy of science, ethics, and the nature and possibility of philosophy. J. Schechter.

1840. Twentieth-Century Continental Philosophy
The course will focus on the main figures of the German tradition--Husserl, Heidegger, Cassirer, Gadamer, Adorno, Habermas, and Tugendhat, with emphasis on their efforts to rethink such key concepts as consciousness, history, reason, and the self. Some attention will be paid to points of intersection with German-language philosophers traditionally considered "non-Continental"-Frege, Wittgenstein, and the Vienna Circle. B. Reginster.

1850. Philosophical Logic
An examination of various philosophical issues arising in the foundations of logic, such as the following: existence, definite description, reference and truth, semantic paradoxes, implication and presupposition, modalities and “possible worlds,” logical truth, the nature of logical knowledge, and logic in natural language. Prerequisite: PHIL 1630 or the permission of the instructor.

1880. Advanced Deductive Logic
An introduction to the 'limitative' theorems of deductive logic, including the undecidability of first-order logic, the Gödel incompleteness theorems, and the arithmetical undefinability of arithmetical truth. Intended as a sequel to PHIL1630; previous participation in either that course or one of similar content is strongly recommended.
1890. Topics in Twentieth-Century Philosophy

Recent topics include:

1890A. Contextualism and Naturalism in Twentieth-Century Epistemology
Topics include the epistemological ideas of the later Wittgenstein; the "epistemological naturalism" that P. F. Strawson finds in Wittgenstein (and in Hume), and adopts as his own philosophy, early and late; naturalized epistemology, as defined by W. V. Quine; and varieties of contextualism in the epistemology of recent decades, including selections from the work of Robert Nozick, Fred Dretske, Peter Unger, and, most recently, David Lewis.

1890B. Wittgenstein
A detailed study, concentrating on themes in the Philosophical Investigations. Readings also in some earlier works of Wittgenstein, Frege, and Russell that provide the background to Wittgenstein's break with his former views. Topics include a selection from the picture theory of the proposition, logical atomism, understanding and meaning, rules and rule-following, "private languages," imagination, grammar and necessity, and skepticism and certainty. Prerequisite: three courses in philosophy.

1890C. Philosophy and Science of Perception
This course is structured around close examination of Wilfrid Sellars's classic essay "Empiricism and the Philosophy of Mind. Additional readings set the work in its historical context (reductionist views of mind, foundationalist epistemology, and scientific instrumentalism), and include Ayer, Carnap, Chisholm, Hempel, Price, Schlick, Skinner, and Ryle.

1890D. Theories of Truth
No question more reeks of philosophy than the question "What is truth?" We'll look at what logicians have had to say about the matter and, in particular, at what they have had to say about the Liar Paradox.

1910. Topics in the History of Philosophy
A study of the major figures and unifying themes of classical German philosophy, focusing on Kant, Fichte, Schelling, and Hegel. Also includes discussion of such figures as Jacobi, Reinhold, Maimon, Hölderlin, and Novalis.

1910A. Currents in American Pragmatism: Peirce to Putnam
Pragmatism is a uniquely American contribution to philosophy. This course analyzes the development of pragmatism by investigating the work of Peirce, James, Quine, Richard Rorty, and Putnam. Special emphasis is placed on the role played by recent pragmatism in the realism/antirealism debate.

1910B. Intentionality in Brentano, Meinong, Husserl
Intentionality—that feature of our mental states in virtue of which they are of or about something—was a central theme for a number of philosophers working in Vienna at the turn of the century, including most prominently Franz Brentano, Alexius Meinong, and Edmund Husserl. Their work influenced both phenomenological and analytic traditions, including Freud, Heidegger, Moore, Russell, and Ryle.

1910C. German Idealism
A study of the major figures and unifying themes of classical German Philosophy, focusing on Kant, Fichte, Schelling, and Hegel. Also includes discussion of such figures as Jacobi, Reinhold, Maimon, Hölderlin, and Novalis.

1990. Topical Investigations
An elective for seniors with at least six previous courses in philosophy.
Primarily for Graduates

Recent topics include:

2020H. The Self
2020I. Physicalism and Dualist Alternatives
2020J. Understanding Actions
2020K. Current Issues in the Metaphysics of Mind

2030. Seminar N. Arpaly.
Recent topics include:

2030A. Moral Psychology
We all have our notions of good people, bad people, and ordinary people, but reality tends to defy these concepts. Many otherwise "nice", family loving, church going people voted for Hitler. On the other hand, people with stupid or even evil views about morality sometimes turn out to be a lot better "in practice" than their smart counterparts who know Kant by heart. The same person may be very honest with her husband but very dishonest with IRS, brave in battle but scared of public speaking. In this class we shall explore this complexity, touching upon topics like rationality, free will, weak will, character, and love. We'll look at attempts by contemporary philosophers to find some method in the mess.

2040. Seminar C. Larmore.
Recent topics include:

2040C. The Philosophy of A. N. Prior
2040D. Contractarianism and Its Limits
Can morality, and justice in particular, be rightly understood as a contract or agreement for mutual benefit? This seminar focuses on the strengths and weaknesses of the social contract tradition, looking chiefly at contemporary authors such as Rawls, Gauthier, Dworkin, Scanlon, and Nussbaum.

2040E. Freedom

2040F. The Philosophy of Bernard Williams
Bernard Williams was one of the most important philosophers of the 20th century. The seminar will focus on his ethical thought, with some attention to his writings in philosophy of mind, epistemology, and the history of philosophy.

2060. Seminar C. Hill.
Recent topics include:

2060C. Qualia
2060D. Recent Work in Non-Consequentialist Moral Theory
2060E. Consciousness
2060F. Epistemology and Metaphysics of Perception
After a review of such traditional epistemological topics as Cartesian and Pyrrhonian skepticism about perceptual knowledge, the argument from hallucination, and the argument from perceptual relativity, we will consider the account of the relationship between perception and knowledge that is provided in Anil Gupta's recent book, Empiricism and Experience. We will then turn our attention to topics in the metaphysics of perception, including colors and color experience, the representational
content of perceptual experience, perceptual quality spaces, and perceptual consciousness.

2060G. Other Minds

2070. Seminar J. Dreier.
Recent topics include:

2070G. Relativism and Nihilism
2070H. Instrumental Reason
2070I. Selected Topics in Metaethics
2070J. Measuring Value

2090. Seminar K. Dunlop.
Recent topics include:

2090A. Kant on Self-Knowledge
Our main reading will be the "Paralogisms" section of the *Critique of Pure Reason*, with attention to its (early modern) historical context.

2100. Seminar D. Estlund.
Recent topics include:

2100E. The Philosophy of John Rawls
2100F. Democratic Authority
2100G. Liberal Rights in Democratic Theory: Two New Books
2100H. Ideal Theory and Political Philosophy

2110. Seminar J. Broackes.
Recent topics include:

2110D. Hume
2110E. Soul and Mind in Plato, Aristotle, and Descartes
2110F. Locke
2110G. Philosophy of Iris Murdoch
We will concentrate on Murdoch's *Existentialists & Mystics*, together with her near-contemporaries, e.g. Simone Weil, Hare, Sartre, and successors like John McDowell and Rosalind Hursthouse. Topics include: moral realism, moral perception, virtue, the notion of Good, the Platonic idea of an ascent to the Good; and perhaps Murdoch's views on aesthetics, developed in dialogue with Kant and Plato.

Recent topics include:

2120D. Philosophy of Mathematics
2120H. Vagueness and Logic
2120I. Frege
2120J. Philosophy of Language

2130. Seminar D. Kutach.
Recent topics include:

2130A. Causation and Physics
2130B. **Conditionals**
We will survey the philosophical literature on the semantics of conditionals. Debate will focus on (1) various logical systems describing counterfactuals, (2) whether conditionals have truth conditions, assertibility conditions, or some other semantic structure, and (3) the classification of conditionals into subjunctives and indicatives.

2130C. **Physicalism**

2140. **Seminar J. Schechter.**
Recent topics include:

2140A. **The A Priori**

2140B. **Recent Works in Epistemology**
In this seminar, we will discuss contemporary issues in epistemology. In the first half of the course, we will discuss recent monographs on knowledge by Williamson, Hawthorne and Stanley. In the second half of the course, we will discuss epistemic relativism, the possibility of reasonable disagreement, among other topics.

2140C. **The Epistemology and Metaphysics of Modality**

2150. **Seminar M. L. Gill.**
Recent topics include:

2150E. **Value Theory**

2150F. **Plato**

2150G. **Aristotle's Metaphysics**

2150H. **Plato's Republic**

2160. **Seminar F. N. Ackerman.**
Recent topics include:

2160C. **Ethics and Character in Malory's Le Morte D'Arthur**

2160D. **Literature and the Philosophy of Mind: Emotion, Reason, and Action in Malory's "Le Morte D'Arthur"**

2160E. **Plato**

2160F. **Ethics**

2160G. **Moral, Social, and Political Philosophical Issues in Malory's Morte d'Arthur**

2160H. **Disability, Fiction, and Bioethics**
This seminar focuses on fiction as a vehicle for exploring conceptual, ethical, and social issues involving sensory, mobility, and cognitive disabilities. Topics include the following. What is disability? What is "normality"? What are the conceptual and empirical relations between disability and illness? How do disabled people see themselves? How do others see them? In what senses, if any, do various disabilities make disabled people worse off? What is disability pride? Should pride, traditionally one of the seven deadly sins, now be considered a virtue? Is it rational for non-disabled people to fear being disabled? Is it rational for disabled people to want to be "cured"? To want not to be? What do non-disabled people owe disabled people and vice versa? How can fiction aid in the philosophical analysis and discussion of such questions? Fiction writers discussed include Doris Lessing, Flannery O'Connor, Joanne Greenberg, Allen Barnett, Rosellen Brown, and others. Analytic philosophers and bioethicists, including Ronald Dworkin, Susan Wendell, Anita Silvers, and others, provide philosophical grounding for these discussions. This seminar is open to
undergraduate and graduate students with background in philosophy, social sciences, biological sciences, or literature.

2160. Philosophical Issues About Human Longevity

2170. Seminar B. Reginster.
Recent topics include:

2170C. Nietzsche's Ethical Thought
2170D. Philosophy Issues about Love
2170E. Themes in Nineteenth-Century Ethics and Moral Psychology
2170F. Philosophical Issues from Freud

The seminar will propose a discussion of a range of issues in philosophy of mind and philosophical psychology inspired by Freud's psychoanalytic theory. These issues will include the problem of irrationality, with particular attention given to the case of self-deception; the concept of the unconscious; the concept of a drive and the idea of a drive psychology; the sources of moral agency; and various technical notions bearing on all these basic issues, such as repression, identification, internalization, narcissism, sublimation, fantasy, and so on. Seminar discussions will be based on readings from Freud, and on secondary sources from recent philosophers, including Davidson, Johnston, Gardner, Deigh, Scheffler, Hopkins, Wollheim and others.

2200. Graduate Proseminar
Will cover classics of philosophy from the end of the 19th century to the end of the 20th; including moral as well as metaphysics, epistemology and philosophy of language. Instructor permission required. R. Heck, J. Broackes, N. Arpaly, and others.

2800. Dissertation Workshop

2900. Thesis Preparation

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. Research in Philosophy
Section numbers vary by instructor. Please see the registration staff for the correct section number to use when registering for this course.

2990. Thesis Preparation

**Physics**

Professors Cooper, Cutts, Elbaum*, Estrup Fried, Gaitskell, Glicksman, Guralnik, Jevicki, Kosterlitz, Lanou, Landsberg, Lawandy, Levin, Ling, Maris, Marston, Maxson, Narain, Partridge, Pelcovits, Seidel, Shapiro, Tan, Tauc, Valles (Chair), Weiner, Westervelt, Xiao, Ying; Associate Professors Dell’Antonio, Feldman, Lowe, Mitrovic, Tang, Tucker; Associate Professor (Research) Intrator; Assistant Professors Koushiappas, Spradlin, Stein, Volovich; Assistant Professors (Research) Li, Neretti, Nesovics, Speer; Adjunct Professors Ala-Nissila, Brower, Cote, Granato; Adjunct Assistant Professors Antonelli, Morath; Adjunct Associate Professor Targan; Adjunct Lecturer Jariwala.
The department aims to develop in its students a comprehensive grasp of the principles of physics, together with a productive capacity in research. The courses of study are flexible in subject matter and are conducted by means of lectures, seminars, laboratories, and colloquia. Undergraduate as well as graduate students have opportunities to carry out research in fields of current interest.

The principal research fields of the department are condensed matter physics, elementary particle physics, low-temperature physics, nonlinear optics, physical acoustics, astrophysics, biological physics, and cosmology. Interdisciplinary study and research, coordinated with other departments, is encouraged for students interested in brain and neural science, semiconductor physics, geophysics, physics of solid continua, polymer physics, and computational physics, as well as other fields.

Undergraduate Programs
For a complete description of the following standard concentration programs leading to the bachelor’s degree please visit:
http://www.brown.edu/Administration/Registrar/concentration.html
- Astronomy
- Engineering and Physics
- Geology-Physics/Mathematics
- Mathematics-Physics
- Philosophy and Physics
- Physics

Graduate Programs

Master of Science. The minimum requirements for this degree consist of eight courses or equivalent. These would normally be 2000-level physics courses, e.g., the core courses PHYS 2010, 2030, 2040, 2050, 2060, 2080, 2140, 2170, 2410. Other courses outside the department or 1000-level courses can be substituted by permission of the physics department. No more than two courses can be research courses. The usual program for a half-time assistant is the same as Semesters 1–3 of the Ph.D. program described below. These courses and the general requirements of the Graduate School lead to the master’s degree.

Doctor of Philosophy. The usual program for a half-time assistant is shown below; other arrangements are possible, depending on the student’s background, interests and special requirements.

Semester 1: PHYS 2050, 2030, and one elective (or PH 201). Semester 2: PHYS 2010 (or one elective), 2060 and 2040. Semester 3: PHYS 2070, 2080, and 2410. Semester 4: PHYS 2140, 2170 (if not taken earlier), and one or two electives. Semester 5: PHYS 2410 (if not taken earlier), and one or two electives. A qualifying examination is given at the beginning of Semester 3, and the preliminary examination is given during Semester 5. These examinations may be taken earlier, by permission of the department. There are six required core courses (PHYS 2010, 2030, 2040, 2050, 2060, 2140) and in addition a minimum of four advanced courses need to be completed beyond the core courses. These courses and examinations, together with the general requirements of the Graduate School, including a research thesis, lead to the Ph.D.

Students with insufficient preparation in certain subjects may postpone some of the usual first-year programs and take courses on the 1000-level.
All new graduate students take a diagnostic examination during the registration period preceding their first semester. The results of this examination are used solely as an aid to the selection of suitable courses.

For additional information please visit the department’s website at:
http://www.physics.brown.edu/

Courses of Instruction

Primarily for Undergraduates

0010. Introduction to the Meaning and Structure of Physics
A wide-ranging introduction to physics for nonscientists that emphasizes the fundamental principles and ideas underlying the field of physics. Focuses on three "great" ideas: Newton's laws of mechanics and universal gravitation, Einstein's theory of relativity, and the development of quantum mechanics. Lecture demonstrations and nonconventional laboratory sections illustrate the concepts discussed in class. Knowledge of high school algebra is sufficient background. Not designed to satisfy medical school admission requirements.

0020. From Quanta to Quarks, for the Nonscientist
This course is aimed at students of the Arts, Humanities, and Social Sciences, who would appreciate a non-mathematical presentation of the revolutionary discoveries of fundamental Physics of the Twentieth Century. The Lectures begin with Einstein's Relativity and Planck's Quantum Hypothesis, descend into the realms of Atoms and Nuclei, and end with the current limits of our knowledge, the Quark Model of the elementary particles.

0030, 0040. Basic Physics
Survey of mechanics, electricity, magnetism, optics, and modern physics for concentrators in sciences other than physics-including premedical students or students without prior exposure to physics who require a less rigorous course than PHYS 0050, 0060. Employs the concepts of elementary calculus but little of its technique. Lectures, conferences, and laboratory. Six hours of attendance. Recommended: MATH 0090 or 0100.

0050. Foundations of Mechanics
An introduction to Newtonian mechanics that employs elementary calculus. Intended for science concentrators. Potential physics concentrators, who do not have adequate preparation for PHYS 0070, may enroll, but are urged to continue with PHYS 0160 rather than PHYS 0060. Lectures, conferences and laboratory. Six hours of attendance. Prerequisites: PHYS 0050. Recommended: MATH 0090 or MATH 0100.

0060. Foundations of Electromagnetism and Modern Physics
An introduction to the principles and phenomena of electricity, magnetism, optics, and the concepts of modern physics. Recommended for those who wish to limit their college physics to two semesters but seek a firm grounding in the subject, including but not limited to those with some previous knowledge of physics. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisite: PHYS 0050. Recommended: MATH 0100.

0070. Analytical Mechanics
A mathematically more rigorous introduction to Newtonian mechanics than PHYS 0050. For first-year students and sophomores who have studied physics previously and have completed a year of calculus. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisites: high school physics and calculus or written permission.
0100. Flat Earth to Quantum Uncertainty: On the Nature and Meaning of Scientific Explanation
Physics has had a dramatic impact on our conception of the universe, our ideas concerning the nature of knowledge, and our view of ourselves. Philosophy, sometimes inspired by developments in physics, considers the impact of such developments on our lives. In this seminar, students will explore how classical and modern physical theory have affected our view of the cosmos, of ourselves as human beings, as well as our view of the relation of mathematical or physical structures to 'truth' or 'reality.' Through a study of physics as well as selected philosophical readings, we will consider how we can know anything, from seemingly simple facts to whether a machine is conscious. Enrollment limited to 20 first year students.

0110. Excursion to Biophysics
This new course aims at freshmen with good preparation in high school physics, chemistry and biology, but who have not had a set mind what specific disciplines to focus on in their college study at Brown. The course will introduce important physics concepts and techniques relevant to biology and medicine, such as diffusion and transport of molecules and intracellular components, Brown motion and active swimming of microbes, motion of particles confined by a harmonic potential, Boltzmann distribution, exponential growth or decay, and statistics of single molecule behavior. The goal of the course is to cultivate interest and provide essential basics for more rigorous study of biological physics as a branch of interdisciplinary science. Enrollment limited to 20 first year students.

0120. Adventures in Nanoworld
Richard Feynman famously said, "There's plenty of room at the bottom," about the possibility of building molecular-size machines operating according to Quantum Mechanics. Scientists are now learning the art, and students in this course will use basic physics and simple mathematical models to understand the phenomena and materials in the nanoworld. Non-science concentrators and potential science concentrators alike will learn about important classes of nanosystems such as macromolecules, nanotubes, quantum dots, quantum wires, and films. We will learn how people make nanosystems and characterize them. We will consider existing and potential applications of nanotechnology, including molecular motors, nanoelectronics, spintronics (which received the latest Nobel prize in Physics), and quantum information.

0121. Introduction to Environmental Physics: The Quantum Mechanics of Global Warming
We will use basic physics and simple mathematical models to investigate climate change, energy and entropy, the dispersal of pollutants, solar power, and other aspects of environmental science. Lectures will be supplemented with demonstrations of key physical principles. Emphasis will be placed on quantitative reasoning.

0150. Brief History of Time
An introduction to modern cosmology for nonphysicists. Topics include: the nature of space and time, the expanding universe, black holes, and the origin of structure in the universe. Attempts to bridge the gap between sciences and humanities. No mathematics other than high school algebra is assumed. Willingness to be challenged by bold new ideas and an inquisitive mind are prerequisites.

0160. Introduction to Relativity and Quantum Physics
A mathematically rigorous introduction to special relativity and quantum mechanics. The second course in the three-semester sequence (PHYS 0470 being the third) for those seeking the strongest foundation in physics. Also suitable for students better served by an
introduction to modern physics rather than electromagnetism. Lectures, conferences, and laboratory. Six hours of attendance. Prerequisite: PHYS 0070 or 0050. Recommended: MATH 0180 or 0200.

0210. Beginning Astronomy
Semester I: historical and conceptual developments and the study of the solar system. Semester II: stars and their evolution, our galaxy, and the universe at large. Considers the role of pulsars, quasars, neutron stars, and black holes in modern views of the universe. Three hours of attendance. See also PHYS 0270. Either semester may be taken independently.

0220. Beginning Astronomy
See Beginning Astronomy (PHYS 0210) for course description.

0270. Introduction to Astronomy
A complete survey of basic astronomy, more rigorous than is offered in PHYS 0220. Requires competence in algebra, geometry, trigonometry, and vectors and also some understanding of calculus and classical mechanics. Laboratory work required. This course or an equivalent required for students concentrating in astronomy. The course includes conferences and evening laboratory sessions.

0280. Introduction to Astrophysics and Cosmology
A survey of astrophysical phenomenology and the application of physical theory to its interpretation. Prerequisites: PHYS 0040, 0060, 0160 or written permission.

0470. Electricity and Magnetism
Electric and magnetic fields. Motion of charged particles in fields. Electric and magnetic properties of matter. Direct and alternating currents. Maxwell's equations. Laboratory work. Prerequisites: PHYS 0040, 0060, or 0160, and MATH 0090 or 0100. Labs meet every other week.

0500. Advanced Classical Mechanics
Dynamics of particles, rigid bodies, and elastic continua. Normal modes. Lagrangian and Hamiltonian formulations. Prerequisites: PHYS 0070, 0160 or 0050, 0060 and MATH 0180 or 0200; or approved equivalents.

0560. Experiments in Modern Physics
Introduction to experimental physics. Students perform fundamental experiments in modern quantum physics, including atomic physics, nuclear and particle physics, and condensed matter physics. Visits to research labs at Brown acquaint students with fields of current research. Emphasizes laboratory techniques, statistics, and data analysis. Three lecture/discussion hours and three laboratory hours each week. Required of all physics concentrators. Prerequisites: PHYS 0070, 0160 or 0050, 0060; 0470.

0720. Methods of Mathematical Physics
This course is designed for sophomores in physical sciences, especially those intending to take sophomore or higher level Physics courses. Topics include linear algebra (including linear vector spaces), Fourier analysis, ordinary and partial differential equations, complex analysis (including contour integration). Pre-requisites: PHYS 0060 or 0160, MATH 0180, 0200 or 0350, or consent of the instructor.

0790. Physics of Matter
An introduction to the principles of quantum mechanics and their use in the description of the electronic, thermal, and optical properties of materials. Primarily intended as an
advanced science course in the engineering curriculum. Open to others by permission. Prerequisites: ENGN 0040, APMA 0340 or equivalents.

For Undergraduates and Graduates

1100. *Introduction to General Relativity*
An introduction to Einstein’s theory of gravity, including special relativity, spacetime curvature, cosmology and black holes. Prerequisites: PHYS 0500 and MATH 0520 or MATH 0540 or equivalent, or permission of the instructor. Recommended: PHYS 0720. Offered every other year.

1170. *Introduction to Nuclear and High Energy Physics*
A study of modern nuclear and particle physics, with emphasis on the theory and interpretation of experimental results. Prerequisites: PHYS 1410, 1420, or written permission.

1250. *Stellar Structure and the Interstellar Medium*
This class is an introduction to the physics of stars and their environment. The course covers the fundamental physics that set the physical properties of stars, such as their luminosity, size, spectral properties and how these quantities evolve with time. In addition, it includes a study of the physics that takes place in the gaseous environment surrounding stars, the InterStellar Medium (ISM). The ISM is very important because it contains a wealth of information on the evolutionary history of galaxies, their composition, formation and future. Prerequisites: PHYS 0270, PHYS 0500, or instructor permission. PHYS 1530 (perhaps taken concurrently) is strongly recommended but not required.

1270. *Extragalactic Astronomy and High-Energy Astrophysics*
This course provides an introduction to the astrophysics of galaxies, their structure and evolution, with an emphasis on physical introduction of the observations. Underlying physics concepts such as radiative transfer, nuclear reactions and accretion physics will be introduced. Intended for students at the junior level. Prerequisites: PHYS 0270 and PHYS 0470, and either MATH 0190 or MATH 0200, or instructor permission.

1280. *Introduction to Cosmology*
The course presents an introduction to the study of the origin, evolution and contents of the Universe. Topics include the expansion of the Universe, relativistic cosmologies, thermal evolution, primordial nucleosynthesis, structure formation and the Cosmic Microwave Background. Prerequisites: PHYS 0160, MATH 0190, or MATH 0200, or instructor permission.

1410, 1420. *Quantum Mechanics A, B*
A unified treatment of quanta, photons, electrons, atoms, molecules, matter, nuclei, and particles. Quantum mechanics developed at the start and used to link and explain both the older and newer experimental phenomena of modern physics. Prerequisites: PHYS 0500 and 0560; and MATH 0520, 0540 or PHYS 0720; or approved equivalents.

1510. *Advanced Electromagnetic Theory*
Maxwell's laws and electromagnetic theory. Electromagnetic waves and radiation. Special relativity. Prerequisites: PHYS 0470 and MATH 0180 or 0200, or approved equivalents.

1530. *Thermodynamics and Statistical Mechanics*
The laws of thermodynamics and heat transfer. Atomic interpretation in terms of kinetic theory and elementary statistical mechanics. Applications to physical problems. Prerequisites: MATH 0180 or 0200. Corequisite: PHYS 1410.
1560. Modern Physics Laboratory
A sequence of intensive, advanced experiments often introducing sophisticated techniques. Prerequisites: PHYS 0470, 0500 and 0560; and MATH 0520, 0540 or PHYS 0720; or approved equivalents.

1600. Computational Physics
This course provides students with an introduction to scientific computation, primarily as applied to physical science problems. It will assume a basic knowledge of programming and will focus on how computational methods can be used to study physical systems complementing experimental and theoretical techniques. Prerequisites: PHYS 0070, 0160 (or 0050, 0060) and 0470 (or ENGN 0510); MATH 0180 or 0200 or 0350; the ability to write a simple computer program in Fortran, Matlab, C or C++.

1610. Biological Physics
Introduction on structures of proteins, nucleotides, and membranes; electrostatics and hydration; chemical equilibrium; binding affinity and kinetics; hydrodynamics and transport; cellular mechanics and motions; biophysical techniques including sedimentation, electrophoresis, microscopy and spectroscopy. Suitable for undergraduate science and engineering majors and graduate students with limited background in life science. Prerequisites: MATH 0180.

1970. Special Topics in Experimental and Theoretical Physics
1970A. Stellar Physics and the Interstellar Medium
1970B. Introductory Optics
Introduction to optical principles and techniques. Offered to students who have a foundation in physics and are especially interested in optics. The course covers the interaction of light with matter, geometric and wave optics, polarization, fluorescence, and optical instruments (e.g. interferometer, spectrometer, microscope and telescope). Recommended are one physics course (PHYS 0040, PHYS 0060, or ENGN 0040) and one calculus course (MATH 0180, MATH 0200, or MATH 0350), or per instructor's permission.

1970C. String Theory for Undergraduates
This course will concentrate on String Theory. It will be given at introductory/intermediate level with some review of the background material. Topics covered will include dynamical systems, symmetries and Noether’s Theorem; nonrelativistic strings; relativistic systems (particle and string); quantization, gauge fixing, Feynman’s sum over paths; electrostatic analogy; string in curved space-time; and supersymmetry. Some advanced topics will also be addressed, i.e., D-Branes and M-Theory. Recommended prerequisites: PHYS 0470 and 0500, or 0160.

1980. Undergraduate Research in Physics
Designed for undergraduates to participate, individually or in small groups, in research projects mentored by the physics faculty. Students must have taken one year of college level physics. An average of 8 to 10 hours per week of guided research is required as are weekly meetings with the supervising faculty member. Students should consult with faculty to find a mutually agreeable research project and obtain permission to enroll. Section number varies by instructor (students must register for the appropriate section).

1990. Senior Conference Course
Preparation of thesis project. Required of candidates for the degree of bachelor of science with a concentration in physics. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
Primarily for Graduates

2010. *Techniques in Experimental Physics*

2030. *Classical Theoretical Physics I*

2040. *Classical Theoretical Physics II*

2050. *Quantum Mechanics*

2060. *Quantum Mechanics*

2070. *Advanced Quantum Mechanics*

2100. *General Relativity and Cosmology*

Given every other year.

2140. *Statistical Mechanics*

2170. *Introduction to Nuclear and High Energy Physics*

2210. *Elementary Particle Physics II*

2280. *Astrophysics and Cosmology*

This course serves as a graduate-level introduction to modern cosmology, including current topics of research on both observational and theoretical fronts. Topics include relativistic cosmology, inflation and the early Universe, observational cosmology, galaxy formation. Prerequisites for undergraduates: PHYS 1280 and PHYS 1530.

2300. *Quantum Theory of Fields I*

2320. *Quantum Theory of Fields II*

2340. *Group Theory*

Offered every other year.

2410. *Solid State Physics I*

2420. *Solid State Physics II*

2430. *Quantum Many Body Theory*

2470. *Advanced Statistical Mechanics*

2610. *Special Topic in Physics*

2610A. *Selected Topics in Modern Cosmology*

Aims to provide a working knowledge of some main topics in modern cosmology. Combines study of the basics with applications to current research.

2610B. *Theory of Relativity*

2610C. *Selected Topics in Condensed Matter Physics*

2620. *Special Topic in Physics*

2620A. *Astrophysical and Cosmological Constraints on Particle Physics*

2620B. *Green's Functions and Ordered Exponentials*

2620C. *Introduction to String Theory*

2620D. *Modern Cosmology*

2620E. *Selected Topics in Quantum Mechanics: Fuzzy Physics*

2710, 2711. *Seminar in Research Topics*

Instruction via reading assignments and seminars for graduate students on research projects. Credit may vary.
2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980, 2981. Research in Physics
2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Related Courses
Attention is called to the following closely related courses offered in other departments. Applied Mathematics 2050, 2060, Mathematical Methods of Applied Science; Applied Mathematics 2130, 2140, Methods of Applied Mathematics; Chemistry 2010, Advanced Thermodynamics; Engineering 2030, Advanced Dynamics; Engineering 2630, 2640, Electromagnetic Theory. Consult the appropriate portions of the bulletin for further details, as well as for other courses in these departments and in the Department of Mathematics.

Political Science
Professors Andreas, Blyth, Cobb, Cook, Cornwell (Emeritus), Hopmann (Emeritus), Krause, McDermott, Morone (Chair), Orr, Snyder, Stultz (Emeritus), Varshney; Associate Professors Brettschneider, Cammett, Cheit, Luong, Schiller, Tomasi; Assistant Professors Gamble, Krotz, Moffitt, Weitz-Shapiro.

Undergraduate Program
For a complete description of the standard concentration program leading to the A.B. degree please visit: http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Program
The Ph.D. Program in Political Science.

The Ph.D. Program in Political Science at Brown University offers an opportunity for creative individuals interested in pursuing academic or professional careers. Students may specialize in any of four important areas: American Politics, Comparative Politics, International Relations, or Political Theory. Those who complete the program will be prepared not only to teach and to conduct research within universities, but to apply their special skills of analysis and communication in government agencies, private corporations, nonprofit foundations, and other institutions that need persons who combine trained intelligence with specialized knowledge.

Curriculum and Program Requirements. The Ph.D. requires two years of course work, followed by comprehensive exams in two subfields, supervised research and writing of a dissertation prospectus followed by, supervised research and writing of a doctoral dissertation. Students take a written and/or comprehensive examination after completion of their course work, and a final oral examination after a faculty committee has approved the dissertation.
The formal requirements for the Ph.D. degree in political science are:

1. Twelve courses completed with a grade of B or better, of which ten must be in the Department of Political Science and eight of those courses must be 2000-level graduate seminars. Two courses in a related discipline may be taken without prior approval. An additional two courses may be taken in a related discipline on the DGS).
2. The courses must include: POLS 2000; POLS 2580 or POLS 2590; two proseminars POLS 2100, 2110, 2120, or 2130; and the two-semester prospectus writing sequence POLS 2050/POLS 2051.
3. Students will take a written exam and an oral examination in two of the four general areas (American, Comparative, International Relations, and Political Theory). Completing all course work and passing the preliminary exams (both written and oral) constitute the requirements for formal admission to candidacy for the Ph.D.
4. Teaching experience under the supervision of a member of the faculty—in both the main field of expertise and in a second field.
5. A written prospectus and a public defense of the proposal for the dissertation.
6. Adequate mastery of a modern foreign language if appropriate for the dissertation.
7. Completion and successful defense of the Ph.D. dissertation.

In addition to these formal requirements, each Ph.D. candidate is encouraged to undertake a “professionalization project” which consists of a substantial research project that can lead to publication of an article in a peer reviewed journal.

The first year of the program centers on the core courses, which include a seminar on Strategies of Inquiry and Research Design and a course in statistical methods. Students with advanced quantitative training may petition the DGS to satisfy the statistics requirement with an advanced statistics class.

In order to provide the student with a broad knowledge of contemporary political science and as a means of integrating graduate study in political science at Brown, proseminars in the following four subfields will be offered: American Politics, Comparative Politics, Political Theory, and International Politics. Students are required to take two proseminars.

Additional study is based on the specific interests of individual students. Graduate students may choose from among a variety of courses and research seminars offered on domestic and international political institutions as well as in a number of substantive public policy areas.

Master of Arts. The Department of Political Science offers a combined A.M./Ph.D.

For further information, please refer to the Department of Political Science website: http://www.brown.edu/Departments/Political_Science/

Courses of Instruction

Primarily for Undergraduates

0010. Introduction to the American Political Process
Focuses on how the American political process resolves conflicts among elected officials, groups, institutions, and the voters, over key issues facing the country. R. COBB and W. J. SCHILLER.

0100. Introduction to Public Policy
An overview of policymaking and policy analysis in the contemporary United States. The course begins with an examination of traditional justifications for government action. We
will then examine the discipline of policy analysis that has arisen to design and evaluate public policies. We will also consider critiques of the rational method and ask questions about how policy expertise fits into the political system. The course ends with classic works on organizations and implementation.

0110. Introduction to Political Thought
What is justice? What is freedom? What is the basis of political authority? What is the nature of the best regime? Why should we obey the laws? When may we legitimately resist? These and other perennial questions of political life are explored. Readings includes Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Marx, and J.S. Mill. J. TOMASI or S. KRAUSE.

0200. Introduction to Comparative Politics
Introduce students to the subfield of comparative politics, which compares politics across different nation-states. Topics focus on big political questions, including explanations for the rise and decline of democracy and authoritarianism, the emergence of social movements and mass protests, and ethnic conflict and violence. Cases drawn from Western Europe, Latin America, the Middle East, sub-Saharan Africa, South Asia and other regions. M. C. CAMMETT or L. COOK.

0210. Understanding Radical Islam
Why has radical, political Islam emerged as a global threat in our lifetime? This course examines potential domestic sources, such as repressive governments and poverty, as well as international sources, such as U.S. foreign policy, with a special emphasis on the various strategies that governments of states with predominantly Muslim populations have taken toward political Islam. P. LUONG.

0220. City Politics
Bosses, reformers, states, bureaucrats, politicians, the poor, the homeless, and the citizen. An introduction to the major themes of urban politics. J. A. MORONE.

0330. International Political Economy of Development
What is international political economy, what is development, and how can we understand the phenomenon of globalization? This course provides a general introduction to the interaction between international politics and international economics, especially related to developing countries. The first part of the course introduces several theoretical approaches to international political economy. The second part analyzes some of the classic issue areas of international trade relations; foreign direct investment; the international monetary and financial system and the role of international institutions; debt and financial crises; and poverty, inequality and the Millennium development goals. The third part includes analysis of the promises and pitfalls of globalization, and the relationship of globalization to governance, democracy, and human rights. P. LUONG.

0400. Conflict and Cooperation in International Politics
This course provides a basic introduction to the central theoretical perspectives and debates in international relations. The second part of the course applies these models to current problems in international relations, including environmental degradation, pandemic disease, human trafficking, transnational organized crime, and terrorism. P. ANDREAS or R. MCDERMOTT.

0500. Foundations of Political Analysis
Examines the nature of knowledge claims in political science: how we know what we know and how certain we are. Alternative research schools, the nature of description and explanation in political science, a unit covers basis issues of data analysis, substantive themes vary each year. This course is best taken in a student’s first or second year. R. WEITZ-SHAPIRO.
0820. First Year Seminars
Enrollment limited to 20 first year students.

0820A. American Presidency
The origins and evolution of the current presidency and the role of the presidential institution in the American political and policy-making system. Evaluation of the present role of the office and critical examination of recent administrations.

0820D. Freedom
What is freedom? Is it important? How do we know? What should we do about it? We will analyze the different conceptions of liberty - liberal egalitarian, classical liberal, Marxist, and fascist views. We will determine how the various aspects of freedom political, personal, psychological, economic, and moral are complementary, and determine what sorts of institutions promote or undermine these aspects.

0820F. Politics of Aviation
Who are the key players in aviation conflicts? Congress and congressional committees, bureaucratic agencies and pressure groups. Governmental regulation of airlines; past, present and future. Current market trends examined. Two dominant themes in aviation politics: avoid safety failures (crashes); avoid security problems (terrorism). How 9-11 changed the industry.

0820G. Race and Political Representation
While representation is a central tenet of democracy, much disagreement exists over what political representation means and the best way to ensure equitable representation for all citizens. We will study representation and its various forms. We will then use these concepts to examine research on how well American democratic institutions capture the interest of racial and ethnic minorities. Enrollment limited to 20 first year students.

0820L. Philosophy of the American Founding
In framing our political system in the Constitution, who did the Founders rely on for their theoretical framework? In this course, we will explore the works of Montesquieu, Adams, Franklin, Jefferson, Madison, Hamilton, Mercy Otis Warren, and other contributors to the Constitution. Enrollment limited to 20 first year students.

0820P. Fourth Branch of Government
Administrative agencies have been called the fourth branch of government. They write regulations that have the force of law and they are responsible for the implementation of virtually all public policies. How do these agencies fit into our constitutional form of government? How do they relate to the other branches of government? This course traces the rise of the administrative state and it examines the basic elements of command-and-control regulation, along with various alternatives to regulation. Written permission required.

0820S. Capitalism For and Against
What is capitalism? What are its defining traits and institutions, and the roles of the market and the state? How should individual rights and social responsibilities be balanced? What are capitalisms' strengths and weaknesses? Are capitalist societies or other types of systems the best way to achieve justice, promote excellence, and provide freedom, happiness, and material well-being? What are the coherent criticisms of and alternatives to capitalism? This course will study some of the seminal philosophical arguments about capitalism, focusing especially on Smith,
Locke, Rousseau, Marx, and Hayek. Enrollment limited to 20 freshmen and sophomores.

For Undergraduates and Graduates

1000. *American Political Culture*
Values, ideology, religious beliefs, myth and rituals sustain fundamental national attachments. The mechanisms include: the importance of written documents, the impact of individual and collective deaths, the power of symbols, and the creation of holidays, patriotic oaths, and memorials. How do leaders mobilize the public to sustain their commitment? R. Cobb.

1010. *Topics in American Constitutional Law*
The year 2008 marked the 140th anniversary of the United States Constitution's Fourteenth Amendment, which, among many other things, extended national citizenship to newly-freed slaves and embodied the twin promises of equality and liberty for all (or at least for many). This course in Constitutional Law will consider what "equality" and "liberty" have come to mean since the passage of the Fourteenth Amendment in 1868. To that end, we will look closely at the way in which the Supreme Court's equality (equal protection) and liberty (due process) jurisprudence has evolved over the past 140 years, paying close attention to equal protection cases dealing with race, gender, disability, and sexual orientation, and to due process cases dealing with abortion, marriage, sexuality, and the family. Readings will include a Constitutional Law casebook and some additional supplemental materials.

1020. *Politics of the Illicit Global Economy*
This course is about the "underside" of globalization. It introduces key sectors of the illicit global economy, including the clandestine flow of drugs, arms, people, body parts, arts and antiquities, endangered species, and toxic waste. The course compares these illicit sectors across time and place, and evaluates the practice and politics of state regulatory efforts. Particular attention is given to the role of the U.S. in the illicit global economy. P. R. Andreas.

1030. *Modern Political Thought*
What is justice? In a just society how would wealth be distributed? Would such distribution respect property rights? Does the state have the exclusive right to punish and if so why? Should the family be regarded as beyond justice? Is there a tension between democratic self-governance and freedoms from coercion? With an emphasize on both lectures and Socratic dialogue, this course is designed to engage students in conversations with the most important work in modern and contemporary political thought and to get them to engage with the most fundamental questions faced by our polity. We will draw on canonical modern and contemporary writers to see understand the most important debates of the modern period and as importantly to help us dig deep into fundamental questions of justice and legitimacy. Readings from Hobbes, Locke, Rousseau, Marx, Rawls, Okin, Cohen and others. Some prior work in political theory or philosophy suggested. C. Brettschneider.

1040. *Ancient Political Thought*
The Greeks and Romans stand at the beginning of the Western tradition of political philosophy, yet their thought is somehow foreign. What was the special perspective from which they viewed political life? Does that perspective vitalize or confuse our own thinking on justice, education, and the good life? This course will examine these and other questions with a special emphasis on the works of Plato and Aristotle. S. Krause.
1050. Ethics and Public Policy
Examines moral foundations of important policy issues in the American national context as well as at Brown. Considers the following questions: Is there a right to health care? When may politicians lie? What role should university students have in governing themselves? Through these issues, we hope to track the role ethical thinking plays in the conduct of public policy. C. BRETT SCHNEIDER.

1070. Rights
Investigates the moral and political foundations of rights through a reading of classical and contemporary theories of rights. Readings include Hobbes, Locke, Tocqueville, Kant, J.S. Mill, Burke, Marx, Nozick, Waldron, Okin, Ignatieff, and others. Topics include rights and justice; multiculturalism and group rights; human rights in the global context; animal rights and environmentalism; communitarian and postmodern critiques of rights; and rights in the context of American citizenship. S. KRAUSE.

1080. Politics of Transportation Policy
Three transportation modes are emphasized: planes, trains, and automobiles. Three sets of actors are studied: Congress, pressure groups, and governmental agencies. The focus is on historical patterns of usage and current policy questions including safety and security concerns in aviation, problematic drivers, and congestion with cars. Background in the rudiments of American politics is desired. R. COBB.

1100. Congress and Public Policy
How does Congress really work? Who holds power in Congress? How does Congress change when party control changes hands? Does Congress make a difference in policy outcomes? The structures governing both the House and the Senate and the interaction between them are examined as well as the overall relationship between Congress and the President. W. J. SCHILLER.

1110. Mass Media
Dramatic changes are unfolding in the structure and operations of the U.S. media. We discuss how the media have changed over history; what the changes mean for American culture, society, and politics; and how we should evaluate the contemporary media.

1120. Campaigns and Elections
Analysis of campaigns and elections in the contemporary political process, with a specific focus on the presidential and congressional elections in 2008. Topics include the changing nature of campaigns, role of media, money, and the significance of elections for the democratic process.

1130. The American Presidency
The origins and evolution of the Presidency in the American political and policy-making system. Special emphasis on the impact of presidential policies from Franklin Roosevelt through George W. Bush, and an exploration of the future challenges facing the winner of the 2008 Presidential election. W. J. SCHILLER.

1140. Public Opinion and American Democracy
Public opinion is an essential component of democracy. Considering the lack of familiarity about current events, how does public opinion affect public policy? Perhaps more importantly, should it? To assess these questions, we will explore how to measure public opinion and what polls tell us. We will then assess the roots of public opinion and analyze the public policy and representational impact of people’s preferences.

1160. Constitutional Law: Governmental Powers
This course examines governmental powers under the United States Constitution, addressing the powers of Congress, the President, and the courts, as well as the relationship between the national and state governments. The primary reading materials will be leading
Supreme Court cases, supplemented by additional reading materials on history and legal theory. The course will consider the role of the courts in enforcing constitutional principles in a democratic system, as well as theories of constitutional interpretation and constitutional change.

1190. Federalism and Public Policy
Examines basic institutional structure of American federal system, features of modern intergovernmental relationships, and how recent changes in the American federal system have shaped policy-making activity at all levels of government. The course will focus upon theories of federalism and intergovernmental relationships, as well as how these theories generate insight into the nature of contemporary legal, political, and policy debates.

1210. Latin American Politics
Focuses on political and economic transformation in contemporary Latin America. Special attention is given to the processes of market-oriented economic reforms and democratization that have swept the region during the last twenty-five years. Includes in-depth country case studies where key themes can be discussed and elaborated. Prerequisite: discretion of instructor. Combined enrollment limited to 30. R. SNYDER.

1220. Politics of the Post-Soviet States
What political and economic systems have developed in the Post-Soviet states since 1991? Course focuses on failed efforts to build democracy in Russia; divergent patterns of development, including democratization and EU accession in the Baltics, reversions to authoritarianism and Islamic revival in Central Asia; conflict in Georgia and Chechnya; development of economies, civil society; relations among post-Soviet states. Prior study of political science recommended. L. J. COOK.

1230. Politics of the Eastern European States
Comparative analysis of contemporary politics in post-communist states of Eastern Europe; collapse of Communist regimes; focus on the post-1989 period of democratization and transition to markets in Poland, Hungary, Czech Republic and Slovakia; state disintegration and ethnic war in former Yugoslavia. Looks at: political party systems; economic and social developments; effects of integration into European Union; international intervention in the former Yugoslavia. Prior study of political science recommended. L. J. COOK.

1240. Politics, Markets and States in Developing Countries
How can we explain fundamental differences in economic performance and policy across developing countries? Why are some countries praised as economic "miracles," yet others seem mired in inescapable stagnation? This course addresses these questions by introducing the basic topics, concepts, and theoretical approaches that comprise the field of political economy of development. The course draws on case studies from Asia, Africa, and Latin America. R. SNYDER.

1270. Politics and Economies in the Middle East
Provides an overview of contemporary political and economic issues in the Middle East, including ongoing struggles over state and nation building, transnational challengers to the nation-state, civil society and opposition movements, economic development, political Islamism and the apparent rise of ethnic and sectarian strife in the region. M. CAMMETT.

1280. Politics, Economy and Society in India
This course will concentrate on three aspects of the "Indian experience": democracy, ethnic and religious diversity, and political economy. With a brief exception, India has continued to be democratic since 1947. No developing country matches India's democratic record. Second, remarkable cultural, ethnic and religious diversity marks India's social landscape, and influences its politics. Third, Indian economy has of late been going through a serious
economic transformation, drawing comparisons with China. Is the comparison valid? A. VARSHNEY.

1290. *Politics of East Asia*
Will the 21st century be the Asian century? East Asia is the region of great economic hopes and at the same time bears the potential of even greater political conflicts. This lecture offers an introduction to "East Asian Politics". It is going to deal with economic and political development in the regions as well as security issues.

1310. *African American Politics*
Focuses on the contemporary African American politics in various spheres of the American political environment. Examines also how the concept of an African American community has evolved and shifted historically. We will pay particular attention to the growing diversity within the African American community and discuss what these changes mean for black political participation, representation, and organizing. K. GAMBLE.

1320. *Urban Politics and Urban Public Policy*
A central theme of the course is that urban politics in the United arises from the interplay of governmental power and private resources. The course describes the emergence of urban America; the modern city and the theories that have evolved to explain urban politics; and the nature of the urban condition with particular emphasis on the challenges faced by residents and government in the post-industrial city. The class includes a role-playing simulation of decision-making in a medium-size city. The goal of the simulation is to give students the feel for how politics work in an urban setting. The simulation runs throughout the semester. M. E. ORR.

1340. *Political and Economic History of Congress*
Course focuses on the political history of Congressional policymaking. From the 19th century through 2004. Will examine geographic, economic, and political forces that explain congressional policy in regulation of business, trade politics, welfare policy, and education. Software programs, such as Voteview, DW-Nominate, and Stata, that analyze congressional behavior on a multi-dimensional level will be used. W. J. SCHILLER.

1370. *Identity Politics in Europe and the U.S.*
Double credit. This course exposes students to both how historical experience, institutions, and policies foster individual, group, and national identity and the multiplicity of ways in which identity, in turn, affects politics. Broad themes in the first half of the course, which takes place in Paris, France, include European identity as distinct from or composite of national identities within Europe and the role of anti-Americanism in the formation of a European identity. In the second half, which takes place in Providence, Rhode Island, comparisons will be made with United States concerning the experience of colonialism and imperialism, nation-state formation, and the evolution of citizenship in a multi-racial and multicultural environment. P. LUONG.

1380. *Ethnic Politics and Conflict*
Course focuses on the politics of rising national consciousness and the development of ethnic conflicts. It covers sources of contemporary nationalism; nationalist political mobilization; emergence of conflicts; impact on societies of internal strife and wars; international interventions; explanations for resolution or persistence of conflict; politics of post-conflict states. The course combines analytical texts and case studies. Cases from Western and L. COOK.

1390. *International Organization and World Politics*
Examines the institutions and the processes by which states and other actors seek to provide "governance" in the international system. The first part examines history of, and theoretical perspectives on the role of international organizations in the state system. The second part
considers their roles in a range of political, military, economic, environmental, and humanitarian issue. Prerequisite: PS 40. N. TANNENWALD.

1400. Europe and America
Explores the contours of North Atlantic international history and politics through a variety of theoretical lenses. Reviews the grand outlines of European, American, and transatlantic international affairs; the history, theory, and politics of European integration; and the politics and legacies of the Cold War. Then turns to North Atlantic affairs and transatlantic relations post-Cold War: What courses have Europe and America taken since 1989? Which are they likely to take in the future? Is the north Atlantic community about to dissolve? U. KROTZ.

1410. Global Security After the Cold War
Analyzes major contemporary issues of global security utilizing current theories of international politics, emphasizing both continuity and change in global security since the end of the Cold War. Issues examined include proliferation of weapons of mass destruction and of conventional weapons, terrorism, recent arms control and disarmament initiatives, and the changing role of alliances and regional and global security institutions. M. LUONG.

1420. Money and Power in the International Political Economy
Examines how the interaction of states and markets create distinct global monetary and political orders. Class analyzes the shift from the classical liberal Gold Standard through the Post-War Bretton Woods arrangements through to the globalized IPE of today. Instructor permission required. M. BLYTH.

1430. Roots of Radical Islam
Why has radical, political Islam emerged as a global threat in our lifetime? This course examines potential domestic sources, such as repressive governments and poverty, as well as international sources, such as U.S. foreign policy, with a special emphasis on the various strategies that governments of states with predominantly Muslim populations have taken toward political Islam. P. LUONG.

1450. Political Economy of Development
Focuses on the political economy of development and underdevelopment. Topics include comparisons of state and market building among "early" and "late" developers, theories of development, prescriptions for development and their shortcomings, and the challenges for developing countries in the context of a globalizing economy. M. CAMMETT.

1480. Theories of International Relations
Provides an overview of basic thinking about international relations. Focuses on the conceptual fundamentals, grand intellectual traditions and main theoretical trajectories, and key scholarly disagreements that have shaped the discipline of international relations over the past century and on the principal theoretical fault lines that define it today. Also scrutinizes a number of central topics in contemporary international affairs. Prerequisite: POLS 0400 recommended but not required. U. KROTZ.

1500. The International Law and Politics of Human Rights
Human rights have become an increasingly central issue in global politics. This course introduces students to the law and politics of international human rights. It examines the gradual construction of an international human rights regime and its influence on international politics. The course seeks to understand how and why human rights standards have come into being and how they change over time. Drawing on historical and contemporary cases from around the world, the course will survey the actors and organizations, including states, international organizations, and non-state actors, involved in the promotion of human rights around the globe, as well as obstacles to such promotion. It will review competing conceptions of human rights, whether human rights are universal, problems of en-
forcement, and the role of human rights in foreign policy. Major topics include civil and political rights; economic, social and cultural rights; genocide, torture, women's rights, humanitarian intervention, and the international criminal court.

1510. Great Powers and Empires
This lecture course traces the political, economic, military, and cultural development of great powers and empires throughout history. Major themes include effective use of diplomacy, trade and economic policies, military forces, innovation, technology, natural resources, and leadership. Application of lessons to contemporary global affairs is emphasized. Case studies include Macedonian, Persian, Roman, Early Chinese (Ming Dynasty), Mongol, Continental European (1815-1960), Aztec, Mayan, Incan, British (1583-1960), Japanese (1868-1945), Nazi (1933-1945), American (1918-present), and the resurgent modern Chinese and Russian empires. M. LUONG.

1550. Intelligence and Economic Espionage
An overview of the evolution of governmental and private sector intelligence gathering and analysis. Topics include comparison of intelligence, counterintelligence, economic analysis, and industrial espionage. Emphasis on the ethical, political, and economic dimensions of espionage and intelligence programs. Various case studies used throughout the course. No prerequisites. M. LUONG.

1560. American Foreign Policy
This course provides an overview of American Foreign Policy since World War II. The emphasis will be on defense and security policy, and not on foreign economic policy. This course covers significant historical events and personalities over the course of the second half of the twentieth century. When events dictate, part of any given daily class may be devoted to current events in American Foreign Policy, with emphasis on their historical source and context. R. MCDERMOTT.

1600. Political Research Methods
Introduction to basic research methods in political science. Topics include descriptive and inferential statistics, sampling theory and measurement. Emphasis placed on understanding concepts of statistics and how statistics apply to the "real world" political issues. Limited to junior and senior Political Science and Public Policy concentrators. Other concentrators accepted by written permission only.

1740. Politics of Food
How do politics and public policy shape the nature of farming and the price of food in the United States? What is the extent of hunger and malnutrition in the country, and how do politics and public policy shape the responses to these issues? How well does government regulate the safety and healthfulness of food? This course will draw on a combination of case studies and scholarly work to examine these questions. The significance of globalization will also be considered but the emphasis of the course will be on American politics and policy. The course is not open to first-year students; otherwise it is open enrollment course without prerequisites but with an expectation of basic knowledge about American government. R. CHEIT.

1750. Black Political Leadership
This course uses black political thought to understand historical and contemporary forms of black political leadership. It explores the diversity of voices, ideologies, and strategies adopted by black leaders to address an array of political and social challenges. It also focuses on how shifting goals, political contexts, and generational changes shape black leadership. Certain black leaders such as W.E.B. DuBois and Barack Obama are used to understand the different types of black political leadership. K. GAMBLE.
1760. The Obama Infrastructure Policy
Infrastructure has many meanings. This course will focus on roads, bridges, rail, transit and airports. How was it originally created? What were the crucial events? Who are the key actors in Congress and the bureaucracy? What is the role of competing interest groups? What are the major conflicts surrounding its repair and expansion? Prerequisite: POLS 0010 or 0100. This course is not open to students who have taken POLS1080. R. COBB.

1820. Research Seminars
Enrollment limited to 20.

1820A. American Political Development
No description available. Enrollment limited to juniors and seniors J. MORONE.

1820B. Roots of Radical Islam
Why has radical, political Islam emerged as a global threat in our lifetime? This course examines potential domestic sources, such as repressive governments and poverty, as well as international sources, such as U.S. foreign policy, with a special emphasis on the various strategies that governments of states with predominantly Muslim populations have taken toward political Islam. P. LUONG.

1820D. Civil Liberties: Moral, Political and Legal Approaches
This course will examine major constitutional controversies within the context of wider debates in political and legal theory. Readings from Supreme Court cases and prominent texts in political/legal theory. Topics include free speech, privacy, abortion, takings and capital punishment. Prior course work in political theory or philosophy recommended. Enrollment limited to juniors and seniors. C. BRETTSCHEIDER.

1820H. Contraband Capitalism: States and Illegal Global Markets
This course explores the clandestine side of the global economy (including flows of drugs, people, weapons, and money) and state policing efforts. We will examine the organization of these activities, how they intersect with the state and legal economy, their relationship to armed conflicts, and how they shape (and are shaped by) domestic and international politics. Enrollment limited to juniors and seniors. Course is not open to students who have taken POLS 1020. P. ANDREAS.

1820I. Feminism and Political Theory
Examines recent developments in feminist scholarship and their implications for political theory and politics. We explore the impact of gender-differentiated identities on moral reasoning and political agency; the relationships between feminism and classical liberalism, feminism and radical democracy, and feminism and the law; feminist theories of citizenship; and the implications of multiculturalism for feminist politics. Enrollment limited to juniors and seniors. S. KRAUSE.

1820J. Dynamics of Agenda Building
How do new issues make the political agenda? Why aren't elections crucial? Who are the "problem pushers" and "solution savers?" How are they linked? What factors determine the life of an issue? The key processes include problem identification, conflict expansion through issue redefinition, the role of institutional actors and issue activists. Focus limited to domestic American politics. Prerequisite: POLS 0010 or 0100. Enrollment limited to 20 juniors and seniors. R. COBB.

1820N. International Relations in Europe
Reviews central issues in European international affairs from a variety of theoretical and analytic perspectives. Substantive issues considered include peace and war, Europe as part of the North Atlantic world, European integration, and
Europeanization. Time also allocated for discussions of course participants' research. Designed mainly for advanced undergraduates, but graduate students and less advanced undergraduates with relevant background most welcome. Enrollment limited to juniors and seniors. U. KROTZ.

1820S. Liberalism Beyond Justice
Explores liberalism, nationalism, and the ongoing search for an adequate framework for understanding the idea of liberal citizenship. Enrollment limited to juniors and seniors. J. TOMASI.

1820U. Language Policy and Politics in Linguistically Plural Divided Societies
Focusing initially on the experiences with this matter in South Africa, Canada and the United States, the object of this senior seminar will be to come to understand which factors tend generally in states such as these to contribute to linguistic peace and effectiveness, and which other factors have a contrary result. Students will individually write a research paper examining this same issue in a fourth (i.e., different) context of their own choosing. N. STULTZ.

1820V. Middle East Diplomacy
Contemporary Middle Eastern affairs demand of us greater sensitivity and closer, deeper examination because as a distinctive geo-political and ethno-cultural region the Middle East not only suffers from an overloaded political agenda but is today arguably at the epicenter of international concern and diplomacy. Of profound significance for the global system are: Iran's rise as a regional nuclear revisionist power within the larger context of political Islam's reawakening; the politics of Middle East water and Persian Gulf oil; and renewed Russian assertiveness contrasted with waning U.S. influence. No less diplomatically challenging: Turkey's ambivalent strategic orientation between East and West; the unresolved Arab-Israeli-Palestinian conflict; Iraq's fragmentation, Lebanon's precarious unity and Egypt's looming leadership succession crisis; and arrested regional integration reflected in strong indicators of comparative economic stagnation. Multiple disciplinary perspectives, careful scholarly analysis, and the search for recurrent historical patterns inspire this course offering and serve as its framework. P. LUONG.

1820W. Market Liberalism: Origins, Principles and Contemporary Applications
What is liberalism? What are the differences between capitalist, democratic and socialist versions of liberalism? Is it true that liberal theory has undergone a form of moral evolution between its "classical" and its "modern" forms? Are there common moral values that all liberals---capitalist, democratic and socialist---affirm? If so, by what dimensions of value are these rival liberal traditions to be distinguished? J. TOMASI.

1820X. States, Markets, Women and Welfare
This course will cover welfare across advanced, transitional and developing nations, focusing on the roles of states and markets and the effects on women's roles and welfare. It will look at different welfare state structures, how they were established, how they distribute access to health care, education and social security; how they differ across political regime types; how weak states and informal economies affect provision in transitional and developing states. M. CAMMETT.

1821C. Economic Freedom and Social Justice
Can capitalists care about social justice? This course considers the proposition that capitalists can, and should. Readings include a variety of classical and contemporary
sources about the idea of economic freedom and its relationship to social justice. Enrollment limited to 20 seniors.

1821G. Representation, Parties and Interest Groups
Examination of the role of political parties and interest groups in translating the will of citizens into policy outcomes. Covers the extent to which voters use party as a guideline, the possibility of a viable third party at the Presidential level, the effect of parties on Presidential/Congressional relations, and the interaction of interest groups and parties in politics. K. GAMBLE.

1821I. Issues in Democratic Theory
This seminar engages contemporary issues in democratic theory. Topics explored include the meaning of democracy (and the political consequence of different answers to that question); representation and citizenship; democracy and higher law; deliberative democracy; civic engagement; political resistance and oppositional consciousness; and identity politics. C. BRETTSCHEIDER.

1821J. Rhode Island Government and Politics
Students participate in an approved internship in Rhode Island State Politics. Students will be expected to work 8-10 hours a week in an office of state government and, at the end of the semester, reflect on what they've learned. Enrollment limited to 20 senior Political Science concentrators. J. MORONE.

1821L. International Relations of Russia and the States of Eurasia
The course focuses on Russia's international relations with the European Union, China, the United States, Asia, and the Former Soviet States of Central Asia and the Caucasus. Topics include: expansion of Russia's power since 2000; conflicts with Georgia and Ukraine; resistance to expanded US influence in Eastern Europe; military and demographic security, immigration; alliance-building; energy exports and foreign policy. Enrollment limited to 20 juniors and seniors. L. COOK.

1821M. War in Film and Literature
This course introduces students to a study of warfare, and some of the central issues raised in war, through the use of movies and novels. Central themes include civil-military relations, leadership, the role of women in war, managing the homefront as well as issues related to battlefield tactics and strategy. Students will be encouraged to address these topics in applications related to World War I, World War II, and Vietnam in particular. This course will take place in a seminar format which stresses discussion of the relevant materials. Enrollment limited to 20 juniors and seniors. Instructor permission required. R. MCDERMOTT.

1821O. Politics of Economic Development in Asia
It is widely accepted that development is not simply an economic phenomenon. Political processes are intimately tied up with economic development. Does the nature of the political system affect development? Does democracy slow down economic growth? What is the relationship between democracy and economic liberalism? As more countries embrace political freedoms and market-oriented economic reforms, should one expect both to succeed equally? Since the Second World War, an enormous amount of intellectual effort has gone into understanding these issues. Asia has been at the heart of much of this literature. The heaviest emphasis will be on China, India and South Korea. Enrollment limited to 20 juniors and seniors. A. VARSHNEY.
1821P. Political Psychology of International Relations
This course covers basic methods and theories in the use of political psychology to study topics in international relations. The second part of the course applies these models to particular topics, including leadership, group dynamics, and the role of emotion in decision making. Enrollment limited to 20 juniors and seniors. R. McDermott.

1821Q. The United States in World Politics
Examines major aspects of American foreign policy after the Cold War and 9/11 in terms of domestic and international challenges. Discussions of the United States as 'empire' and 'republic,' with independent research and a foreign policy game. Emphasis is on the connections between the processes of policy making and the substance of policies pursued. Pre-requisite: POLS 0400. Open to senior Political Science and International Relations concentrators. L. Miller.

1821R. State Sovereignty and International Law
How should international law affect domestic politics and authority? What kinds of international rules, regulations and norms are there? What authority do they have? Should states obey international law even when it conflicts with their interests and that of their citizens? Is a law-governed order attainable in a world of sovereign states? This seminar explores the evolution of international law and its relation to state sovereignty. Authors include Bodin, Gentili, Grotius, Pufendorf, Rabkin, and Held. Enrollment limited to 20 juniors and seniors. Instructor permission required.

1821T. Criminal Justice System
An examination of police, criminal courts, and prisons in the contemporary United States. Major topics include police discretion, plea bargaining, and theories of punishment. We will also examine the politics of crime, including federal efforts to influence these traditional state functions. Major assignments are based in the Rhode Island criminal justice system. Enrollment limited to 20 juniors and seniors; written permission required. R. Cheit.

1821U. Democracy and its Critics
To what degree does democracy help realize or impede important goals of social justice and prosperity? How much democracy do we really want, all things considered? Readings might include: Rousseau, Joshua Cohen, Alasdair MacIntyre, Jeffrey Stout, Diana Mutz, Bryan Caplan. Enrollment limited to 20 juniors and seniors. C. Brettschneider.

1821V. Roots of Resource Curse: Why are the World's Richest Countries also the Poorest/Most Corrupt/Unstable?
The proposition that developing countries rich in minerals are "cursed" has become doctrine. There are countless studies documenting the correlation between resource wealth and a series of negative economic and political outcomes, including poor economic performance, unbalanced growth, weakly institutionalized states, and authoritarian regimes. But correlation does not equal causation. This course will provide students with the analytical tools to determine when mineral wealth is a curse and when it can be a blessing. Enrollment limited to 20 juniors and seniors. P. Luong.

1821W. The Politics of Race and Gender
Politicians and scholars make a number of predictions about political life based on assumptions about race and gender. This course examines the roles of race and gender in American politics with a particular emphasis on women of color. The course
focuses in social movements, political participation, and political representation. K. GAMBLE.

1821X. The Politics of Social Welfare in the Middle East
This seminar explores the politics of social welfare in the Middle East. The first section of the course examines the concept and origins of the "welfare state" as well as the relationship between the state, NGOs, civil society and informal networks in social service provision. The second part explores how welfare regimes developed and operate in selected Middle Eastern countries, where Islamist and other non-state organizations are key providers of social services. Enrollment limited to seniors, with preference for concentrators in Political Science, Developmental Studies, International Relations, and Middle East Studies. Enrollment limited to 20 juniors and seniors. Written permission required. M. CAMMETT.

1821Z. East European States: Domestic Politics and East European Integration
The seminar examines the post-1989 politics of Eastern Europe states, and the effects of their integration into Europe. Topics include political institutions; civil society; state reconstruction after ethnic wars; the effects of integration into global markets; the significance of accession to the European Union for democracy, political autonomy, ethnic relations, labor, and welfare. U. KROTZ.

1822A. Markets and States
For most of the post-war era the state has served as the primary mechanism for resource allocation. However, by the 1990s, fiscal crises, the erosion of ideologies advocating state intervention, and the pressures of globalization compelled many countries to reconsider the state's economic role. This course examines these new challenges and analyzes how policymakers respond, focusing on the political incentives, institutional constraints, and economic influences that policymakers confront when choosing between various alternatives. Enrollment limited to 20 juniors and seniors. P. LUONG.

1822B. Foundations of Political Economy
This course is both historical and theoretical and overlaps with the disciplines of political science, history, economics, and political theory. Based around an in-depth reading of "the classics" of political economy, the course traces the evolution of political economy through a consideration of some of its major contributions from the seventeenth century to the present; Locke, Ricardo, Smith, Rousseau, Mill, Bentham, Marx, Keynes, Kalecki, Hayek, Friedman, Lucas and Minsky shall be examined. M. BLYTH

1910. Senior Honors Thesis Preparation
Concentrators who have given evidence of superior work in political science may be admitted to honors seminar on the basis of an application submitted in the spring of their junior year. Application and guidelines may be obtained on the Department of Political Science website. Prerequisite: Fulfillment of Methods requirement. Enrollment limited to senior Political Science concentrators. Written permission required.

1920. Senior Honors Thesis Preparation
This course is a continuation of POLS 1910. Political Science Honors students who are completing their theses should enroll. Written permission required.

Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
Primarily for Graduates

2000. *Strategies of Inquiry and Research Design*
Introduction to research methods common in political science research. Topics include theory development, problems of explanation and causation, problem identification, research design, and other fundamentals of empirical research. Graduate students only; qualified undergraduates with instructor's permission.

2020. *American Political Development*
J. A. Morone.

2030. *Seminar in the History of Modern Political Thought*
An advanced seminar in the history of modern political thought from Machiavelli to Foucault. Themes include the nature of political sovereignty and the basis of civil authority; the emergence of liberal constitutionalism; democratic, socialist and aristocratic critiques of liberalism; the meaning of freedom; the relation between liberty and equality; and the ideas of social progress and individual development. Graduate students only; qualified undergraduates with instructor's permission.

2050. *Preparing the Prospectus I*
This course is designed to help students enrolled in the Political Science PhD program to write and defend a prospectus in their third year of study. Instructor permission required.

2051. *Preparing the Prospectus II*
This course is designed to help students enrolled in the Political Science PhD program to write and defend a prospectus in their third year of study. Instructor permission required. Prerequisite: POLS 2050.

2060. *Conflict and Cooperation in International Politics*
Surveys major developments in theory and empirical research related to the “security” dimension of international politics. Focuses on nature of international conflict, especially between state actors, and processes that may enhance cooperation in international interactions. Undergraduate seniors may enroll if they have the appropriate prerequisite: POLS 1480, 2130 or permission of instructor.

2070. *Black Political Participation*
Topical issues in the political behavior of African Americans at the national level. Voter turnout and electoral choice, participation of blacks in major political parties, African American political culture, socialization, opinion, legislative behavior, and political leadership. Goal: to assess strengths and limitations of the research and literature on African American political behavior. Written permission required for undergraduates. M. E. Orr.

2080. *Market Democracy*
Social democracy was the progressive political program of the 20th Century. Social democracy treats economic liberty as morally less important than civil or political liberty. Social democracy is often contrasted with libertarianism, a political system that treats the economic liberties of citizens as moral absolutes. Between social democracy and libertarianism there is conceptual space for a third view: market democracy. Market democracy treats economic liberty as on a par with civil and political liberty. This course examines the moral foundations of social democracy, libertarianism, and market democracy. Could market democracy be a progressive political program for the 21st Century? Graduate students only; qualified undergraduates with instructor's permission.

2090. *Research Seminars*

2090A. *Contemporary Political Theory*
2090B. International Relations Theory
Surveys the main theoretical trajectories and intellectual disagreements that define International Relations as a discipline today. Positions examined include varieties of rationalism and constructivism; realism-liberalism-sociological approaches; and systemic and subsystemic theories. Also considers debates about contours of post-Cold War world politics, America and the world, and moral issues. Tailored mainly for graduate students, but advanced undergraduates with relevant background welcome.

2090C. Liberalism and Its Critics
Course covers various themes in liberal theory. Topics include the role of rights in democratic self-governance, constitutional constraints on majority rule, and the political economy of liberal democracy. Readings from contemporary and canonical political theory, the writings of the framers of the United States Constitution, as well as case law. Graduate students only; qualified undergraduates with instructor's permission.

2090D. Models of Excellence in Comparative Research: Classic Works and the Scholars Who Produced Them
Explores major works that span the range of theoretical approaches and intellectual styles in modern comparative research. Includes in-depth interviews with leading scholars where they reflect on their intellectual formation, their works and ideas, the nuts and bolts of the research process, and the evolution of the field. Graduate students only; qualified undergraduates with instructor's permission.

2090F. Political Theory and International Relations

2090G. Readings in American Institutions
This course is designed as a readings and research course for graduate students and advance undergraduate students. Students will be required to read and analyze the latest work political science in the subfields of American politics, including but not limited to: public opinion, voting behavior, presidency, racial politics and representation, legislative institutions, political economy, and bicameralism.

2090H. Readings in Comparative Politics
A research and readings course on political behavior -from voting to violence, which applies rational choice theory, the Michigan model, the social logic of politics, and other theoretical perspectives.

2090I. Perspectives on Comparative and American Political Behavior and Institutions
2100. Proseminar in American Politics
Introduction to broad issues in American politics. Topics include the interplay of political institutions in the American setting, the process of policy-making, and the behavior of key actors in American politics. Graduate students only; qualified undergraduates with instructor's permission.

2110. Proseminar in Comparative Politics
Provides a survey of major approaches, issues, and debates in the field of comparative politics. Topics: state, revolution, systems of representation and domination, etc. Works of theoretical importance on each topic, focusing on authors' arguments and controversies within the literature.

2120. Proseminar in Political Theory I
An overview of central debates in political theory today. Readings include contemporary writings on justice, liberalism, democratic theory, critical theory, feminism, power, multi-
culturalism, and citizenship and political economy. For graduate students and advanced undergraduates with permission of the instructor.

2130. Proseminar in International Relations
Surveys the main theoretical trajectories and intellectual disagreements that define International Relations as a discipline today. Positions examined include varieties of rationalism and constructivism; realism-liberalism-sociological approaches; and systemic and subsystemic theories. Also considers debates about contours of post-Cold War world politics, America and the world, and moral issues. Not open to undergraduates.

2131. Politics of Gender
Topics include gender and personal identity; the impact of gender on moral reasoning and political agency; feminism in relation to liberalism and radical democracy, feminism and the law; the gendering of political institutions and interstate relations; and the implications of multiculturalism for feminist politics. Open to qualified undergraduates with permission of the instructor. S. KRAUSE.

2140. Post Cold War Conflict
Course explores the nature and causes of post-Cold War conflict. We'll discuss the end of the Cold War, as well as prominent contemporary themes, such as the spread of ethnic warfare and humanitarian intervention, the privatization of security provision, and the proliferation of "transnational threats" such as cross-border crime and terrorism. Graduate students only; qualified undergraduates with instructor's permission. P. R. ANDREAS.

2150. Democratic Theory, Justice, and the Law
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This course will examine contemporary and historical work in the area of democratic political and legal theory. Topics include the relationship between democracy and individual rights, deliberative vs. aggregative conceptions of democracy, the substance/procedure controversy, and the role of judicial review in a democracy. C. L. BRETTSCHNEIDER.

2180 Markets and States in Comparative Perspective
This course examines the interplay of politics, institutions, and markets to analyze the challenges of state intervention in the market from the 1950s to the 1990s, including the erosion of ideologies advocating state intervention and the pressures of globalization. It is concerned with the politics of economic development and market adjustments from a comparative perspective, including both advanced industrial and developing countries. Graduate students only; qualified undergraduates with instructor's permission. P. J. LUONG.

2190. Comparative and Global Politics of Welfare States
Why and how have welfare states been constructed? How do they differ in Western and Eastern Europe, Latin America, Asia, Africa, in democratic, authoritarian, and semi-authoritarian polities? How have they been affected by globalization of politics and markets? Explanations from developmental, institutional, political, and transnational perspectives, cases from various regions. Graduate students only; senior undergraduates with instructor's permission. L. J. COOK.

2210. Race, Ethnicity and Politics
This is a graduate-level introduction to the politics of race and ethnicity in the US context. The seminar examines major theoretical perspectives, debates, and research findings in the study of race and its critical influence upon the politics of the US. The course focuses on political representation, political participation, and political attitudes as related to racial and ethnic minorities. Graduate students only; qualified undergraduates with instructor's permission. K. GAMBLE.

2220. Urban Politics
Covers a number of topics linked to urban politics and urban public policy. Topics include the politics of urban education, affordable housing, downtown development. Examines
how state and federal policy actions have contributed to the nature of the urban condition;
and how race, class and ethnicity are interwoven with urban politics and urban public pol-
icy. Graduate Students only; all others by permission only. M. ORR

2250. Extreme Politics: How Radicals Affect Political Change
Scholarship has increasingly focused on why radical groups emerge. Yet, there is little re-
search to date on how and whether these groups actually have a socio-political impact. This
course will examine the mechanisms whereby and the conditions under which political extremists affect political and/or social change across time and space. We will base our anal-
ysis on several historical case studies that deliberately vary radical groups according to im-
portant characteristics such as: the degree of their prominence in social and political dis-
to audience; the extent of their lifespan in a particular country; and whether their tactics include
the use of violence. Graduate students only; qualified undergraduates with instructor's per-
mission. P. LUONG.

2260. The Politics of Issue Containment
How do decision makers avoid dealing with issues? Given time and resource constraints,
what are the strategies used by officials in American politics to preclude discussion of new
issues? R. COBB.

2290. Particularism in Latin America and Comparative Persepctive
This course will characterize, examine, and explain the use of particularistic practices in to-
day's democracies in Latin America and in comparative perspective. Among these practi-
ces, we pay most attention to the phenomenon known as clientelism. Graduate students only;
qualified undergraduates with instructor's permission. R. WEITZ-SHAPIRO.

2300. War and the Modern State
A central attribute of the modern state has been preparing for and carrying out wars of vari-
ous kinds. This course explores the nature, causes, and consequences of both inter-state
and internal wars. We will examine such themes as the relationship between war-making
and state-making; arguments about the obsolescence of major war; and the changing nature
of conflict in the post-Cold War era. P. ANDREAS

2320. Ethnic Conflict
What is ethnicity? What does it share with nationalism and in what respects is it different?
Why do ethnic groups fight violently and kill wantonly, especially after living peacefully
for a long time? Under what conditions do they manage their relations peacefully? Do
people participate in ethnic insurgencies because of greed or grievance? Will ethnic groups
disappear as modernity proceeds further? These questions will guide our intellectual jour-
ney over the semester. Graduate students only; qualified undergraduates with instructor's per-
mission.

2350. Freedom, Power and Political Action
Examines the self-understandings, social practices, and political institutions that underlie
political action and shape its diverse forms. Combines theoretical study of the sources,
structure, and conditions of human freedom with perspective drawn from empirical litera-
tures on social movements, political resistance, and modern terrorism. Readings include
Arendt, Honneth, Butler, Pettit, Tilly, Scott, Olson, and others. S. KRAUSE

2580. Introduction to Quantitative Research Methods
Course begins with basic introduction of statistical analysis and, using STATA, works with
students to conduct analysis of their own data set. S. MOFFITT.

2590. Quantitative Research Methods
An intermediate statistics course for graduate students. Includes descriptive and inferential
statistics, sampling theory, levels of measurement, multivariate regression, and logit/probit
analysis. Explores the use of statistics in many fields of political science and public policy including American institutions, comparative politics, and international relations.

2970. Preliminary Examination Preparation
A two-semester sequence that takes the form of an independent study directed by a tenure-line faculty member of the Department of Political Science. Only second-year graduate students may register for the course; it is intended to provide a framework to help prepare for preliminary examinations. P. J. LUONG.

2971. Preliminary Examination Preparation
A two-semester sequence that takes the form of an independent study directed by a tenure-line faculty member of the Department of Political Science. Only second-year graduate students may register for the course; it is intended to provide a framework to help prepare for preliminary examinations.

2975, 2976. Field Survey and Research Design
An independent study directed by a tenure-line faculty member of the Department of Political Science. Only third-year graduate students may register for the course; it is intended to provide a framework for producing a formal research design modeled on the dissertation prospectus.

2980. Individual Reading and Research
An independent study course directed by a tenure-line faculty member in the Department of Political Science. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit. THE STAFF.

2991. Thesis Research and Preparation
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Population Studies and Training Center

Michael J. White, Professor of Sociology, Director.

The Population Studies and Training Center (PSTC) is a multidisciplinary unit organized to facilitate and strengthen research and graduate training in demography at Brown. Its core faculty associates are from the Departments of Sociology, Economics, and Anthropology. Other PSTC faculty are affiliated with the Brown Medical School, the Environmental Change Initiative, the Watson Institute for International Studies, and the Spatial Structures in the Social Sciences initiative. This combination has led to an extraordinarily dense network of collaborations both within and across disciplines. The PSTC is not only a source of infrastructure and research support for associated scientists, but also the nexus of intellectual activity for empirically driven and theoretically grounded scholars with population interests at Brown. The PSTC is a leader among demographic centers in several areas, including anthropological demography, multi-method data collection in the developing world, and the demography of Africa. The PSTC is also a key player in terms of the development of multi-method analysis and in the integration of demographic perspectives into the study of the process of economic development.
Faculty research at the PSTC is characterized by a wide subject matter scope and a portfolio of federal agency and private foundation awards for research in more than two dozen developed and developing country settings. Current research activities encompass topics across five signature thematic areas: spatial inquiry (particularly migration, social networks, urbanization, and innovative spatial methods), fertility and HIV/AIDS, the demography of families and households, social behavior and health, and population-environment links.

The PSTC provides a competitive interdisciplinary demography training program conducted in cooperation with the Ph.D. programs in Sociology, Anthropology, and Economics. The program is designed to prepare demography trainees to be successful scholars in their respective disciplines, and to give students the skills to successfully participate in the broad intellectual community of population studies. Degree requirements are described under the departmental listings, although all trainees are required to complete selected methods and interdisciplinary course requirements. Many PSTC students receive funding for their studies through Center training awards from the National Institutes of Health, the National Science Foundation, and the Hewlett Foundation. Those students who are not supported by PSTC fellowships obtain funding through research assistantships and support from the Graduate School. PSTC students also have an excellent record of obtaining competitive external support for their studies and research.

The PSTC is housed in Mencoff Hall on Brown’s center campus. Mencoff Hall provides offices for many affiliated faculty, as well as carrel space for students, and includes a dramatically designed, state-of-the-art seminar room that accommodates 50, a small meeting room, and generous exhibit/function space. The PSTC supports multiple computing platforms, including multi-processor Linux servers for computation, along with high-speed networking, ample file storage, and a wide array of specialized application software.

The PSTC sponsors regular colloquia and occasional seminars and conferences, and the Center maintains and promotes professional linkages with population centers and organizations in the developing world, particularly in sub-Saharan Africa. These linkages have resulted in collaborative research opportunities, as well as ongoing visits and exchanges of scholars and students from other organizations.

Those interested in learning more about research and training activities at the PSTC should visit the Center’s website at www.pstc.brown.edu.

Portuguese and Brazilian Studies

Professors Almeida, Green and Vieira; Associate Professors Dzidzienyo, Flores and Valente (Chair); Senior Lecturers Simas-Almeida and Sobral; Adjunct Professors Clemente and Monteiro; Adjunct Associate Professor Becker; Adjunct Assistant Professor Pacheco; Adjunct Lecturer Smith.

The Department of Portuguese and Brazilian Studies offers five degree programs: (1) Ph.D. degree in Portuguese and Brazilian Studies, (2) A.M. degree in Portuguese Bilingual Education and Cross-Cultural Studies or ESL Education and Cross-Cultural Studies, (3) A.M. degree in Brazilian Studies, (4) A.M. degree in Portuguese and Brazilian Studies and (5) A.B. degree in Portuguese and Brazilian Studies. The department’s programs focus on the global nature of the Portuguese-speaking world, as well on specific geographical areas: Continental and Insular Portugal, Brazil, Lusophone Africa, and Luso-America. Undergraduate and graduate students are able to work with a distinguished faculty
committed to both research and teaching, and to take advantage of the extensive resources on the Portuguese-speaking world at the Rockefeller, John Hay, and John Carter Brown libraries. Besides offering academic programs in Portuguese language, Portuguese and Brazilian literature, history, and culture, and ESL/cross-cultural studies, the Department of Portuguese and Brazilian Studies extends its resources beyond the immediate university community by organizing a varied program of cultural events, including lectures, concerts, and symposia. Exchanges with Brazilian and Portuguese universities, the publication of books and two scholarly journals, and consultation in bilingual/ESL curricular and technical assistance exemplify the department’s broader social and educational contributions.

For more information, please visit our web page at:  
http://www.brown.edu/Departments/Portuguese_Brazilian_Studies/

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

Doctor of Philosophy Degree in Portuguese and Brazilian Studies

The Ph.D. program in Portuguese and Brazilian Studies is advanced graduate study in the language, literatures and cultures of the Portuguese-Speaking World, with students concentrating on one or more of the following areas: Continental and Insular Portugal, Brazil, Lusophone Africa, the Republic of Cape Verde, and Luso-America. Students enrolled in this program are able to take advantage of the diverse expertise of the department’s faculty which embraces specializations in literature, language, philosophy, comparative literature, folklore, history, ethnic and cross-cultural studies, anthropology, and bilingual education. It is the department’s philosophy that all students grasp the comprehensive nature of the Portuguese-Speaking World and study its language, literatures, and cultures as well as apply the tools of research and scholarship to their individual programs of study. While this doctoral program allows for an interdisciplinary component, the emphasis of the core program is in the Portuguese language and Luso-Brazilian literature and culture.

Core Program: the standard route to the Ph.D. will be the successful completion of 16 courses, a general examination, a preliminary examination, a colloquium, and a dissertation.

Ph.D. candidates are expected to have achieved native or near-native fluency in Portuguese. A diagnostic oral and written language examination is taken during the first year. In addition, candidates should demonstrate reading ability in a second foreign language, which normally would be French, Spanish, Italian or German.

Doctoral candidates are required to present themselves for the following examinations: 1. General Examination: a four-hour written examination covering a reading list of approximately twenty basic works in the field, to be given at the start of the student’s third semester; 2. Preliminary examination: a two-day written in-depth examination on two broadly defined areas developed by the student in consultation with a committee made up of at least three faculty members, normally held at the conclusion of the student’s course work; the content of the exam will vary, depending on the student’s program, but part of the exam must be written in Portuguese and part in English; 3. Pre-Dissertation Colloquium:
an oral presentation of the student’s dissertation proposal, open to all faculty and graduate students in the department, to be given within the semester following the preliminary examination. The colloquium is based on a twenty-five-page paper submitted to the student’s committee and available to faculty and graduate students in the department. The dissertation may be written in English or in Portuguese.

Master of Arts Degree Program in Portuguese Bilingual Education and Cross-Cultural Studies or ESL Education and Cross-Cultural Studies

This interdisciplinary program offers graduate level study in advanced language and bilingual education for bilingual teachers of Portuguese as well as ESL training for teachers of ESL. Candidates possessing an A.B. degree and a teaching certificate may apply for admission to this graduate program with the aim of completing 8 graduate-level courses in Portuguese Bilingual Education and Cross-Cultural Studies or 8 graduate-level courses in ESL Education and Cross-Cultural Studies.

Specific requirements for this two-track curriculum are:

**Portuguese Bilingual Education, and Cross-Cultural Studies Curriculum:**

1. One course in Bilingual Education Methodology (2120A);
2. One course in Problems and Current Issues in Bilingual Education (2020A);
3. One course in Foundations of Bilingual Education (2010A);
4. Three Basic Required courses (1720, 1750 and 2020D);
5. Two other related courses to be selected from offerings in Portuguese and Brazilian, Education, Anthropology, Linguistics, Psychology and Sociology.
6. Bilingual Education candidates must take a written proficiency exam in Portuguese.

**ESL Education and Cross-Cultural Studies Curriculum:**

1. One course in ESL Methodology for Assessment and Evaluation (2120A);
2. One course in Problems and Current Issues in E.S.L. (2020B);
3. One course in Applied Linguistics for E.S.L. (2020A) or Linguistic Theory and Practice (ANTH 2800);
4. Three Basic Required courses (1720, 1750 and 2020D);
5. Two other related courses to be selected from offerings in Portuguese and Brazilian, Education, Anthropology, Linguistics, Psychology and Sociology.

All candidates must complete a master’s project in addition to their course work as well as deliver an oral presentation in English describing this project.

This graduate degree program does *not* provide candidates with elementary and secondary teaching certification. It does, however, offer specialization courses that will satisfy R.I. Bilingual and ESL state endorsement requirements. Candidates for this degree may be part-time or full-time. In case of the former, students are encouraged to complete at least two courses per semester thereby enabling them to complete their requirements in two years.

Master of Arts Degree Program in Brazilian Studies

This interdisciplinary degree program is designed to provide students as well as mature professionals holding an A.B. degree and possessing a reading and speaking knowledge of Portuguese, with a social science/humanities curriculum in Braziliana. The program offers graduate level training with special focus upon Brazil for careers in academia, foreign service, and international organizations including transnational business and foundations.
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Drawing upon a candidate’s knowledge of Portuguese, this program will develop a unique combination of linguistic and interdisciplinary skills via course offerings in English and Portuguese.

Core Program: Candidates will complete a program of 8 graduate courses. Each candidate will take a seminar in addition to two required courses in the social sciences, and two in the humanities component. Besides these 5 required courses, students will complete one 292 course as a culminating in-depth experience in their area of focus (social science or humanities). Students will thus round out their program with at least two electives in their field of interest. Consequently, for a student focusing upon the social sciences it is conceivable that, in addition to one seminar, he/she will be able to complete 5 courses in a field of interest. Students will be expected to complete at least 3 of their courses via the Portuguese language.

Master of Arts Degree Program in Portuguese and Brazilian Studies

This interdisciplinary degree program is designed to provide students as well as mature professionals holding an A.B. degree and possessing a reading and speaking knowledge of Portuguese, with a social science/humanities curriculum in Portuguese and Brazilian Studies. The program offers graduate level training with a focus on the Portuguese-speaking world.

Core Program: The requirements for this degree follow those of the A.M. in Brazilian Studies with the difference that students will be required to take at least three courses in Portuguese literature, history and culture and at least three courses in Brazilian literature, history and culture. Students will satisfy a Portuguese language proficiency requirement by taking PB 103 or passing a proficiency examination. As in the case of the other master’s degrees in the Department, a Master’s Project is required.

Master’s Degree in Course

Graduate students pursuing a doctorate in Portuguese and Brazilian Studies may apply to receive a master’s degree upon completion of the preliminary examination. Students selecting this option will not be required to write a Master’s Project.

Courses of Instruction

Primarily for Undergraduates

0100-0200. Elementary Portuguese
Designed for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A year course; only in exceptional circumstances is credit given for one semester alone. P. I. SOBRAL and STAFF.

0110. Intensive Portuguese
A highly intensive course for students with little or no preparation in the language. Stresses the fundamental language skills of understanding, speaking, reading, and writing. Aspects of Portuguese and Brazilian culture are also presented. Uses a situational/natural approach that emphasizes communication in Portuguese from the very first class. A two-semester sequence in one semester with ten contact hours each week. Carries double credit and covers the equivalent of two semesters. This course should be chosen by students beginning the
study of Portuguese as sophomores who would like to participate in the Brown-in-Brazil Program as juniors. P. I. SOBRAL and STAFF.

0400. **Writing and Speaking Portuguese**
Designed to improve the students' ability in contemporary spoken and written Portuguese. Using such cultural items as short stories, plays, films, videos, newspaper and magazine articles, and popular music, students discuss a variety of topics with the aim of developing good communication skills. Attention also given to developing writing ability. A systematic review of Portuguese grammar is included. Prerequisite: POBS 0200, or POBS 0110, or placement. Conducted in Portuguese. Completion of POBS 0400 is the minimum requirement for participation in the Brown-in-Brazil Program. P. I. SOBRAL and STAFF.

0610. **Mapping Portuguese-Speaking Cultures: Brazil**
Selected literary and cultural texts that serve as vehicles for a deeper understanding of Brazilian society. Literary materials will be taken from several genres and periods with special attention to contemporary writings. Other media such as film and music will also be included. Considerable emphasis on strengthening speaking and writing skills. Prerequisite: POBS 0400, placement or instructor's permission. Conducted in Portuguese. P. I. SOBRAL.

0620. **Mapping Portuguese-Speaking Cultures: Portugal and Africa**
Selected literary and cultural texts that serve as vehicles for a deeper understanding of Portuguese and Luso-African societies. Literary materials will be taken from several genres and periods with special attention to contemporary writings. Other media such as film and music will also be included. Considerable emphasis on strengthening speaking and writing skills. Prerequisite: POBS 0400, placement or instructor's permission. Conducted in Portuguese. L. SIMAS-ALMEIDA.

0710. **Modern Brazil Goes to the Movies**
Looks at Brazil through the eye of the camera and focuses on topics such as migration, race relations, gender and family dynamics and social inequities in contemporary Brazilian culture and society. Students will read articles and critical essays relating to the themes of each film as they develop their oral and written language skills. Conducted in Portuguese. P. I. SOBRAL.

0810. **Belonging and Displacement: Cross-Cultural Identities**
Focuses on the representation of immigrants, migrants and other “border crossers” in contemporary literature from Brazil and other countries. How do people respond to the loss of home and the shift to a new culture? Is “going home” possible? How do individuals deal with their dual or triple identities? Piñon, Lispector, Scliar, Rushdie, Salih, Cristina Garcia, V. S. Naipaul and others. Conducted in English. Enrollment limited to 20. Reserved for First Year students. P. I. SOBRAL.

0910. **On the Dawn of Modernity**
We will analyze how a new mindset that would later be called modernity slowly emerged from the medieval world and how the trials and errors of the 15th and 16th century navigators helped shape that transformation. The seminar is interdisciplinary insofar as the readings will include developments in astronomy, geography, shipbuilding, mathematics, philosophy, as well as what could be called early anthropology, as stepping stones to the first scientific revolution. Conducted in English. Enrollment limited to: 20. Reserved for First Year students. O. T. ALMEIDA.

For Undergraduates and Graduates

1030. **Portuguese Stylistics: Advanced Language Study and Creative Writing**
An intensive writing course covering basic genres: letter, short essay, diary, short story, and poetry. Students write five pages per week on five different preassigned topics that range
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over a wide variety of subjects. Exposes students to idiomatic and stylistic writing in a multitude of areas. In class, students read and comment on each other’s writings. Conducted in Portuguese. L. SIMAS-ALMEIDA.

1070. **Plugging into Brazil: Print, Television, and the Internet**
We will investigate the many nuances of the Brazilian media in its various forms and discuss Brazil using newspapers, leading magazines, current television broadcasts and the Internet. What are the characteristics of the Brazilian media? How does the media shape the views of Brazilians living in Brazil and those abroad? What is the role of the Brazilian media in a globalized world? Conducted in Portuguese. Prerequisite: One of the following: POBS 0610, 0620, 0710, or consent of the instructor. P. I. SOBRAL.

1080. **Performing Brazil: Language, Theater, Culture**
Designed to deepen the students’ understanding of Brazilian culture and society through the performing arts. Students will read a series of plays and respond to them in a variety of ways: in writing, verbally, and through performance. The course will include poetry and music as these can also be performed. Throughout the semester students will also be working on creating their own performance pieces. Conducted in Portuguese. P. I. SOBRAL.

1500. **Topics and Themes in Portuguese and Brazilian Literatures**

1500A. **African Literature of Portuguese Expression**
A survey of representative African narrative literature of Portuguese expression (Cape Verde, Guinea-Bissau, São Tomé e Príncipe, Angola, and Mozambique). The selections will cover the periods before and after the independence of these former Portuguese colonies. Conducted in Portuguese. L. SIMAS-ALMEIDA.

1500B. **Azorean Literature**
Survey of the major works in prose and poetry of the Azorean writers of the 20th-century that reflect the açorianidade or the Weltanschauung of the Azoreans. Works by writers such as Nunes de Rosa, Vitorino Nemésio, Côrtes-Rodrigues as well as by the most representative authors of the "New Generation." Conducted in Portuguese. O. T. ALMEIDA.

1500C. **Brazilian Literature in Translation: Clarice Lispector—a Woman of Spirit**
As Brazil's foremost woman writer of the XXth century, Clarice Lispector has received critical attention from French, Brazilian and American feminists. With the aim of appreciating her work comparatively, this course will examine four novels and four story collections from the following theoretical perspectives: existentialist, feminist, poststructuralist and Jewish hermeneutics. Conducted in English. N. H. VIEIRA.

1500D. **Brief Encounters: Modernist and Postmodernist Brazilian Short Fiction**
With Modernism and Postmodernism as the primary theoretical frames, we will examine the aesthetics of short fiction by discussing short stories and novellas from the 1920s to the 1990s that foreground the characteristics of these literary currents and their respective regional and urban expressions. As images of Brazil, this fiction will also be read within the context of feminist, hybrid, subaltern, and postcolonial stances. Conducted in Portuguese. N. H. VIEIRA.

1500E. **Contemporary and Brazilian Fiction: New Paths and New Perspectives**
Selected prose narratives from the 1970s to the present are read with the aim of identifying new paths and perspectives in contemporary Brazilian literature and culture that challenge traditional literary and cultural hierarchies as well as canonized aesthetics. Milton Hatoum, João Gilberto Noll, Caio Fernando Abreu, Marilene
Felinto, Sônia Coutinho, Roberto Drummond, Sérgio Sant'Anna, Rubem Fonseca, and others. Conducted in Portuguese. N. H. VIEIRA.

1500F. Contemporary Portuguese Women Writers
Analyze women's discourse and proposes an interpretation of female characters in the works of six contemporary Portuguese women writers: Maria Velho da Costa Maina Mendes, Maria Teresinha Horta Ana, Agustina Bessa-Luís O Mosterio, Teolinda Gersão Paisagem com Mulher ao Fundo, Lidia Jorge O Jardim sem Limites, and Ivette Centeno Os Jardins de Eva. By way of contrast, Mário Ventura's A Revolta dos Herdeiros is discussed as an example of how a male writer fictionalizes a woman as narrator.

1500G. Cultural Politics of Hybridity in Modern Brazilian Fiction
Explores Brazilian fiction that manifests intersections between erudite, popular and mass cultures. With the aim of challenging unnatural polarities that separate these forms of cultural expression, the theme of hybridity will be examined in prose fiction from the 1960s to the present within the context of the development of the modern Brazilian novel and recent theories on cultural hybridization. Readings will focus on the socio-political and cultural implications of hybridization in prose fiction by such authors as Caio Fernando Abreu, Ivan Angelo, Ignácio de Loyola Brandão, Roberto Drummond, Rubem Fonseca, Clarice Lispector, José Agrippino de Paula, Adélia Prado, Sergio Sant'Anna, and others. Conducted in Portuguese. N. H. VIEIRA.

1500H. Esthers of the Diaspora: Female Jewish Voices from Latin America
Fiction by and/or about Jewish women from Brazil, Argentina, Venezuela, Mexico, Chile, and Cuba. Evoking the image of the biblical Queen Esther who lived between two worlds, these Jewish voices will be discussed from the perspectives of feminist, hybrid, diasporic, and transcultural theories. Special attention to Brazil’s Clarice Lispector. The expression of the role of women vis-à-vis the immigrant experience will also be discussed. Conducted in English. N. H. VIEIRA.

1500L. Prophets in the Tropics—Latin American Jewish Writing
Compares the differences and the parallels between the narratives of the Jewish diaspora in Brazil, Argentina, Mexico, and Peru. As decentered dissenters in literature, these writers invariably address their diasporist situation vis-à-vis the larger society via such issues as immigration, cultural diversity, exile thinking, nationalism, discrimination, and postcolonialism. Prose by female and male writers, along with background materials in history, biography, memoirs, essay, and film. Conducted in English. Prerequisite: one 100-level literature course. N. H. VIEIRA.

1500M. Rereading Colonial Brazil
In the first part of the course we will discuss major literary and artistic achievements in Brazilian society during the first three centuries after Brazil's "discovery." In the second part of the course we will consider how novelists, poets (including song writers), filmmakers, visual artists and social scientists since Independence have reassessed the colonial period from a post-colonial position. Conducted in Portuguese. L. F. VALENTE.

1500N. Senses and Sensibilities in the Nineteenth-Century Portuguese Novel
The works to be read are representative of the main literary trends in 19th century Portuguese literature. They will be analyzed with a focus on literary aesthetics, but also on meanings (or senses), both culturally and personally, by exploring the textual construction of emotions, i.e., the engagement of sensibilities in the written word.
Authors to be studied include A. Garrett, Camilo C. Branco, and Eça de Queirós. Conducted in Portuguese. L. SIMAS-ALMEIDA.

1500O. The "I" of the Beholder: Self-Examination and Self-Display in Modern Brazilian Fiction
This course will address the first-person impulse in modern Brazilian fiction with the aim of analyzing the process of self-consciousness vis-à-vis national identity, individualism, memorialism, authoritarianism, and subjectivity. The course will also consider the first person in the context of realism, modernism, regionalism, and postmodernism. Discussion will center upon prose by Mário de Andrade, Rachel de Queiroz, Antônio Olavo Pereira, Clarice Lispector, Lygia Fagundes Telles, Nélida Piñón, Ivan Ângelo, Rubem Fonseca, and others. N. H. VIEIRA.

1500P. The Personal Dynamics of Witnessing: Self-Interpretation in Brazilian Autobiographical Fiction
Analyzes first-person narration and the ethics of self-examination, self-display, and self-invention. First-person narrators are read as self-chroniclers who become subject and object, or spectator and spectacle, of their own lives. Readings from such writers as Mário de Andrade, José Lins do Rego, Cyro dos Anjos, Antóio Olavo Pereira, Clarice Lispector, Lygia Fagundes Telles, Nélida Piñón, Rubem Fonseca, and Sérgio Sant'Anna. Conducted in Portuguese. N. H. VIEIRA.

1500Q. The Sage of Suspicion: The Skepticism of Machado de Assis
Focuses on the major novels and short stories of Brazil's foremost realist. Presentations and discussions address character and narrative distrust as well as skepticism related to unreliable narrators and ironic voices. Also explores the sociopolitical picture of Brazil in the second half of the 19th century in the context of Machado's Human Comedy. Conducted in Portuguese. N. H. VIEIRA.

1500R. Twentieth-Century Portuguese Prose
Reading and textual analysis of some significant writers from Portugal, along with information related to their historical context. José Saramago, Lidia Jorge, Vergílio Ferreira, Helder Macedo, Agustina Bessa-Luís, and Rosa Lobato de Faria. Conducted in Portuguese. L. SIMAS-ALMEIDA.

1500T. José Saramago and his Contemporaries
The Nobel Prize winner José Saramago will enjoy a leading place in our critical analysis of Portuguese contemporary novels. Other writers to be included are Lidia Jorge, António Lobo Antunes, Helder Macedo, Vergílio Ferreira, and Agustina Bessa Luís. Conducted in Portuguese. L. SIMAS-ALMEIDA.

1500U. The Leaping Chameleon: Reconfiguration of Self-Identity and Culture in Contemporary Brazilian Fiction
Focuses on reconfigurations/definings of concepts of identity -- personal and cultural in Brazilian prose fiction form the 1980s to the present. Protean forms and unstable subjectivities become apparent in fictional portrayals of aberrant and disfigured beings in liminal spaces, these serving as vehicles critical of urban strife, cultural instability, estrangement, and social segregation, written by authors such as André Sant'Anna, Bernardo Carvalho, Lilian Fontes, Marcelino Freire, Cintia Moscovich, Ivana Arruda Leite, Luiz Ruffato, and others. Conducted in Portuguese. N. H. VIEIRA.
1500V. Modern Brazilian Theater: Nelson Rodrigues and the Dynamics of Performance
Reading the psychological, mythical and Carioca plays by Nelson Rodrigues will serve to define modern Brazilian theater. Exploring influences from Greek tragedy to Freud, discussions will focus upon social rituals and taboos Rodrigues dramatized to unmask Brazilian society. Film/taped performances and criticism will be studied for interpreting modes of performativity and as tools for cultural analysis to understand the distance between self and behavior. Conducted in Portuguese. N. H. Vieira.

1600. Topics and Themes in Portuguese and Brazilian Cultures and Civilizations
Topics will vary from semester to semester.

1600B. Colonialism, Nationalism and Gender in Portuguese India
This seminar focuses on Portuguese rule and discourse in India, from an anthropological and historical perspective. Colonialism and nationalism in India will be studied in relation to former Portuguese colonies in Africa as well as to other experiences in India under the British raj. Gender issues will also be addressed. Attention to the case of the devadas (ritual dancers). Conducted in English.

1600C. Cross-Cultural Perspectives on Education: Education and the Portuguese-Speaking World
A comparative education course focusing on schooling in Brazil, Portugal, Cape Verde, and these Portuguese-speaking populations in the U.S. The role of education in these diverse societies, as well as theories and methodologies for cross-cultural research and analysis, are explored from both historical and contemporary perspectives. Conducted in English. A. Becker.

1600D. Portuguese Discoveries and Early Modern Globalization
Explores the political, commercial, military, cultural and social dimensions of the Portuguese presence in Africa, Asia and America, 1415-1808. Examines different phases in the context of geographical regions, subsequently integrating the different regions into a multi-continental, multi-oceanic, global system. Emphasizes European/non-European contacts and interactions. Conducted in English. J. Flores.

1600F. European Citizenship
Focuses on the construction of equal citizenship in Europe. Examines relevant declarations of the rights of persons and citizens and compares the process of citizenship building in different countries (with particular attention to the case of Portugal). Emphasizes the ongoing formation of the European Union's citizenship and the recent Charter of Fundamental Rights of the EU.

1600K. On the Dawn of Modernity
A look at the emergence of modernity and its conflicts with the classical world view as revealed in the writings of the Portuguese navigators (XVth and XVIth centuries) on their encounters with the non-European world. Readings will focus on fields such as astronomy, cartography, geography, shipbuilding, and anthropology, as stepping stones to the first scientific revolution. This literature has been practically unknown to non-Portuguese readers. Conducted in English. O. T. Almeida.

1600L. Portugal, Southern Europe and European Integration
Focuses on the economic, political and public opinion dimensions of European unification and its impact on Portugal, Spain, Italy and Greece. It also analyzes the effect on southern European countries of Eastern European enlargement, the new balance of power arising from the Treaty of Nice and the institutional reform being currently discussed at the ongoing European Convention. Conducted in English.
1600M. *Immigration into Southern Europe*
Focuses on new trends of international migration in Europe, particularly in Southern Europe (Portugal, Spain, Italy and Greece), since the mid-1970s. The following topics will be studied: phases of immigration and characteristics of flows; new geographies of migration (including Brazilian and Eastern European immigration); the economic and social framework explaining migrations; the demographic challenge; new channels for migration (including smuggling and trafficking); immigration policies; and modes of social incorporation of immigrants. Conducted in English.

1600N. *Portuguese-Speaking Africa and Anthropology from Colonialism to Postcolonialism*
This course focuses on the anthropological knowledge of African sub-saharan societies, the conditions and limitations of these studies during the colonial period and their continuity in contemporary subjects. Stresses the Portuguese colonial experience and the evolution of social sciences in African Portuguese-speaking countries. Conducted in English.

1600O. *Power, Segregation and Mobility Under Late Portuguese Colonialism and Its Aftermath*
Portuguese colonialism in Africa and Asia and its aftermath in light of contemporary anthropological theory and colonial/postcolonial studies. Also addresses migration and diaspora, both the Portuguese migrant colonies in the Americas and northern Europe, and the contemporary migrations into Portugal from the former colonies, China and South Asia. Documentaries and fiction broaden the presentation and discussion of main issues. Conducted in English. C. BASTOS.

1600P. *The Last Empire: Portuguese Colonialism and Decolonization in Comparative Perspective*
Adopting a comparative perspective, the course gives special emphasis to political, ideological and military dimensions of Portuguese rule in the African colonies. The first part deals with the evolution of Portuguese colonialism since World War II. The second part focuses on the process of decolonization after 1974, integrating the dissolution of Portuguese Empire in the international context of the Cold War. Conducted in English. L. N. RODRIGUES.

1600Q. *Perceptions of the Other and Ethnographical Writing in Early Modern Portugal*
Focuses on the privileged situation of Portugal as far as the knowledge of extra-European cultures in early modern Europe is concerned. The course examines agents, instruments and mechanisms of information gathering and diffusion of the "outer world" in Europe via Lisbon. The most important *topoi* of these Portuguese ethnographical representations will be discussed through a close analysis of a wide range of contemporary texts and visual records. Conducted in English. J. FLORES.

1600R. *The Lusophone Black Atlantic: Cultures and Religions Across the Ocean*
Addresses the cultural unity and differentiation within the Lusophone Black Atlantic, with a special focus on mobility, diaspora, and transnationalism, including the consideration of such issues as luso-tropicalism, "creolization," colonialism, and Afro-Brazilian religions like Umbanda and Candomblé. The course bibliography includes anthropological texts as well as current Luso-African and Brazilian literature. Conducted in English. C. BASTOS.
1720. **Literacy, Culture, and Schooling for the Language Minority Student**
Focusses on increasing awareness of the intersection of language and literacy, the sociocultural influences on literacy development, and the application of diverse strategies that support the acquisition of second-language literacy. Combines a theoretical exploration of literacy processes and methodological implications with a clinical requirement of four hours weekly in a second-language field-teaching practicum. Conducted in English. S. W. Smith.

1750. **Language, Culture, and Society**
Investigates the meanings of language, culture, and society and the interrelationship among them. Examines the functional and dysfunctional uses they can play in public education, particularly from the public school administrators’ and teachers’ viewpoints. Explores concerns directly related to the nature, quality, and future of English-as-a-Second-Language programs. Reflective activities, lectures, simulations, case studies, role plays, and small group discussions. Conducted in English. M. F. Pacheco.

1800. **Concentration Seminar in Portuguese and Brazilian Studies**
An interdisciplinary seminar intended primarily for junior and senior concentrators in Portuguese and Brazilian Studies, but open to nonconcentrators and graduate students with consent of the instructor. May be repeated for credit with content changed. Conducted in Portuguese.

1800A. "Que país é este?" **Twentieth-Century Definitions of Brazil and Brazilianness**
Focuses on three major areas: the portraits of Brazil from the late 1930s to the early 1960s, mainly by left-leaning intellectuals; the economic and political model of Brazil imposed by the military regime of 1964-1985; and the subversion of the official definitions of Brazil in the "anti-histories" of the *Abertura* period (1975-1985). Materials drawn from the social sciences, history, literature, and film. Authors include Sérgio Buarque de Holanda, Gilberto Freire, Vianna Moog, Paulo Freire, Golbery do Couto e Silva, Roberto da Matta, Caio Prado Jr., Richard Morse, and others. Conducted in Portuguese. L. F. Valente.

1800B. **Lusofonia: National Identities and Transnational Challenges**
The creation of the Commonwealth of Portuguese-Speaking Countries has reignited debate concerning the roots, history, contemporary developments, and future prospects of the Portuguese-speaking world. This seminar focuses on key issues regarding the identities of the Portuguese-speaking nations, their interrelations, and their interactions with the wider world. A. de Quental, T. de Pascoais, Pessoa, G. Freyre, S. Buarque de Holanda, Vianna Moog, A. Sérgio, E. Lourenço, A. Cabral, and R. Da Matta. Conducted in Portuguese. O. T. Almeida.

1800E. **The Brazilian Puzzle: Confronting the Post-Colonial Legacy**
Brazilian intellectuals have often attempted to understand and explain the challenges in modern Brazilian society (political, economic, racial, educational) by pondering Brazil’s Iberian roots and assessing the legacy of Portuguese colonialism. Manuel Bonfim, Sérgio Buarque de Holanda, Paulo Prado, Gilberto Freyre, Vianna Moog, Caio Prado, Celso Furtado, Paulo Freire, Oswald the Andrade, João Ubaldo Ribeiro. Attention to film, music and the visual arts. Conducted in Portuguese. L. F. Valente.

1800F. **The Lusophone World and the Struggle for Modernity**
A study of classical writings from the Portuguese-speaking world dealing with the issue of modernity, focusing particularly on the Counter-Reformation and Baroque paradigms versus the Enlightenment. Portuguese, Brazilian and African writers such as Antero de Quental, Sérgio Buarque de Holanda, Vianna Moog, Amilcar Cabral and
others will be read critically and in a comparative approach. Conducted in Portuguese.
O. T. ALMEIDA.

1970. Reading and Guided Study
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

1990. Research and Preparation of Honors Projects
This independent study course is designed for students working on honors projects. Written permission of the concentration advisor (Prof. Sobral) is required. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Primarily for Graduates

2010. Foundations of Bilingual Education
Topics will vary from semester to semester.

2010A. Language Theory and Curriculum Development
Focuses on the application of language theory, methodology, and curriculum development procedure for classes enrolling English language learners. Participants focus on setting essential goals and objectives aligned with learning standards and develop appropriate curricula in several subject areas. Conducted in English. M. F. PACHECO.

2020. Problems and Current Issues in Bilingual/ESL Education
Topics will vary from semester to semester.

2020A. Applied Linguistics for ESL
Focuses on the linguistic development of bilingual children. Addresses three major dimension of language acquisition—linguistic, cognitive and sociocultural—within educational contexts for students of all ages. Conducted in English. S. W. SMITH.

2020B. Cross-Cultural Growth and Development
Explores physical, cognitive, social and emotional human development from a cross-cultural perspective. Part one analyzes child-rearing practices in agrarian and industrialized societies. Part two is based on case studies involving the ethnolinguistic groups in the Providence area, which are studied and discussed with implications for teaching and learning. Conducted in English. M. F. PACHECO.

2020C. Educational Leadership in Diverse Settings: Research, Policy, and Practice
A series of lectures and discussions representing various perspectives and styles. Individual sessions focus on leadership issues surrounding standards, high stakes testing, and school reform initiatives. Most topics address leadership for low performing schools and for diverse student populations. Discussions led by prominent educational leaders. Some lectures may be open to the public. Conducted in English. A. BECKER.

2020D. Theories in First and Second Language Acquisition
Theory and current research relating to first and second language acquisition and learning are examined from a pedagogical perspective. Focuses on both learning and teaching a second language. Conducted in English. S. W. SMITH.

2120. Methods and Materials for Portuguese-English Bilingual Programs
Topics will vary from semester to semester.
2120A. ESL Methodology Assessment and Evaluation
An overview of the current principles, practices, and approaches that inform assessment and evaluation for English language learners. Participants engage in class activities that duplicate selected assessment approaches and identify strategies for integrating assessment with planning and instruction appropriate to the language proficiency of students. Participants explore assessment research and theoretical background for an understanding of the complexity of evaluating student achievement. Conducted in English. S. W. SMITH.

2500. Topics and Themes
Topics will vary from semester to semester.

2500B. Portuguese Overseas Encounters
A critical analysis of some classic Portuguese travel writings from the 15th to the 20th century. The readings include Zurara, Camões, Fernão Mendes Pinto, História Trágico-Marítima, Ramalho Ortigão, Raul Brandão, as well as the contemporary Pedro Rosa Mendes. Conducted in Portuguese. O. T. ALMEIDA.

2500E. Portuguese Cultural and National Identity
A critical reading of some key issues in Portuguese intellectual history regarding Portuguese national identity. Classical authors such as Verney, Antero de Quental, Teixeira de Pascoais, Fernando Pessoa, Antonio Sélrio, and Eduardo Lourenço are read along with contemporary theoretical works on the issue of cultural and national identity. Conducted in Portuguese. O. T. ALMEIDA.

2500F. Tales of the "Sertão"
The reality and mythology of the "sertão" have long been a source of inspiration for Brazilian writers, visual artists, and filmmakers. This seminar considers the transformations of the "sertão" motif since the second half of the nineteenth century. Fiction by José de Alencar, Euclides da Cunha, Graciliano Ramos and João Guimarães Rosa. Films by Glauber Rocha and José Araújo. Conducted in Portuguese. L. F. VALENTE.

2500G. Nation and Narration
The invention and transformation of the idea of Brazil as a nation narrative texts since the middle of the 19th century. Manuel Antônio de Almeida, José de Alencar, Adolfo Caminha, Machado de Assis, Monteiro Lobato, Mário de Andrade, Adalzira Bittencourt, Antônio Callado and João Ubaldo Ribeiro. Theoretical texts by Benedict Anderson, Homi Bhabha, Edward Said, Eric Hobsbawn, Frantz Fanon, Roberto Schwarz and others. Conducted in Portuguese. L. F. VALENTE.

2500H. The City and the Street: Tradition, Modernity and Human Subjectivity in Brazilian Urban Literature
From Machado de Assis’s streetcar chronicles, João do Rio’s belle-époque flâneur crónicas, and modernists’ views of São Paulo down to the urban paranoia of Rubem Fonseca’s crime narratives and the destabilizing subjectivities of contemporary writers, this seminar examines diverse urban bodies and cartographies for understanding spatial and temporal relationships between the city and bodies, sexual cultures, gender roles, violence, peripheries, and metropolitan apocalyptic tensions. Conducted in Portuguese. N. H. VIEIRA.

2500I. The Portuguese Essay
Focuses on some key themes of Portuguese social, political and cultural life that have been dealt with in the essay form, in the 19th and 20th century, such as Portugal’s
decline, modernization, regeneration and national identity. Special attention to literature on the essay as a genre. Readings include Antero de Quental, Oliveira Martins, Silvio Lima, Joaquim de Carvalho, Antonio José Saraiva, Eduardo Lourenço and others. Conducted in Portuguese. O. T. ALMEIDA.

2600. Topics and Theme
Topics will vary from semester to semester.

2600A. Medieval and Renaissance Portuguese Literature
An analysis of Portuguese literature from the Middle Ages to the 16th century. Special attention given to the poetry of the Cancioneiros, Fernão Lopes, Gil Vicente, and Luís de Camões. Conducted in Portuguese. L. SIMAS-ALMEIDA

2600G. Decolonizing Brazil: The Postcolonial Dilemma of "Not Being And Being Other"
Considering the "ambivalent construction of the Brazilian's cultural existence" as the basic stance for reexamining Brazil from a revised postcolonial approach, this seminar will contextualize the Brazilian postcolonial from the viewpoints of diversity, difference, hybridity, and heterogeneity. Authors to be read are Manuel Antônio de Almeida, Machado de Assis, Adolfo Caminha, Oswald de Andrade, Graciliano Ramos, Samuel Rawet, Silviano Santiago, and Lygia Fagundes Telles. Conducted in Portuguese. N. H. VIEIRA.

2600I. Modern and Contemporary Brazilian Poetry
An intensive reading of selected Brazilian poets of the past eighty years, including Carlos Drummond de Andrade, João Cabral de Melo Neto, Mário Faustino, Paulo Leminski, Ana Cristina César, Paulo Henriques Britto, and Salgado Maranhão. Each student will be responsible for an oral presentation about an additional poet, to be chosen in consultation with the instructor. Conducted in Portuguese. L. F. VALENTE.

2600J. The "I" of the Beholder: The Autobiographical Mode in Modern Brazilian Fiction
Analyzes first-person fictional narration and the ethics of self-examination, self-display and self-invention. Examines questions of truth in fiction, the self and the other, autobiographical theory, and the concept of witnessing and reporting in relation to self-representation. Mário de Andrade, Cyro dos Anjos, Antônio Olavo Pereira, Clarice Lispector, Lygia Fagundes Telles, Helena Parente Cunha, Rubem Fonseca, Sérgio Sant’Anna and Bernardo de Carvalho. Conducted in Portuguese. N. H. VIEIRA.

2600M. The Word in the Dark: Passion, Quest and Identity in the Universe of Clarice Lispector
Examines the major novels, short story collections, and crônicas by the Brazilian writer Clarice Lispector and analyze the development of her literary voice and her unique use of language. Reading her work through and beyond the existential, feminist and poststructuralist views manifested in the best critical and theoretical analyses of her work, this seminar will focus especially upon her passionate struggle with language as well as her genre-breaking narratives, alongside her ontological quest for narrative subjectivity. Seminar presentations and papers will explore these issues with the aim of understanding Clarice's spiritual and philosophical impulses as well as her original linguistic contribution to Brazilian and World Literatures. Conducted in Portuguese. N. H. VIEIRA.

2600N. Transgressing Gender: Female Voicing in Modern Brazilian Literature
Looks at theoretical and critical essays on gender and beyond in relation to the fiction of three major Brazilian female writers: Rachel de Queiroz, Lygia Fagundes Telles,
and Clarice Lispector. Discussion addresses issues of gender identity and ambiguity, female voicing, gender politics, alterity, feminist consciousness, as well as power and resistance. Readings include two or more works by each of the three writers. Conducted in Portuguese. N. H. Vieira.

2600O. The Sage of Suspicion: Machado de Assis and the Agencies of Narrative
Novels and short stories of Machado de Assis within the context of the socio-political reality of nineteenth-century Brazil. Attention to the ideologies of Brazil’s ruling class, its self-image and views on national identity, class and race; the issue of fiction vs. reality; and/or such topics as irony, symbolism, and narratology. Conducted in Portuguese. N. H. Vieira.

2600P. Fernando Pessoa and Co.
An analysis of key writings by the major Portuguese Modernist poet Fernando Pessoa, as well as by his more important heteronyms, particularly Alvaro de Campos, Alberto Caeiro, Ricardo Reis, and António Mora. The course will emphasize the recurrent themes of identity, divided self, meaning, disquietude, and displacement. Conducted in Portuguese. O. T. Almeida.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit. The Staff.

2980. Reading and Guided Study
Reading in Portuguese language, literature, civilization, and bilingual studies. Conducted via Portuguese readings and discussions. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Public Policy and American Institutions

Professors Loury, Orr (Director), Spoehr, Wong; Associate Professors Brettschneider, Cheit, Schiller, Tyler; Assistant Professors Aizer, Cho, Knight, West; Adjunct Associate Professors Augusto, Miller; Adjunct Assistant Professors Luong, Wasserman; Adjunct Lecturers Allen, Arenberg, Burke Bryant, Combs, Gresham, Marino, Scurry, Slattery-Bownds.

The A. Alfred Taubman Center for Public Policy and American Institutions, established in 1984, offers an undergraduate concentration in Public Policy and American Institutions which is designed to improve understanding of the impact of government, and master’s programs in public policy and public affairs that train students to draw upon concepts from political science, law, economics, education, community health, urban studies, and sociology to develop innovative solutions for issues of real-world significance.

Undergraduates in the concentration are required to take a series of core courses in public policy, economics, statistics, ethics, and policy analysis. Although not required, internships in public sector agencies are strongly encouraged as part of the concentration.
Where appropriate, financial support is provided to students engaged in educationally relevant internships.

Graduate students in each of the master’s programs are required to complete coursework in institutions, public budgeting and management, economics, statistics, and policy analysis. Master of Public Policy students are also required to complete a research workshop, social science data technologies course, and an internship in a policy-focused field of their choosing.

The center also encourages Brown University faculty and students to engage in research on important public policy problems. Engaged in an active research agenda, external grantsmanship, and community service, the current center faculty is pursuing this theme in a variety of different problem areas including urban policy, health care, education policy, law, and technology policy. The center periodically distributes the results of research conducted by its faculty and students. The center’s faculty has gained national recognition for its teaching excellence and high quality research.

Undergraduate and Graduate Programs
For a complete description of the standard concentration program leading to the A.B. degree, and the graduate requirements leading to the M.P.P. and M.P.A. degrees, please see the Taubman Center website:
http://www.brown.edu/Departments/Taubman_Center/index.html.

Courses of Instruction

0700. First Year Seminars
Enrollment limited to 20 first-year students.

0700I. Examining Social Policy Issues through Contemporary Fiction
This course examines how contemporary novelists are addressing poverty, homelessness, mental illness, race relations, domestic abuse, and other important social issues. Students will employ a "problem definition" framework to consider the way that novels "typify" social problems by making claims about their scope, severity, and causation, as well as the attributes of "afflicted" groups and individuals.

For Undergraduates and Graduates

1170. The Criminal Justice System in Rhode Island
An examination of criminal justice issues using social science tools and traditional methods of reporting and interviewing. Assignments focus on Rhode Island's criminal courts. Which cases get carried forward for prosecution, and why? What factors explain the differences in sentences for various crimes? Prerequisites: POLS 0010, or POLS 0100.

1200. Policy Analysis and Program Evaluation
Broad overview of public policy analysis and program evaluation with emphasis on methodological issues involved in the analysis and assessment of government programs. Illustrations are drawn from a variety of substantive policy areas. Prerequisite: POLS 0100, and POLS 1600 or EDUC 1110 or SOC 1100 or ECON 1620, or written permission of instructor.

1500. Comparative Policies: Analyzing Policy Making Around the Globe
Analyzes the institutions and policy-making of several countries. Includes an analysis of education policy, health policy, and social welfare policy.
1700. Junior/Senior Seminar in Public Policy
Enrollment limited to: 20. Instructor's permission required.

1700A. Issues Facing Our Cities
This course is designed to provide students with an understanding of the nature and causes of urban problems, and of some of the solutions that have been designed to address them. The course will begin by exploring urban problems such as poverty, homelessness, and crime. It then will review and evaluate different public and private responses designed to address them.

1700B. Social Welfare Policy in the United States
Exposes students to the key challenges for social welfare policy-making in the United States. Particular attention will be given to the formulation and administration of prominent welfare, health, and education policies. Course materials also will explore how demographic and economic trends affect the implementation of social welfare policies. Instructor permission required.

1700C. The Internet and Public Policy
Explores policy issues involved in technology, the internet, and other digital developments. Students will study how technology policy is formulated, how issues of privacy and security are handled, and how technology policy affects society and politics.

1700D. The Economics of Health Policy
Applies general theoretical principles of economics to the health care sector. The basic approach is to recognize the importance of scarcity and incentives, allowing for differences particular to health. The demand for health and medical care are examined theoretically and empirically. The competitiveness of these markets, the relationship with health insurance, and the role of government are explored.

1700E. American Housing Policy
Examines U.S. public and private sector policies that affect the provision and distribution of housing to the American population. We consider the national, state, local and private sources of housing policies, the historical development of such policies, and some of their most significant consequences, including home ownership, urban sprawl, income and racial segregation, and homelessness. Comparisons with other systems will be made.

1700F. Economics and Public Policy
An economic analysis of major social programs in the United States. Topics include the possibility of market failure in the private sector, the redistribution of income, and incentive effects created by the programs. Specific policy issues to be examined are welfare reform, Medicaid, school finance reform, and the Earned Income Tax Credit (EITC).

1700G. Education Policy Challenges
An in-depth look at education system. Analyzes current education policy problems, including contemporary debates over standardized testing, equal access, and school choice.

1700H. Family Law and Policy
A seminar exploring how the family is defined and regulated by the legal system and through public policy. Focuses on how well legal definitions of families coincide with the realities of modern American families, the role of the judiciary in constructing
family policy, and the interaction between private family life and public rules. Topics include marriage, divorce, adoption, and reproductive technology.

1700I. Fiscal Federalism Policy
Issues in government spending and tax policy specific to federal systems with central, state, and local governmental units. Conceptual topics include the normative assignment of fiscal responsibilities within federal systems and the equitable distribution of income. Specific policy areas include welfare, education, and the taxation of internet commerce.

1700J. GIS and Public Policy
An introduction to the theory and practice of social science Geographic Information Systems (GIS) as applied to public policy analysis. Topics include: the geographical basis of policy issues, spatial mapping, and the use of ArcView software to study policy problems.

1700K. Health Policy Challenges
Introduces students to the U.S. health care system. Focuses on how the organization, financing, and market structure of the system affect the key issues of access, cost, quality, and equity of care. Specific issues include minority and vulnerable populations, technology, risk adjustment, managed care, long-term care, ethics, and public health.

1700L. Issues Facing Health Care
When people think of "health" policy, they often think of policy issues that are related to "medical care". This course focuses on the social, environmental, and political factors that shape "public" rather than "individual" health. It uses public health topics to illustrate the basic fundamental problems of the politics of regulation and social policy.

1700M. Law and Public Policy
The role of courts in social reform with special attention to the institutional limitations of adjudication and problems in implementing policy through the judiciary. The concept and practice of "public interest law" is examined in detail in the context of such issues as managing mental institutions, schools, and the welfare system.

1700N. Legal Policy Challenges: Federalism and Separation of Powers Issues Under the U.S. Constitution
This course combines an introductory overview of the current American legal system with a look at the history, philosophy, and structure of the federal constitution and government, with particular emphasis on issues such as federalism, judicial review, separation of powers, and the commerce clause in United States Supreme Court jurisprudence. Students will be expected to read, analyze, and be prepared to discuss critically the assigned reading, including the case law and other legal materials, for each weekly class. Each class will be conducted as a seminar and taught via the Socratic Method used in many law schools.

1700O. Shaping Policy: Political Institutions in the United States
Through a thorough examination of political parties, interest groups, the judiciary, Congress, elections, the media, the presidency, and the bureaucracy, provides students with a clear understanding of the forces that shape public policy in modern America.

1700P. Social Science Data Technologies
Provides advanced training in the principle methods of data analysis across a range of substantive areas. Students will gain technical competence utilizing a variety of online
internet research and data mining tools and stand alone software including but not limited to SPSS, Excel, Access, and ArcView (GIS).

1700Q. Urban Policy Challenges
Uses theoretical readings and case studies to consider a variety of public policy issues related to American cities including: the commercialization of the nonprofit sector, tax exemption, charitable choice, and the role of nonprofit organizations in political advocacy.

1700R. Urban Revitalization: Lessons from the Providence Plan
Explores policy issues facing cities today and examines how the public, private, and nonprofit sectors have mobilized in selected cities to address these issues. Topics include jobs and economic development, education, public safety, and regional approaches. Focuses on The Providence Plan, a joint city-state revitalization initiative designed to address the problems of urban poverty. Comparisons with similar programs in other cities. Instructor permission required.

1700S. Policies Affecting Working Families
Examines sociological and economic factors and current policies contributing to conflict between caring and earning which affects working families in the U.S. Investigates dynamic landscape of the American family and costs of providing and caring for family members. Considers government's and employers' roles in shaping policies, cross-national comparison of American policies with other leading nations, and links between policies and outcomes.

1700T. Good Government
An applied ethics course specifically for students with backgrounds in Public Policy, it will emphasize the primary themes of good government: openness, deliberation, and integrity. Students will develop an essay on good government and do research for case studies of ethical dilemmas involving public servants. Prerequisite: POLS 0100 (or equivalent). Instructor permission required.

1700U. Communications, Advocacy and Public Affairs
Teaches students about communication strategies and tactics for affecting social change, and examines how individuals and organizations frame issues and execute campaigns in order to change policy.

1700V. Nonprofit Organizations
Contemporary nonprofits and their role in community building and shaping public policy are central to this course. Topics include how strong coalitions impact housing, welfare and children's policy, organizing empowered communities, the influential and engaged donor and building the value of nonprofits. Case studies will be featured and new nonprofit models will be conceptualized to strategically address critical human need.

1700W. Privacy in Networked Society
Covers philosophical, legal, and pragmatic issues surrounding privacy in a media-saturated and technologically-intense world. Examines the complex issues surrounding privacy from ethical, political, economic, and legal perspectives. Analyzes national government, domestic regulatory agency, and individual company responses (or lack thereof) to these issues and discusses potential future responses. Instructor permission required.
1700X. Social Movements and Ethnic Conflicts
Social movements are organized as collective efforts to promote or to resist change in society that rely, at least in part, on non-institutionalized forms of political action (e.g. demonstrations, riots). Our study of collective action will draw principally from research in political science and sociology and may include (among others) the civil rights, environmental, and religious movements.

1700Y. Crisis Management
Introduces future policymakers to the multifaceted decision-making process in which governments, businesses, advocacy organizations, and the public are thrust into the throes of a policy crisis. Various crisis management theories, key stakeholders in a crisis situation, and the positive and negative effects of various strategies are analyzed.

1700Z. State and Local Government
Examines state and local politics and government in the United States. The first part of the course examines the historical underpinning and division of power of the major political actors, institutions, and processes through both institutionalist perspectives. The second part focuses on the role of states in shaping significant policy areas including civil unions, education, healthcare, welfare, and the environment.

1701B. Public Organization and Management
The aim of this course is to approach public sector organizations from a theoretical and systematic point of view in order to understand the proper function and role of public organizations in our society, and examine important conditions and factors required for effective public organization management. The boundary between the public and private sector is discussed as well as similarities and differences between the two. Also, challenges originating from the characteristics of our Knowledge-Information Society are discussed, along with potential solutions to address them. There are no specific prerequisites for the course; however, some essential knowledge in microeconomics and American government system is recommended. In case the course is oversubscribed, the enrollment preference would be determined by the student's class standing and the areas of study.

1701C. Corporate Power and Global Order: Regulation and Policy in the Transnational Economic Sphere
This course introduces students to the legal architecture of the global trading system. In the first part, we will explore some of the diverse legal regimes that shape and are shaped by the behavior of transnational economic actors, with attention to the perspectives of transnational regulators, corporate managers, and activists. In the second part, we will look at basic trade theory and concepts as well as the GATT/WTO regime. Finally, we will consider case studies presenting complex business/social/policy problems from perspectives gained in the course. Students will be assigned to groups and asked to select a case study topic during the first week of class. In the final classes, student groups will present their case studies to the class for analysis. Some knowledge of trade theory, international law and institutions and/or business theory would be helpful but is not required.

1701D. Aging and Public Policy: The Impact of an Aging Society on Public and Private Sector Organizations
A "silver tsunami" is coming. Soon 20% of US residents will be over the age of 65 - a milestone already reached in Japan and much of Western Europe. Governmental policy makers and business leaders are scrambling to adapt as the aging population reshapes the demand for services and products and threatens to unravel the social
safety net. This course will investigate the aging wave, analyze its impact on both private and public organizations through case study review, and consider implications for future management and policy. Emphasis will be on “social entrepreneurship” - practical solutions and their implementation within organizations. This seminar is intended to inform and prepare students aspiring to careers in private or public sector management, as business leaders, entrepreneurs or public policymakers. Limited enrollment, preference given to graduate students, public policy concentrators, and seniors.

1701E. Local Political Cultures, New Electronic Practices and 2008 National Elections
This course will be taught at two sites simultaneously: Taubman Center for Public Policy and Tougaloo College Center for Civic Engagement and Social Responsibility. At Brown, the course will be an Independent Reading & Research course with a difference, under Prof. Geri Augusto. At Tougaloo, the course will be taught by Profs. Stephen Rozman and James Stewart. Students taking the course will be expected to work on their own, meeting for discussion three-four times a month, time and place to be mutually determined. The class will also meet informally with the instructor twice a month. Central to the course will be engagement in a semester-long, cross-campus Brown-Tougaloo dialogue on local/regional political cultures and new electronic practices around voting and campaigning, via this MyCourses page, three scheduled video-conferences, and other modalities to be determined by students themselves. Assigned interdisciplinary course readings (to be read by students on both campuses) will inform electronic communications between the two groups of students, helping them explore the intersection of local political cultures, political action, public policy issues, civic engagement, new practices of “cyberpolitic” (blogging, viral networking, etc.), and the 2008 presidential election, as well as uncover areas of convergence and divergence between the two localities. Course open to juniors and seniors in Public Policy. Students from other departments and centers welcome, as space permits. Enrollment at Brown will be limited to 8 students. Written permission required. (More information in MyCourses or e-mail Geri_Augusto@Brown.edu)

1701F. How Lawyers Think: Lessons in Reading, Reasoning and Rulership from American Legal Thought
American society is, perhaps more than any other, shaped, managed and governed by lawyers. As with other disciplines, like economics, political science, sociology or literary studies, expertise in law is gained through mastery of the unique techniques, practices and analytics of the discipline. These techniques, in turn, shape how lawyers think, see the world, imagine possibilities and obstacles, make policy and engage in professional life. In this course students will be introduced to some of the most significant techniques of reasoning, interpretation and argumentation developed in the American legal academy since the late 19th century and will explore how disciplinary struggles over these techniques both emerged from and helped shape legal and policy responses to some of America’s biggest governance challenges, including economic concentration and corporate power, the welfare state and the New Deal, the dismantling of Jim Crow and the protection of civil rights, and the emergence of identity politics. The course is designed to introduce students from other disciplines to legal analysis as a disciplinary practice and presumes no prior legal study.

1701G. Science and Technology Policy in the Global South
Using theoretical ideas and empirical examples, this seminar explores from a variety of perspectives the relationships among science, technology, society, and public
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policymaking in the Global South. It examines the influence of past experience, forms of public science organization, systems of knowledge and belief, civic epistemologies and regulatory frameworks, strategic agendas for development, and tensions in power and social relations on the governance of science and technology in several societies. Also interrogates the roles of local and global knowledge in shaping S&T policymaking and citizenship in an internationalized context. Bridging public policy and science studies, the seminar introduces a more internationalized perspective on science and technology governance, and enhances capacity for effective policymaking practice. Students will be graded on three writing assignments; participation in a web-based roundtable with counterparts in Brazil, South Africa and/or India; and class participation. Junior/senior seminar for Public Policy concentrators; others welcome with instructor's permission.

1701H. Congressional Leadership, Parties and Public Policy
Focuses on the Congressional leadership, parties in Congress and their impact on political interactions, and public policy. The course will examine the relationship between the leadership in the Congress and the powerful elements in the House and Senate such as committee chairmen and the party caucuses as well as the media and lobbyists. Emphasis is on the decades long trend toward greater political polarization and its impact on the ability of the institution to respond effectively to address critical national priorities such as the federal debt, health reform immigration, nuclear proliferation and global warming. Enrollment limited to 20 juniors, seniors and graduate students.

1701I. American Immigration Policy: Issues and Politics in State and Nation
No description available. Enrollment limited to 20 juniors, seniors, and graduate students concentrating in Public Policy.

The course will combine an overview of the current American legal system with an introductory look at the rights protected under the Due Process and Equal Protection Clauses of the United States Constitution, with particular emphasis on privacy, economic rights, abortion, sexual orientation, voting rights, and racial and gender classifications in United States Supreme Court jurisprudence. Students will be expected to read, analyze, and then be prepared to discuss critically the assigned reading and legal materials for each weekly class. Each class will be conducted as a seminar and taught via the Socratic Method used in many law schools.

1770. Public Policy and Higher Education
Examines federal and state policies in education, their intersection, and their impact in the U.S. on higher education. Major topics include the organization and funding of higher education in the U.S., the evolving federal and state roles in education, and recent reform movements. Ends with a review of the emerging public agenda for education and the policy changes called for or likely to occur.

Supervised reading or research. Specific program arranged in terms of the student's individual needs and interests. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

An advanced two-semester research seminar for senior honors candidates in the public policy and American institutions concentration. Participants jointly consider strategies appropriate to researching and writing a senior paper before proceeding to individual research on
topics they choose. Each participant is required to present a summary of his or her work to the colloquium.

Primarily for Graduates

2000. Institutions and Policy Making
Studies how political, social, and economic institutions structure policymaking. Covers a variety of policy areas such as education, health care, technology policy, welfare, and social policy. D. M. West.

2010. Economics and Public Policy
Examines issues in government spending and tax policy. Conceptual topics include the normative assignment of responsibility with federal systems and the equitable distribution of income. Specific policy applications are covered. Staff.

2020. Public Budgeting and Management
Explores how organizations use budgets and management tools to achieve broader social, economic, and political objectives. It is designed to show how these techniques can be used to improve organizational performance. P. M. Marino.

2030. Statistics
Covers social and economic statistics and their role in public policy research. Among the topics explored are descriptive and inferential statistics, measurement, sampling, and multivariate analysis. Staff.

2040. Policy Analysis
Investigates policy analysis and program evaluation with emphasis on assessment of government programs. E. A. Miller.

2050. Program Evaluation
Designed to equip graduate students with the knowledge and tools needed to become critical consumers of evaluation research and to conduct evaluations of various social programs and policies. Following an introduction to the field of program evaluation, the course will address specific topics including: logic models, process evaluations, experimental and quasi-experimental designs for outcome evaluations, and alternative data sources. Class discussions and assignments will utilize evaluation examples from a variety of substantive policy areas. Prerequisite: PPAI 2030. Open to graduate students only.

2130. Organizations and Policymaking
Graduate seminar exploring how organizational, political and professional cultures shape policymaking and implementation; how policymakers and practitioners acquire policy-relevant knowledge and frame issues for public action; and how policy is made and implemented in complex interactive systems where power is unequal. Uses policy cases from the U.S., EU, and South Africa, with cross-border resonance in higher education, public health, and biotechnology. Also draws on instructor's own public policy experience in U.S. and southern Africa. Readings are transdisciplinary, and both U.S. and international. Seminar enhances capacity to think behind policy, and act across boundaries. No prerequisites. Reserved for graduate students in Public Policy and Public Affairs. Advanced undergrads and graduate students from other departments may apply for permission from the instructor.

2150. Strategic Communication
Teaches students communication skills for social change, and examines how individuals and organizations frame issues in order to effect change.

2170. Leadership and Organization
Leadership is an integral part of-and integral to-the policy process. Teaches students how to lead policy organizations effectively and efficiently, giving them the knowledge and
skills necessary to conceive, sell, and implement policy. A review of effective leadership gleaned from historical and contemporary examples serves as a reservoir of knowledge from which students will draw throughout their careers. J. E. MARESCO.

2200. *The Political Economy of Punishment*
Examines a range of policy issues raised by the necessity to punish those who violate a society’s laws. Draws on studies in economics, sociology, criminology, and political science to explore such topics as the death penalty, the ‘war on drugs’, gun control, and racial disparities in criminal participation, victimization, and punishment. G. C. LOURY.

2250. *U.S. National Security Policy*
Analyzes domestic and global issues related to American national security policy. Issues examined include the evolution of national security strategy since World War II, homeland security, economics of national security, the intelligence community and intelligence reform, counterintelligence, responses to terrorism, weapons of mass destruction, unilateralsm vs. multilateralism, and economic espionage. M. LUONG.

2550. *Managing and Leading in Public Affairs*
Examines issues related to leading and managing in the realm of public affairs, covering foundation topics such as: honor, ethics, and accountability; management and organization theory; organizational behavior; managerialism, performance, and strategic management; leadership; personnel management and social equity. Examining tools for effective relationship and networking building, cases will be used to apply concepts learned.

2600. *Social Science Data Technologies*
Covers the applied use of data sources and computer software programs. Its goals are to teach students how to use common software packages and access policy-relevant data. J. D. COMBS.

2650. *Congress and the Federal Budget: Procedure, Politics and Public Policy*
Focus is on the federal budget process, political interactions, and public policy outcomes. The budget represents nearly one-quarter of GDP making those decisions central to the functioning of our democracy and the health of our economy. Emphasis is on the Congressional budget process, appropriations process, and revenue decision-making because the Constitution establishes Congress as the guardian of the nation's purse strings.

2700. *Advanced Organizational and Management Strategies*
This discussion-intensive graduate-level seminar focuses on a wide range of contemporary theories and practices in organizational and management strategies. Topics include organizational structure and design, communication, culture and diversity, change management, stakeholder relations, long-term strategic planning, as well as workforce development and leadership identification, development and succession strategies. Course assignments include team-developed reports and oral presentations. Open to Public Policy graduate students and to other students by instructor permission.

2750. *Mediation, Negotiation, and Arbitration Strategies*
This graduate-level seminar is a synthesis of negotiation, arbitration, and mediation theories and practices as applied to public policy professionals. Course topics include interagency negotiation and cooperation, professional and workplace negotiations, agreements in legislative and advocacy environments, using non-governmental bargaining partners, role of government regulators, and international and cross-cultural agreements. Emphasis on analysis of ethical issues and strategies in the planning, formulation, and implementation of negotiated agreements. Enrollment limited to 16. Instructor permission required.
2755. Ethical Issues in Policy Analysis
A greater understanding of the moral dimensions of public policy can improve the assessment of policy alternatives. Course begins with a brief overview of various ethical theories, with particular attention given to distributive justice and utilitarianism. Uses a variety of domestic policy case studies to identify and examine the role of ethics in policy analysis and policy choice. The latter part of the course will discuss the ethical conduct and responsibilities of policy professionals. Open to graduate students only.

2800. Internship
Practical job experience in the public, private, or non-profit sector. E. A. MILLER.

2820. Special Topics in Public Policy

2900. Research Workshop
Group research projects centering on topics organized by the instructor. Students will be organized into small teams that will undertake research projects such as policy analysis, evaluation studies, organizational assessments, or data projects. Results of these projects will be presented in the seminar. P. J. MCGUIGAN.

2980. Graduate Independent Study
Please check Banner for the correct section number and CRN to use when registering for this course.

Center for the Study of Race and Ethnicity in America

The center was established in 1988 to encourage and support the development at Brown and nationwide of studies of race and ethnicity in America. The director of the center is Evelyn Hu-DeHart, Professor of History and Ethnic Studies.

One purpose of the center is to develop resources for research and teaching in the area of race, ethnicity, and class. A particular focus of the center is on interdisciplinary and comparative study of non-European groups in America, with particular reference to African Americans, Asian Americans, Latinos, and Native Americans. The center also encourages interdisciplinary and comparative research on issues of race and ethnicity among ethnic minorities in other countries.

A second purpose of the center is to inform the University community about research on race and ethnicity. Toward that end, it sponsors a faculty seminar series, workshops, public lectures featuring distinguished scholars, and conferences; produces publications that are disseminated both locally and nationally; engages in joint activities with community organizations, student groups, scholars outside Brown, and learned societies; and participates as a member institution of the Southern New England Consortium on Race and Ethnicity.

A third purpose of the center is to encourage research development and participation in the research process. It does so by collaborating with other academic departments and institutions on interdisciplinary research projects, and by providing small research grants to faculty and graduate and undergraduate students.

For information about the center, to be put on its mailing list, or to receive its newsletter, write to the Center for the Study of Race and Ethnicity in America, Box 1886 (or 150 Power Street), Brown University, Providence, RI 02912, or call 401-863-3080. The center’s fax number is (401) 863-7589. Email: RACETH@Brown.edu. Web: www.brown.edu/Departments/Race_Ethnicity/
Religious Studies

Professors Cladis, Dietrich (Emeritus), Frerichs (Emeritus), Harvey (Chair), Kraemer, Olyan, Reeder (Emeritus), Roth, Satlow, Sawada, Stowers, Twiss (Emeritus); Associate Professors Lewis, Wulff; Assistant Professors Bush, Khalek; Visiting Professor Denzay Lewis.

The department offers instruction in the academic study of religion and preparation for college and university teaching. Descriptions of the graduate programs are available from the academic office coordinator.

For additional information please visit the department’s website at: http://www.brown.edu/Departments/Religious_Studies/.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

The Department offers six specialized Ph.D. tracks: Ancient Judaism; Asian Religious Traditions; Early Christianity; Religion and Critical Thought; Religion, Comparison and Culture; and Religion in the Ancient Mediterranean.

Master of Arts

Students are admitted for terminal Master’s study only under exceptional circumstances. Eight graduate level courses are required, including RELS 2000, “Theory of Religion.” Must demonstrate competency in French or German, as well as in whatever other languages are relevant to research interests. A thesis is required.

Doctor of Philosophy

Each of the six Ph.D. programs has the same general course of study. All students will go through the phases of subject coursework; foreign language exams (or equivalent coursework); preliminary exam; preparation of a dissertation prospectus and its approval by the faculty; and the research, writing and defense of the dissertation. All Ph.D. students are also required to gain teaching experience in undergraduate courses as Teaching Assistants or Teaching Fellows.

Coursework: All students are required to complete the equivalent of three years (six semesters) of full-time study beyond the baccalaureate degree (i.e., twenty-four tuition units). Up to one full year of graduate work done in residence at other institutions and not used in fulfillment of the requirements for the Ph.D. elsewhere may, on the recommendation of the department faculty and with the approval of the registrar, be counted in fulfillment of this requirement.

Students will normally develop their course of study in consultation with the faculty in their area and as necessary with the Director of Graduate Study. All students are required to take RS 200, a seminar on “Theory of Religion.” We encourage students to work and develop professional relationships with faculty outside of the Department who focus in cognate
areas. A student in Ancient Judaism, for example, might take courses in the archaeology of the Near East or literary theory. Students in Religion and Critical Thought often take courses in the Philosophy Department.

After completion of formal course requirements, Early Christianity requires that its students enroll in one designated seminar in their particular program each semester until the completion of the Preliminary Examinations.

**Foreign Language Requirements:** All students are required to demonstrate competency in two modern foreign languages, typically French and German. This requirement can be fulfilled through either appropriate coursework or examination. Depending on the student’s program and interests, other modern languages (e.g. Modern Hebrew for students in Ancient Judaism; Italian for some Early Christianity students) may also be required.

The programs in Ancient Judaism, Early Christianity, and Religion in the Ancient Mediterranean also require competency in ancient languages (Hebrew, Aramaic, Greek and Latin for Ancient Judaism; generally Greek and Latin for Early Christianity). In the Religion in the Ancient Mediterranean program, students choose a major and a minor field at the end of their first year. Their language requirements are determined according to this choice. Students in the Religion and Critical Thought, and the Religion, Culture and Comparison programs determine additional language requirements in consultation with the faculty.

Students must complete all language requirements prior to taking their Preliminary Examinations.

**Preliminary Examinations:** Presently the different programs vary widely in the format and expectations of their exams. This is due, in part, to the differing professional expectations in each of these areas. Generally, however, each program has designed its exams to help its students acquire specialized expertise as well as disciplinary breadth. More specifically:

*Ancient Judaism:* The exam has two segments. The first, to be taken no later than the end of a student’s seventh semester of residence, is meant to provide a firm grounding in history, literature, and methodological issues from Ancient Israel to the end of Late Antiquity. This examination is based on a standard reading list provided in advance to the student. The second exam, to be taken no later than the end of the eighth semester of residence, is on a series of specialized topics. The reading lists for this exam are made by the student in close consultation with the core faculty.

*Early Christianity:* Qualifying examinations are normally taken at the end of the first or the beginning of the second year and measure a basic knowledge necessary for advanced work in the field. The two areas of examination are (1) Greek and Roman cults and philosophies from Alexander through Late Antiquity; and (2) Judaism from the Persian period through Late Antiquity. The Preliminary Examination is normally taken before the end of the third year. The precise scope and content of the examination will be determined by consultation between each individual student and faculty. The three areas of examination are:

1. Christianity in the early Empire (Augustus through Marcus Aurelius) with an emphasis on New Testament studies and the beginnings of Christianity
2. Christianity in Late Antiquity (Marcus Aurelius through Justinian); and
3. the area of dissertation.

*Religion and Critical Thought:* The Preliminary Examination should be concluded within a year of completing the course work. Normally, then, the Preliminary Examination would
be concluded at the end of May of the student’s third or fourth year (depending on whether the student entered the program with a bachelor’s or master’s degree). The four segments, all of which may be satisfied by papers of approximately 25-35 double-spaced pages (including notes) are defined as proficient treatment of:

1. a comparison of two historically significant figures or texts;
2. a conceptual issue pertaining to the philosophy and theory of religion, religious ethics, political theory, or some combination of these;
3. a substantive review essay of a noteworthy book published within the last ten years or so; and
4. a topic that is pertinent to the student’s dissertation.

Up to two of the exams may be satisfied by take-home examinations.

Religion, Culture, and Comparison: RCC students take two sets of examinations:

1. a four hour written examination of theoretical competence based upon a bibliography produced by the Department;
2. a written Preliminary Examination of two three-hour parts that will test knowledge of the major cultural area and critical issues related to the study of that area.

In addition, RCC students write a major paper in connection with RS 200 that formulates a series of critical questions and areas for theorization in the student’s major area, and that discusses relevant bibliography in the social sciences and religious studies.

Religion in the Ancient Mediterranean: The Preliminary Examination is taken in four parts:

1. Major field
2. Minor field
3. Ancillary area
4. Dissertation area

Generally, students who entered with an MA will spend their third year of study preparing for and taking the Preliminary Examination. Students who enter without an MA are expected to complete the Preliminary Examination during their fourth year of study. In either case, two parts of the Examination should be completed by January of the academic year in which the examination is taken, and the entire examination completed by the end of May.

Dissertation Prospectus: Students normally present a formal dissertation prospectus to the faculty shortly after successful completion of their exams, and defend the dissertation prospectus before the department faculty two to four weeks later.

Dissertation: Students are normally expected to devote one to two years to the dissertation, and to defend the dissertation before the department faculty four to six weeks after its submission.

Course Work for Graduate Programs

For regular seminar offerings, see RELS 2010, 2060, 2110, 2310. Much of the graduate instruction provided by the department occurs in the form of individual or collective tutorials arranged between students and faculty. (Students enroll in RELS 2910.) Areas of research include the following:

Religion and Society in Late Antiquity; Early Christian Asceticism; Hagiography; Women in Early and Byzantine Christianity; Syriac Studies (S. Harvey)
Cynicism, Stoicism, Epicureanism and Early Christianity; The Form and Function of Early Christian Literature; Early Christian Ethics; The Social World of Early Christianity (S. Stowers)

Early Christian Narrative Traditions, Christian Women and Jewish Women in the Roman Period, Religion and Gender in the Greco-Roman Mediterranean, Christian and Jewish Apocrypha and Pseudepigrapha, Christianity and Judaism in Ancient Asia Minor, Jewish Inscriptions in the Graeco-Roman Period (R. Kraemer)

Confucian Texts; Taoist Texts; Chinese Buddhist Texts; Sinological Methods for Philosophical Texts (H. Roth)

Early Judaism; Rabbinic Texts; Marriage and Sexuality; Religious Piety in Antiquity (M. Satlow)

Hindu Texts, Vaishnava Devotion, Music, Dance, Drama and Aesthetic Theory; Women in the Hindu Tradition (D. Wulff)

Philosophy of Religion; Kant, Hume, and Pragmatism

Religious Origins of Liberal and Communitarian Thought; Religion and Modernity: Rousseau, Durkheim, Weber and Dewey (M. Cladis)

History, Literature, and Religion of Ancient Israel; History of Biblical Interpretation (S. Olyan)

Religion and Culture

**Courses of Instruction**

Primarily for Undergraduates

0010. *Approaches to Religion*
An introduction to the study of religion by examining selected examples of religious belief and practice from around the world and exploring some theoretical tools with which to think about them. **STAFF.**

0011. *Faith and Violence*
Explores the relationship between religious texts and rhetoric and violence. How do sacred texts promote or discourage violence, and how have later religious communities understood (and continue to understand) these texts? While the course will focus mainly on Judaism, Christianity, and Islam, occasional Asian examples will be used. No prerequisites. **M. L. SATLOW.**

0020. *Death and Afterlife in the Biblical Tradition*
A close analysis of the development of ideas about death and the afterlife in the Hebrew Bible and in the literatures of Second Temple Judaism and early Christianity. Topics: life and death in Israel and ancient West Asia; the abode of the dead and its denizens; from Sheol to Heaven, Hell, and the final judgment; religious specialists, rituals, and the literature of death: necromancy; burial and mourning rites; cults of the dead ancestor. No prerequisites. **S. M. OLYAN.**

0040. *Great Contemplative Traditions of Asia*
Introduction to the critical study of contemplative practices and experiences emphasizing philosophical and scientific analyses of works from the major Asian contemplative traditions of South and East Asian Buddhism and Chinese Daoism in historical context. Theol-
retical studies of mysticism and studies from the psychological sciences will be included. H. D. Roth.

0050. Love: The Concept and Practice
A study of love (in classical and modern texts and in film) that provides a window into a host of religious, philosophical, and ethical issues. Topics include the potential conflict between divine and human love, between transcendent and earthly love, and the nature of friendship, romance, marriage, and love at the crossroads. Although the scope is love in the West, the Kamasutra and other texts furnish a comparative component. M. S. Cladis.

0065. On Being Human: Religious and Philosophical Conceptions of Self
An examination of classic and contemporary views on the nature of human existence. Central themes include human freedom, the relation between reason and emotion, and the significance of personal history and memory. We also ask how conceptions of who we are shape views about how we should live. Sources include religious and philosophical texts as well as recent films. Lile T. A. Lewis.

0070. Religious Thought in Modern Literature
Examination of themes and issues of Western moral and religious thought as represented in imaginative literature. Focuses on structures and problems of moral selfhood and religious commitment. Special attention to: the project of selfhood and its significance; evil and subversion of self and community; ideas of faith, love, and redemption.

0075. Reel Religion: Representations of Religions in Film
Religious practices, beliefs, and experiences are given diverse representations in film. In this course, we study some of these representations, with particular attention to critical issues in the interpretation of both religion and film, and references to major themes in the relevant religious traditions and literatures. Representative films include Star Wars 6: The Return of the Jedi; The Name of the Rose; The Chosen; The Handmaid's Tale, The Cup, The Matrix, Witness and Water. No prerequisites. DVPS Lile R. S. Kraemer.

A comparison of women's and men's practices, experiences and beliefs, focusing on patterns observable in a range of religions. Special attention paid to the ways religions participate in diverse constructions of gender (ideas about masculine and feminine), and how these relate to the construction and exercise of power and authority. Specific traditions and historical periods studied vary from year to year. Examples may include: leadership in African American churches; Buddhist monastics; early Christian asceticism; evangelical Christian organizations; medieval and early modern Christian witchcraft accusations; Hindu devotions for husbands and brothers; the turn to orthodoxy among contemporary Jewish women and men; the mosque movement in contemporary Islam; village kamis in Okinawa (Japan); the Shakers, Zar and Bori possession in North Africa and the Caribbean. DVPS Lile WRIT R. S. Kraemer.

0090. Freshman Seminar
Enrollment limited to 20 first year students.

0090D. Jewish and Christian Women in Antiquity
What do we know about Jewish and Christian women in the Greco-Roman Mediterranean, and what difference does this make for the study of early Judaism, early Christianity and women's history and religions more broadly? An examination of literary, documentary and archaeological sources from the later Hellenistic period through the late Roman period, with generous assistance from recent scholarship and
particular attention to issues of theory in women's and gender studies, and in religious
studies. R. S. KRAEMER.

0090E. Faith and Violence
Explores the relationship between religious texts and rhetoric and violence. How do
sacred texts promote or discourage violence, and how have later religious
communities understood (and continue to understand) these texts? While the course
will focus mainly on Judaism, Christianity, and Islam, occasional Asian examples will
be used. No prerequisites. Reserved for First Year students. Enrollment limited to 20.
M. L. SATLOW.

0100. Buddhism
An introductory survey of Buddhist beliefs, teachings and practices. Readings will com-
prise a combination of primary and secondary sources and genres including sutras (“scrip-
tures”), narratives, commentaries, and biographies. STAFF.

0105. Judaism
Surveys the major practices, traditions, and beliefs of the Jews, with an emphasis on mod-
ern Jewish communities. How does a Jewish community shape its practices and beliefs
against its own specific historical circumstances to create a coherent and meaningful reli-
gious system? What is “Judaism,” and how do scholars of religion explain and interpret it?
M. L. SATLOW.

0110. Christianity
A historical survey of Christianity from its foundations to the present, tracing its develop-
ment into three main branches: Orthodox, Catholic, and Protestant. Readings from a variety
of Christian "classics" accompany the survey, pursuing the theme of how-in different times,
places, and circumstances-Christians have understood their relations to the divine and to the
world. S. A. HARVEY.

0120. The Foundations of Chinese Religions: Mystics, Moralists and Diviners
An introduction to the origins and early development of the indigenous religious thought of
China from the oracle bone divination of the Shang Dynasty to the ethical philosophy of
Confucianism and the cosmology and mysticism of Daoism. The course will seek to iden-
tify and elucidate the basic elements of the distinctive Chinese world view and demonstrate
how they have shaped the nature of religious practice and experience and how they have
been shaped by them. Works of interpretive scholarship will be used to supplement the pri-
mary texts in translation that will form the course. Optional lab section will give first-per-
person experience with the ancient divination practices of the I Ching, Confucian moral psy-
chology, and early Daoist meditation. H. D. ROTH.

0130. Hinduism
After a brief look at our earliest evidence, we focus on the three most prominent Hindu
goals during the last two millenia- enlightenment, righteous action, and loving, often pas-
sionate devotion-and the variety of practices undertaken to realize them. These include
study, meditation, music, drama, image worship, asceticism, and nonviolence. Attention to
issues of gender, caste, and untouchability.

0140. Religion in India
Presents three major religious traditions that have flourished in India-the Hindu, the Bud-
dhist, and the Islamic-and looks more briefly at two others, the Jain and the Sikh. We con-
sider each individually and then study their interaction, exploring such prominent instances
of violence and non-violence-both in theory and in practice-as jihad, Gandhian nonviolent
resistance, and Hindu Nationalism.
0150. **Islam**  
In this course, the historical origins and development of Islam will be studied in light of the sources and communities that shaped it. Themes to be explored include the central doctrines of Islam as derived from the Qur'an and traditions (sunna), the development of Islamic law (shari'ah), the Shi'i alternative, the growth of Muslim theology, philosophy, and mysticism (Sufism), and controversial issues among contemporary Muslims. N. KHALEK.

0190. **Japanese Religious Traditions**  
This course is an introduction to the history of Japanese religion as it developed in the early and medieval periods, with some attention to related modern and contemporary manifestations. The emphasis will be on native ("Shinto") ideas and practices; major Buddhist teachings; and popular practices such as shamanism and death rituals. Readings include primary texts in translation and selected modern interpretations. No prerequisites. J. T. SAWADA.

0210. **Celluloid Jesus**  
An examination of the representations of Jesus in cinema from the second half of the twentieth century, with judicious comparative use and analysis of ancient narrative traditions about Jesus, particularly in the New Testament gospels. Films include: Samuel Ray's *King of King*; Pasolini's *Passion of (St) Matthew*; Monty Python's *Life of Brian*; Denys Arcand's *Jesus of Montreal*; Scorsese's *Last Temptation of Christ*, *Jesus Christ Superstar* and *The Matrix*. R. S. KRAEMER.

0240. **Judaism and Christianity in Conflict**  
Explores the tense relationship between Judaism and Christianity from antiquity to the present, with an emphasis on theological issues and polemics. Readings include selections from the New Testament and early Christian writers on Jews and Judaism, Jewish writings on Jesus and Christianity, transcripts of medieval debates, philosophical broadsides, parodies, and contemporary theological documents (e.g., Vatican II).

0260. **Religion Gone Wild: Spirituality and the Environment**  
A study of the dynamic relation between religion and nature. Religion, in this course, includes forms of spirituality within and outside the bounds of conventional religious traditions (for example, Buddhism and Christianity, on the one hand; ecofeminism and the literature of nature, on the other). Topics in this study of religion, philosophy, and ecology will include religious depictions of nature, humans, environmental justice and environmental degradation. Enrollment limited to 20. M. CLADIS.

0270. **Varieties of Religious Experience in China**  
Derives a preliminary phenomenology of religious and mystical experience in China through examining representative texts from Taoist and Buddhist traditions in their historical contexts and analyzing them using Western theoretical models. Readings divided equally between Chinese primary texts and Western theorists, with particular attention paid to the relationship between philosophical and psychological models. Seminar format. Prerequisites (in descending order of importance): RELS 0100, 0120.

0290. **Topics in the Study of Religion**  
0290C. *Christian Ethical Theories*  
Classical and contemporary readings in Christian ethical theory. Topics include: virtue ethics, natural law, divine command ethics, philosophical challenges to religious ethics, and the place of religious community in a liberal state. STAFF.

0290D. *Women, Sex and Gender in Islam*  
This course is a survey of women in Islamic society from the medieval to the modern worlds. Using a variety of non-fiction, fiction and film sources, we will address issues such as women and Islamic law; women's bodies and images of Muslim women in the
Muslim world; contemporary feminism and movements in Islam; the questions of secularism, veiling, and others. Preference given to students with prior university level coursework in Islam. Examples include RELS 0150, 0640, 1520.  N. KHALEK.

0290E. Engaged Buddhism  
This course will examine the connection between meditation, insight, ethical character, and social activism within certain Buddhist movements. We will look at the historical background of engaged Buddhism, explore its central concepts, and analyze it theoretically. As many engaged Buddhist movements employ meditation as an important part of their practice, we will also be studying, first hand, the effects of meditation on activism by incorporating regular sessions of sitting meditation into the course.  H. D. ROTH.

0320. Israelite Religion  
The origins and development of ancient Israel's religious beliefs, rituals and cultic institutions will be considered from an historical and contextual (i.e., wider West Asian) perspective. Topics include method in reconstructing religion; myth, epic and history; the identity of Yahweh, Israel's national god; covenant; Yahweh and other deities (monolatry and monotheism; angels; a consort of Yahweh?); temples, their iconography and ideologies; festivals and sacrifice; purity; death and afterlife; religious specialists (priests, prophets, mediums, professional mourners). No prerequisites. S. M. OLYAN.

0330. Jewish and Christian Biblical Interpretation to the Eighteenth Century  
This course provides an opportunity for students to explore the ways in which the Hebrew Bible has been interpreted by Jews and Christians from antiquity to the Enlightenment. The modern historical-critical and literary methods of biblical exegesis will be introduced at the beginning of the course and will inform our investigation of traditional approaches to interpretation. The course assumes no prior knowledge of the Bible. S. M. OLYAN.

0350. Religion in the Dead Sea Scrolls  
An examination of the Dead Sea scrolls and the archaeology of Qumran with a particular focus on the religious aspects of this community. How did the authors of these scrolls envision their relationship with the divine? How did they worship? How did they understand religious and moral perfection? This class will have an additional section for graduate students. S. M. OLYAN.

0400. New Testament and the Beginnings of Christianity  
How and why Christianity emerged in various forms in the ancient Mediterranean. Insights from religious studies, gender studies, literary studies, anthropology, and other fields. Careful critical readings of New Testament books, non-canonical gospels, early Christian letters, ancient apocalypses. Topics include: Jewish contexts; representations of Jesus; Paul and early communities; Christians and imperial Rome; gender constructions; canonization; eventual separation of Christianity and Judaism. Open to all students. R. S. KRAEMER.

0410. Christianity in Late Antiquity  
The communal struggles, personal rivalries, and theological conflicts that shaped Christianity in its formative centuries: heresy and orthodoxy, hierarchy and charisma, gender and class, persecution and martyrdom, paganism and classical tradition, creeds and councils, asceticism and the body, church and state, eastern and western Christianity. Focused in the 2nd through 6th centuries A.D. S. A. HARVEY.

0420. Sacred Bodies  
How did ancient Christians understand physical holiness? What did the bodies of saints demonstrate or reveal? How was bodily sanctity represented in actual practices, and in literary, artistic, or ritual expressions? We will consider three broad categories of saints:
0430. Sacred Stories
Ancient Christian narrative imagination and the formation of Western culture. Emphasis will be on the ancient stories that accompanied the spread and "triumph" of Christianity, but attention will also be given to how these themes and images have prevailed in western history. Biblical legends, heroes and heroines, saints and sinners, the demonized Religious Other. S. A. HARVEY.

0500. The Theory and Practice of Buddhist Meditation
Examines the theory and practice of Buddhist meditation in historical and modern contexts. Traces this practice from its origins in 6th-century B.C.E. India to its transmission to China, Korea, and Japan. Studies selected normative texts and explores how Buddhist meditation is practiced today in each of these regions, both as an individual practice and as part of a monastic regimen. Meditation lab related to weekly seminar. Topic for 2007: Meditation and Ethics. Prerequisites: RELS 0100 or 0120. H. D. ROTH.

0510. Confucian Ethics
An examination of Confucian moral thinking as contained in the Analects, Mengzi, Xunzi, and Records of Rituals. Issues considered include the absence of a concept of transcendence, the relationship between moral and ritual norms, and moral activity as an aesthetic and spiritual discipline, against the background of Western patterns of moral thought. Prerequisite: Previous work in ethics or Chinese studies. STAFF.

0530. Lao Tzu and the Dao De Ching
Seminar on the historical and philosophical origins of the Dao De Ching, heretofore acknowledged as the foundational text of the Taoist tradition. Recently discovered and translated manuscripts from Ma-wang-tui and from Kuo Tien that cast new light on these questions will be the basis for the course. Recent research on early commentarial traditions to the Tao Te ching and on its philosophical significance will also be studied. Prerequisite: preference given to those completing RELS 0120. H. D. ROTH.

0640. Martyrdom and Jihad in the Islamic Tradition
This course examines concepts of martyrdom and holy war ("jihad") and compares it with other monotheistic traditions, Judaism and Christianity. How are war and martyrdom presented in the sacred texts of these traditions? How has Islam idealized and problematized martyr and/or holy warrior in different ways? How have modern religious revivalism and nationalism, appropriated martyrdom and holy war in our time? Course material will include sources in translation, scholarly articles, books & films. N. KHALEK.

0750. Death and the Afterlife in the Ancient World
This course focuses on the evolution of beliefs and rituals related to death in and around the Roman Empire, including Egyptian, Greek, Roman, and Near Eastern cultures. Using an interdisciplinary approach, we combine methodologies from Anthropology, Classics, and Religious Studies. Topics include myths of the afterlife; books of the dead, magic, and death rituals; divinization, heaven, hell, and Last Judgment; and the impact of Christianization on Roman understandings of death. STAFF.

0800. Christianity, Ethics, and Politics
Classical and contemporary readings in Christian ethical theory. Topics include: virtue ethics, natural law, divine command ethics, philosophical challenges to religious ethics, and the place of religious community in a liberal state. H. D. ROTH.

0830. Religion, Reason, and Ethics from Kant to Nietzsche
The nineteenth century witnessed revolutionary transformations in thinking about the power and limits of human reason, the relation between reason and religion, revelation, the role
of humanity in creating religion, morality and religion, the significance of history, and the plurality of religions. This course examines major thinkers from this period who continue to shape our own assumptions and reflection.

0840. Religion and Politics
This course examines the role of religion in public life, especially in pluralistic, democratic societies. We consider whether religion and politics can or should be separated; what role government should have in regulating religion; and whether a cohesive society needs a shared religion. Readings from early modern Western thinkers, contemporary theorists, and recent Supreme Court decisions.

0850. Liberation Theology in the Americas
Liberation theology seeks to bring the social teachings of Christianity to bear on political and economic injustice. This course treats liberation theologies as socially grounded, politically engaged currents in religious thought. Focusing on Latin America, we will investigate the historical contexts and central themes of liberation theology: the relationship between theory and practice, the political function of the church, the relation between political freedom and salvation, and the role of intellectuals. T. A. LEWIS.

0880. Issues in the History of Religions
For Undergraduates and Graduates

1000. Methods in Religious Studies
Intensive introduction to classical and contemporary theories of religion and the principal methods for the study of religion. Junior seminar for religious studies concentrators. STAFF.

1130. Philo
Examines Philo's life and writing, and their importance for the study of Judaism and Christianity in antiquity. How typical was Philo? How did he interpret the Bible? How does his thought "fit" into the religious landscape of the first century CE? Focuses on reading Philo's writings, but will also survey scholarly approaches to Philo. Knowledge of Greek helpful. M. L. SATLOW.

1170. Studies in Early Christianity

1210. Religion and Gender in the Ancient Mediterranean
A consideration of the relationships between constructions of gender and religious systems in the Hellenistic and Roman periods, including but not limited to Christianity and Judaism. Prerequisites: courses in Early Christianity (RELS 0400 or 0410), or courses in Ancient Judaism (JUDS 0470), or courses in Greek and/or Roman religion. R. S. KRAEMER.

1300. Ancient Christianity and the Sensing Body
Bodily experience and sensory engagement became increasingly important for Christians during their first six centuries. This seminar examines how and why the body and its senses gained worth for ancient Christians as instruments for gaining knowledge of God. Prerequisites: RELS 0110, 0400, or 0410. S. A. HARVEY.

1310. Ecology and Theology in Ancient Christianity
How did early Christians understand the relationship of humanity to the natural world, the animal kingdom, and the created order? What were the obligations and responsibilities of Christians regarding care for the world, and how did these manifest a relationship to God? Pre-requisite: RELS 0400 or 0410.

1320. The Origins of Western Morality
How Greco-Roman and Jewish moral and ethical thought and practices were appropriated and transformed by Christianity. Special attention to Hellenistic philosophy, the Greek version of the Hebrew Bible and Christian writers in the first three centuries CE. Addresses
questions about the origins of tensions and conflicts in Western morality and why sexual ethics have been so prominent and so problematic.

Before the emergence of Christian "orthodoxy," from the second to the fourth centuries, Christianity often adopted unusual modes of expression. This course offers an examination of some of these different forms of Christianite, as Christians attempted to balance issues of self-identity and self-definition with compromise and cultural accommodation. Examining early Christian "heretics" as case-studies, this course will focus on reading second-century texts from the Nag Hammadi Library and learning what we can about the communities that produced them. Prerequisite: one course in New Testament or Christian Origins. If the course is oversubscribed, priority will be given to graduate students and Religious Studies concentrators. Prerequisite: RELS 0400 or equivalent. STAFF.

1370. *Issues in the Philosophy and Theory of Religion*
Current issues in the philosophy and theory of religion. Attention to such issues as: concepts of deity and their coherence; arguments about divine existence; nature of religious faith; status of religious experience; the self and immortality; theories about the nature, function, and rationality of religious beliefs and practices, and theories about the phenomenology and veridicality of mystical experiences.

1380. *Topics in Contemporary Religious Thought*
Current issues such as God and history; reason, revelation, and tradition; secularism; modernity and theology; the relation of religion and morality; love and justice; religion and politics; comparative religious thought.

1400. *The Huai-Nan Tzu*
This course will approach early Taoist thought through the study of important essays from the Han dynasty compendium, the *Huai-nan Tzu*. Prerequisites: prior study of Taoism at the university level in such courses as RELS 0120. H. D. ROTH.

1410. *Directed Readings in Chinese Religious Thought: Chuang Tzu*
Entails a careful reading of the entire text of the *Chuang Tzu* in translation. Secondary sources on the philosophy and textual criticism of the book-drawn from the writings of Graham, Liu Hsiao-kan, Ivanhoe, Mair, Roth, and others-are also read. Seminar format. Prerequisites: RELS 0120 H. D. ROTH.

1420. *Earliest Daoist Syncretism*
A seminar on the early history of the Daoist tradition that explores the syncretic Taoism of the Han dynasty known as "Huang-Lao." Focuses on representative texts, analyzing them for evidence of the tradition's unique blend of spiritual practice and political thought. No previous course work required, but preference given to students who have a demonstrable interest in the subject or prior course work in religious studies or East Asian studies. RELS 0120. H. D. ROTH.

1430. *Classics of East Asian Buddhism*
This course is an opportunity to read and understand the canonical texts of East Asian Buddhism. Through close reading, written analysis, and discussion, participants will become conversant with the major Mahayana Buddhist teachings in their original scriptural or literary articulations. Selected later interpretations may also be considered. All readings are in English translation. J. T. SAWADA.

1440. *Themes in Japanese Buddhism: Original Enlightenment*
An exploration of critical themes and debates in the study of Japanese Buddhism. Participants become conversant with the key features of medieval Japanese thought as well as the strengths and weaknesses of established conceptual models in Japanese Buddhist studies, especially the paradigm of "original enlightenment thought." Readings include primary

1520. *Pilgrimage and Sacred Travel in the Lands of Islam*
Focuses on pilgrimage and travel to loca sancta in the Islamic world. We will read travelogues and pilgrimage manuals in translation, and will address theoretical and anthropological studies on the phenomenon of pilgrimage and sacred travel in a variety of geographical and chronological contexts. We will study physical, artistic, and architectural aspect of pilgrimage shrines. Seminar will also serve as an introduction to the tools of the study of Islam, including source criticisms and historiography. N. Khalek.

1530. *Methods and Problems in Islamic Studies*

1530A *Methods and Problems in Islamic Studies: Narratives*
Examine the problem of historical thinking and writing in the first six centuries of Islam. It will specifically emphasize the rise and development of Islamic narratives as they are discussed in contemporary scholarship on how to "do" Islamic studies. As such, we will discuss, in depth, theoretical issues pertaining to source criticism, Orientalism, the Cultural Turn, anthropology, and narrative. Enrollment is limited to 20 students. DVPS Lile.

1540. *Monks, Mystics and Martyrs: Abrahamic Traditions Compared*
This course explores the process of "standing out" from mainstream society, from traditional kinship relationships, from local practices of community and economic production, undertaken by ascetics and mystics in the three Abrahamic traditions. We will explore monasticism and mysticism in Judaism, Christianity, and Islam, from the period of late antiquity to the high Middle Ages. Using primary sources in translation and scholarship on the phenomena of asceticism and mysticism, we will address the motivations for and manifestations of non-traditional practices of worship and community-building in the Mediterranean and Middle-Eastern world. N. Khalek.

1610. *Sacrifice and Society*
Investigation of the sacrificial practices and ideologies that have been important to numerous unrelated societies. The origin and significance of animal sacrifice has been a central question for classical social theory (e.g., Durkheim, Freud, Mauss) and is still important for theorization in anthropology and religious studies. Probable examples include Israelite, Greek, Hawaiian, Christian, Nuer.

1620. *Disability in Antiquity*
An investigation into the ways in which physical deformities and mutilations are represented in texts from ancient Israel, Mesopotamia, Greece, and other Mediterranean cultures. Primary focus: texts of the Hebrew Bible.

1730. *Religion and Ethics in Public Life*
Religious traditions and moral identity; secular liberalism versus religious nationalism; universal and particular loyalties; "fundamentalism," gender, and religiously inspired violence. Priority given to concentrators in religious studies, political science, and international relations. Prerequisite: previous work in ethics.

1740. *Religion, Ethics, and Politics*
Religious traditions and moral identity; secular liberalism versus religious nationalism; universal and particular loyalties; "fundamentalism," gender, and violence. Priority given to concentrators in religious studies, political science, and international relations.

1760. *Skepticism and Religion*
1780. Religion and Naturalism
What is nature? Is nature all there is? In what ways, if any, should the study of religion be in principle different from the study of nature? This course will survey some of the varieties of philosophical naturalism, both historical and contemporary. Drawing a distinction between substantive or metaphysical naturalism and methodological naturalism, it will examine the arguments made on behalf of naturalism and explore its implications for religion.

1820. Religious Ethics and Human Rights
This seminar examines a range of the most influential criticisms of human rights; assesses several proposed theories of human rights; surveys the approach of several religious traditions toward justifying human rights; and considers a range of issues within contemporary debates, such as religious freedom, minority group rights, women's human rights, and the role of religion in politics.

1880. Topics in the History of Religion

1880A. The Gift in Antiquity
This course is an interdisciplinary and cross-cultural examination of gift-giving in antiquity, with a focus on the Mediterranean in late antiquity. We will examine a range of gift-giving activities, such as sacrifices (gifts to the gods), civic donations, and almsgiving. Several visiting lecturers will participate in the course, and it will culminate in an international conference to take place at Brown. M. L. SATLOW.

1990. Individual Study Project
Directed reading and research arranged with individual faculty. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

1999. Thesis Preparation
Required of seniors in the honors program. Open to others only by permission of the chair of the department. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Primarily for Graduates

2000. Theory of Religion
Critical examination of major approaches to the study of religion, especially those of the anthropology and the history of religions, with attention to issues in current debate. STAFF.

2060. Seminar in Ancient Judaism M. L. SATLOW.

2100. Seminar in Ancient Israel and Judaism S. OLYAN.

2100A. Early Jewish Prayer
An examination of prayer from the Hebrew Bible to late Antiquity. Will look at actual liturgies, writings about prayer and ancient and modern theorizations of prayer. Knowledge of Hebrew and Greek helpful. M. L. SATLOW.

2100B. Exegesis at Qumran
Focuses on Hebrew exegetical texts such as the Temple Scroll, MMT, pHab, 4QJub, CD. Intended for doctoral students and others with sufficient knowledge of Hebrew. S. OLYAN.

2100C. 1 and 2 Kings

2100D. Disappearance of Jewish Diaspora R. S. KRAEMER.
2100E. Literature of the Early Second Temple Period
A close reading of selections from surviving literary texts of the late sixth century (e.g., Isaiah 56-66, Zechariah 1-8, Haggai) and and the fifth century (Ezra-Nehemiah, Malachi). Prerequisite: An advanced knowledge of biblical Hebrew and permission of the instructor. S. OLYAN.

2100F. Seminar in Biblical Studies: Ugaritic
Survey of Ugaritic grammar followed by readings in mythic and epic literature (e.g. the Baal Cycle, Kirta, Aqhat) and ritual texts. Prerequisite: Knowledge of the grammar of one Semitic language. S. OLYAN.

2100G. Early Rabbinic Literature: The Mishnah
Readings in the Mishnah and related rabbinic literature. While the focus will be on gaining textual skills, we will also survey academic approaches to the Mishnah: What is the Mishnah and its relationship to earlier and contemporaneous texts? How was it composed, transmitted, and received? Prerequisite: Reading knowledge of Hebrew. M. L. SATLOW.

2110. Seminar in Contemporary Religious Thought
Recent topics have included: Duty and Virtue, Historicism and Ethics; History, Tradition, and Morality; Kant’s Relation to Modern and Post Modern Theology; Post Structuralism in Liberation Thought; Pragmatism; Recent Conceptions of Natural Law; Religion and Social Theory; Religious Origins of Liberal and Communitarian Thought.

2120. Seminar: Contemporary Religious Thought

2150. Targumic Aramaic
Introduction to Targumic Aramaic. Prerequisite: Knowledge of the grammar of a Semitic language (preferably Hebrew).

2160. Aramaic Readings
A survey of epigraphic and biblical Aramaic intended for doctoral students and others with sufficient background in Aramaic grammar.

2200. Seminar in Early Christianity

2200A. Apocryphal Acts

2200B. Asceticism

2200C. Seminar in Early Christianity: Cappadocians
Basil of Caesarea, Gregory of Nazianzus, and Gregory of Nyssa. The seminar will consider their impact in three areas: the formation of a Christian culture within the Roman socio-political realm; the theological debates on Trinitarianism, Christology, and the nature of the human person; and the Christian contemplative tradition. S. A. HARVEY.

2200E. Christianizing Antioch
Antioch from the first century CE until the Muslim conquest in the seventh, as Christians first utilized the city and its resources for their own formative developments, and then came to assume ascendancy over its society, culture, and landscape as the Roman Empire took on its Christianized identity. S. A. HARVEY.
2200F. Early Christian "Apocalypticism"
A critical investigation of the concept and category of apocalypticism as used in the study of early Christian literature and Jewish antecedents.

2200G. Gospel of John
An intensive professional-level study of the Gospel according to John. Competence in Greek is required. Not open to undergraduates. R. S. KRAEMER.

2200H. Ancient Christian Narratives about Jesus

2200I. Paul's Letter to the Romans

2200J. The Virgin Mary in Late Antiquity
A study in the developing theological and devotional traditions regarding Mary the Mother of Jesus, focusing on the fourth through the sixth centuries A.D. Major theological positions; relationship to pre-existing civic cults and goddess traditions; the role of popular violence in the Mariological definitions of the Council of 431; imperial Marian piety; Marian relics; Mary as cultural metaphor. S. A. HARVEY.

2200K. Issues in Pauline Studies

2200L. Historiography of Earliest Christianity

2200M. Early Christian Hymnography
Select examples of early Christian hymnography, 2nd-6th centuries. Particular attention to poetic forms, types of content, ritual contexts and functions, and performative elements. Weekly readings in Greek. S. A. HARVEY.

2200N. Roman Religions
This course will examine some of the various religious options open to citizens of the Roman Empire. Special attention will be paid to the so-called "oriental" cults of the high Empire: Magna Mater, Isis, and Mithraism. Evidence will be drawn from literary sources, but also epigraphy, archaeology and material culture. Drawing on contemporary scholarship, attention will also be paid to the historiographical construction of the category of ancient religion (i.e., what's "religious" about Roman religions?) Subcategories for analysis will include religion and imperialism; colonization, assimilation and hybridity, and ancient identity construction.

2300. Seminar in Classical Chinese
The foundational philosophical texts of the Daoist tradition are read in classical Chinese and analyzed from a number of possible perspectives including comparative religious thought and historical and textual criticism. Texts for each year's version of the course are drawn from Chuang Tzu, Lao Tzu, Huang-Lao po-shu, Li-shih ch'un-ch'iu, Han-fei Tzu, Kuan Tzu, and Huai-nan Tzu. Prerequisites: reading knowledge of classical Chinese and prior study of Daoist thought. Advanced undergraduates may be admitted. H. D. ROTH.

2300A. Seminar: Early Taoist Thought
The foundational philosophical texts of the Taoist tradition will be read in Classical Chinese and analyzed from a number of possible perspectives including comparative religious thought, and historical and textual criticism. Texts for each year's version of the course will be drawn from the following list: Chuang Tzu, Lao Tzu, Huang-Lao po-shu, Li-shih ch'un-ch'iu, Han-fei Tzu, Kuan Tzu, and Huai-nan Tzu. Prerequisites: reading knowledge of Classical Chinese and prior study of Taoist thought. Advanced undergraduates may be admitted.

2300B. Huai-nan Tzu

2400. Seminar in Religion in the Ancient Mediterranean
2400A. *Jewish and Christian Women in Greco-Roman Antiquity*
Textual, documentary, and inscriptive evidence for Jewish and Christian women in the Greco-Roman Mediterranean, with particular attention to methodological and theoretical issues. Competence in Greek and Latin required. Not open to undergraduates. R. S. KRAEMER.

2400D. *Orthodoxy in Antiquity*
Examines the concept of "Orthodoxy" in ancient Mediterranean religion, with a focus on the development of Jewish orthodoxies from the third century BCE to the seventh century CE. How and why are orthodoxies and heresies created? Knowledge of at least one ancient language (typically Hebrew or Greek) required.

2400E. *Pseudepigrapha*

2500. *Religion, Culture and Comparison: Description, Redescription and Comparison*
This seminar treats theory formation in the study of religion together with issues regarding cross-cultural and trans-historical comparison and translation. Readings will include both theoretical and methodological writings and examples drawn from ethnography and history such as the phenomenon of animal science.

2600. *Religion, Culture, Thought: Seminar*
2600A. *Durkheim, Weber, and Dewey: Religion in Modernity*
This seminar investigates theories of religion and modernity in the work of Durkheim, Weber, and Dewey. M. S. CLADIS.

2600B. *Hume and Kant on Ethics and Religion*

2600C. *The Emergence of Modern Liberal and Communitarian Thought*
Throughout our country's history liberal (individualist, rights-based) and communitarian (community centered) models of society have at times clashed. Our present age is one of those times. What are the historical origins of these two models? And what are some ways in which commitment to both models can be maintained, even in light of their potential conflict? These questions will be pursued.

2600D. *Pragmatism and Religion*
Readings in the original American pragmatists and their recent admirers with special attention to the topic of religion.

2600E. *Seminar in Religion and Critical Thought: Hegel* T. A. LEWIS.
2600F. *Seminar on Religion and Critical Thought: Brandom* T. A. LEWIS.

2006G. *Reason, Tradition and Modernity*
The modern West has been defined largely by pervasive challenges to inherited religious beliefs, ethical mores, and political institutions. Since the Enlightenment, these developments have provoked widespread reflection on the nature and significance of tradition, the limits of reason, as well as the relation between reason and tradition. We will trace this current from the developments of German romanticism through recent "new traditionalist" thought, such as that of Alasdair MacIntyre.

2006H. *Skeptical Strategies and Religious Commitment*
A look at the history of skepticism and its relation to religion, with special attention to the resemblance of ancient Pyrrhonian skepticism to a religious discipline, and the modern use of skeptical arguments in the service of religious apologetic. Authors
include Sextus Empiricus, Montaigne, Descartes, Spinoza, Hume, Lessing, Kierkegaard, and Wittgenstein.

2890. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for preliminary examinations. No course credit.

2910. Independent Research
The staff is willing to offer independent reading courses in selected areas. See the Instructor for more information.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Renaissance and Early Modern Studies

Professors Castiglione (Italian Studies), Cook (History), Cope (History), Egan (English), Feerick (English), Foley (English), Frizzetti (Anthropology), Gould (English), Hanink (Classics), Harris (History), Haynes (Comparative Literature), Jodry (Music), Kahn (English), Krause (French Studies), Kriz (History of Art and Architecture), Lincoln (History of Art and Architecture), Martinez (Italian), Merrim (Comparative Literature and Hispanic Studies), Muller (History of Art and Architecture), Newman (Comparative Literature), Nummedal (History), Oklot (Slavic Languages), Oldcorn (Italian Studies), Putnam (Classics), Rabb (English), Riva (Italian Studies), Saint-Amand (French), Saval (Comparative Literature), Seifert (French Studies), Teller (Judaic Studies), Zerner (History of Art and Architecture).

Undergraduate Program
For information regarding the Renaissance and Early Modern Studies concentration program leading to the A.B. degree, please visit:
http://www.brown.edu/Administration/Registrar/concentration.html or
http://www.brown.edu/Departments/Renaissance_Early_Modern_Studies/.

Courses of Instruction
Interested students should also consult courses given by Renaissance and Early Modern Studies faculty in their respective departments.

Slavic Languages

Professors Cook, Evdokimova, Fidler (Chair), Gleason, Golub, Herlihy, Levitsky; Associate Professors Carey, Golstein, Pollock; Assistant Professor Oklot; Senior Lecturer deBenedette.

The Department of Slavic Languages serves as the center for campus study of the languages, literatures, and cultures of the Slavic world. Its undergraduate program develops
an in-depth knowledge of their cultures and considers the unique role that literature and language have played in shaping the political and social development of the former East-Bloc nations. It is the particular strength of the department to enable students to view Slavic cultures from within through research and teaching based on solid knowledge of the relevant languages. The department helps students to discover the diversity of perspectives in those cultures and to examine and experience how they differ from the students’ own. Its approach is complemented by courses in other units (the Watson Institute for International Studies and the Departments of History, Political Science, Comparative Literature, and Theater, Speech and Dance, among others) that examine aspects of Eastern Europe as viewed from without, that is, in the context of Western scholarly, cultural, and foreign policy traditions.

The department’s principal objectives are:

1. to develop language expertise according to stated proficiency goals;
2. to facilitate study of the Slavic languages, literatures and cultures, with a strong focus on Russia and the Czech Republic, using a variety of cross-disciplinary perspectives;
3. to provide, in courses taught in Slavic languages, a combination of language and discipline content, always in a balance appropriate to the level of instruction;
4. to internationalize students’ learning encounters by requiring that they experience the language and culture outside the classroom;
5. to foster consistent and close interaction with other university units and faculty members who, through their research on Eastern Europe, improve the range and the quality of courses available in our concentration in Slavic studies.

Undergraduate Program

For a complete description of the standard concentration programs please visit: http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

The Department of Slavic Languages offers a comprehensive doctoral program in Slavic Studies specializing in Russian culture and literature and in modern Czech culture. The program has a strong interdisciplinary focus and students are encouraged to work with departmental faculty as well as with faculty in related fields, such as comparative literature, theater, history, art history, modern culture and media, and political science. The program trains flexible and innovative scholars able to address varying teaching and research needs in future job markets. Outstanding library holdings in West and South Slavic languages and cultures at Brown and courses through the Brown-Harvard exchange program offer yet additional excellent resources for research.

In addition, to receive training in related disciplines, the doctoral students amass experience in teaching languages and literatures. Mentoring in teaching occurs in various contexts: in language and literature courses, where they serve as teaching assistants, in the interdepartmental foreign language teaching methods course (and related practice), and in seminars at The Sheridan Center for Teaching and Learning. Students will receive extensive advice on research strategies, conference presentations, and publication of their work.

Requirements

1. 16 graduate-level courses, including
A minimum of five 2000-level graduate seminars
Theory and Methods of Foreign Language Teaching
Two to four courses in a related field (to be determined in consultation with the Director of Graduate Study)
2. Teaching (minimum three semesters). An effort will be made to provide teaching experience not only in a Slavic language, but also in Russian literature, culture, and history.
3. Reading knowledge of a second language closely related to the student’s specialization. A standard of professional competence should be maintained within the area of likely specialization. Most students intending to specialize in Slavic cultural studies should demonstrate an appropriate language competence in Russian and one more Slavic language, normally Czech, and most students specializing in one Slavic culture need German or French for their research. This requirement may be satisfied through advanced coursework during the first year, or by placement evaluation. Fulfillment of the second language requirement with a language other than German or French must be approved by the graduate committee.
4. Qualifying Examination (details in the department office).
5. Dissertation and Defense (details in the department office). Students should submit the doctoral thesis prospectus to the thesis director and the Director of Graduate Study by October 1 of their fourth year.
6. Students whose primary Slavic language competence requires them to take language courses below the 100-level may do so in consultation with the Director of Graduate Study, but those courses will not count toward the course requirements for the Ph.D.

Funding and Time Table for Completion of the Ph.D. in Slavic Studies

Normally coursework and the preliminary examinations are completed by the end of the third year, submission of the doctoral thesis proposal during the fourth, and one or two years of work to complete the doctoral thesis. Students in good academic standing will receive full support for five years.

For additional information please visit the department’s website at: http://www.brown.edu/Departments/Slavic_Languages/

Courses of Instruction

Czech
Primarily for Undergraduates

0100, 0200. Introductory Czech
Introduces the performance of basic tasks in Standard Czech, highlights of Czech culture, and a worldview of a nation uniquely located on the threshold of western and eastern Europe. Emphasis on oral communication. CZCH 0200 includes readings of annotated literary texts on the Web. M. FIDLER.

0410. Topics in Czech Language and Culture
Examines aspects of Czech cultures as manifested in history, literature, journalistic writing, and film. An equally important aim is to develop students’ written and oral expression beyond everyday discourses. Tasks for the course are adjusted to two different language levels (intermediate and advanced). Prerequisite CZCH 0200 or placement test.
0410A. Boys and Girls: Relationships under Socialist Bohemia
Using Miloš Forman’s film “Loves of a Blonde” and supporting materials around it, we will discuss human relationships and how they can be interpreted culturally and politically. Equally important is the acquisition of language. M. FIDLER.

0410B. Coming of Age in Postwar Czechoslovakia
Examines the political and cultural changes in the post-WWII Czechoslovakia through the eyes of a child. The centerpiece of the course is a film on elementary school in post-war Prague as a symbolic representation of the society that is about to emerge. Use of literary and journalistic texts. M. FIDLER.

0410C. Czech View of Self and Others
Examines the Czech view of themselves as well as others, one of the most debated topics in the current context of expanding European Union. The centerpiece of the course is a film about a man-eating flower (animated by Jan Svankmajer) invented by a crazy scientist. The story unfolds in Prague, involving a peace-loving Czech botanist and his daughter, the American detective Nick Carter (played by a Slovak actor), and the Czech police enforcement. The film is a treasure box of symbolic representations of Czechs and people Czechs view as others. Use of literary and journalistic texts. M. FIDLER.

0410D. Czechs and the Big Brother: Czech Lands in the 1980s
Events in Czechoslovakia in the late 1980’s as represented in the Oscar-winning film Kolja. The Velvet Revolution and the Czech perspective on Russia. Readings from different genres. Equal emphasis on language acquisition, including Colloquial Czech. Separate language tasks for two proficiency levels (2nd-3rd year). Conducted in Czech. For students who have completed CZCH 0200 or the equivalent. M. FIDLER.

0610. Topics Course on War, Revolution and National Identity in Czech Culture
Explores war, revolution, and the issue of national identity in Czech culture and history from various angles as manifested in literary and journalistic texts, art, music, and films. Use of authentic materials. Discussion in Czech. An ancillary aim is to develop advanced language skills. Tasks for the course are adjusted to two different language levels. Prerequisite: CZCH 0410 or placement test.

0610A. Czech Lands under Occupation and Terror
The "most famous Czech" Jára Cimrman and his most active period, namely the late 19th to early 20th-century Bohemia. Highlights of Czech cultural icons and emblems, and discussions on what constitutes Czech national identity reflected in the Cimrman phenomenon. Readings on several Czech cultural icons. Two different sets of requirements for students of two language proficiency levels. The course is for students who have completed CZCH 0410 or the equivalent. M. FIDLER.

0610B. Psychosis of Occupation in the Czech Lands
Discussion of the Occupation period during WWII. The course is built around a Czech New Wave classic film about an eccentric director of a crematorium in Prague, who turns into a fanatic collaborator under the terror and demagogy of the regime. Use of literary texts and texts on Czech history. M. FIDLER.

0610C. Czech Cultural Icons, Emblems, and National Identity
The relationship between Czechs and the neighboring superpowers that exist from the period of the Czech National Revival in the 19th century. Discussion of frequently addressed national character of the Czech nation from the viewpoint of Czechs.
Explores how these issues relate to the attitudes and viewpoints in the contemporary setting. Conducted in Czech. Prerequisite: CZCH 0410 or placement test. M. FIDLER.

For Undergraduates and Graduates

1000. *Dimensions of Czech Animation: Contexts, Interpretations, and Dialogs with the East*
Cultural-historical contexts that gave rise to the internationally acclaimed Czech animation by Trnka, Svankmajer and others. Fascination with Czech animation in Japan used as an example to illustrate the mechanism of cross-cultural reception of Czech animation. Readings of related Czech literature/theory of animation. Selected Japanese animation and literature discussed. Readings in English. Films are dubbed or subtitled in English. Written permission required. M. FIDLER.

1050. *Contemporary Czech Society and Literature in Translation*
Surveys representative Czech prose texts mainly from the late 20th to 21st century, in English translation. No knowledge of Czech is required. Readings include Hasek, Capek, Kundera, Hrabal, and Havel. Films also part of course. M. FIDLER.

**Russian**

Primarily for Undergraduates

0100, 0200. *Introductory Russian*
Introduction to Russian language and culture. Oral and written communication in Russian; emphasis on the literary and everyday culture of Russia and the former U.S.S.R., including the changes that have reshaped everyday life for citizens of Russia. Five meetings per week, plus use of audio, video, and web materials. L. DEBENEDETTE.

0110. *Intensive Russian*
Intensively-paced introduction to Russian culture and language; completes one year of study in one semester (RUSS 0110 = RUSS 0100-0200). Comprehension and use of contemporary Russian; fundamentals of Russian grammar; vocabulary acquisition; focus on oral communication. Introduces aspects of everyday culture of Russia and the former U.S.S.R. Ten to fifteen hours weekly work outside the classroom. Double credit. L. DEBENEDETTE.

0250. *Introductory Russian in St. Petersburg*
Intensive introductory language and culture taught in St. Petersburg, Russia, meeting 15 hours per week. Students develop communicative and cultural competence in Russian emphasizing 1) culture of everyday life in Russia and 2) life in St. Petersburg. For students without previous study of Russian. V. GOLSTEIN.

0300, 0400. *Intermediate Russian*
Continues development of language proficiency while broadening understanding of contemporary Russian culture via readings in literature and history. Expansion of vocabulary for dealing with conversational topics and review of Russian grammar. Features literary and nonliterary readings in Russian, as well as video and computer resources. Five class meetings per week. Prerequisite: RUSS 0110 or RUSS 0200 or RUSS 0250 or placement by exam. L. DEBENEDETTE.

0320. (0320) *Freshman Seminar*
Enrollment limited to 20 first year students.
0320A. *Dostoevsky's "The Brothers Karamazov" – The Art of the Novel*
An in depth analysis of Dostoevsky's last novel as the culmination of his art and thought. Central religious and philosophical themes of the novel, such as the relations of faith to morality, modes of transgression, retribution, and epiphany, the question of theodicy, and the nature of authority. Discussion of Dostoevsky's poetics and of his contribution to the genre of the novel. Readings from literary criticism and from other pertinent literary texts, such as the Bible, Schiller, and Voltaire will also be discussed. In English. Enrollment limited to 20 first year students. S. EVDOKIMOVA.

0320B. *Gogol: A Journey into the Fantastic*
Gogol's altered states of reality uniquely shape the rise of modern Russian literature and anticipate the fictional worlds of Kafka and Borges. Gogol unfolds a grotesque gallery of characters with radish-shaped heads and ghosts with mustaches, who live in a world, in which dogs can talk and noses can walk. Dostoevsky was among the first to relish the labyrinths of Gogol's fantasy scapes; we will follow in Dostoevsky's footsteps. Enrollment limited to 20. Written permission required. A. LEVITSKY.

0320C. *Demons and Angels in Russian Literature*
The literary images of fallen angels, as well as various poetic demonologies in Russian literature extend from the medieval apocrypha, up to famous works of the twentieth-century literature, like, for example, Bulgakov's *Master and Margarita*. Although, the Russian literary angels are in many respects related to their Western counterparts, the apocalyptic character of Russian spiritual culture makes them in many respects unique. Examining these images, the course addresses the important questions concerning the human condition in general. Angels as one critic said, "represent something that was ours and that we have the potential to become again"; their essence is otherness. Consequently, their literary representations explore the possibilities of human existence as well as its central paradigms like, love, rebirth, mortality, or 'fallenness.' The course will analyze the images of angels and fallen angels (devils) in the works of the nineteenth and the twentieth-century Russian prose, visual art, and film - from romanticism to 'postmodernism' - in the context of the world literature and culture. Authors to be studied: Milton, Goethe, Byron, Lermontov, Flaubert, Dostoevskii, Solzhenitsyn, Bulgakov, Andreev, Nabokov, Erofeev. We will also discuss films by Tarkovskii and Wenders. In English. Enrollment limited to 20 first year students.

0350. *Intermediate Russian in St. Petersburg*
Intensive intermediate language and culture taught in St. Petersburg, Russia meeting 15 hours a week. Development of communicative and cultural competence in Russian, emphasizing 1) descriptive and narrative texts and 2) culture and history of St. Petersburg. Prerequisite: RUSS 0110 or 0200, or equivalent. V. GOLSTEIN.

0500, 0600. *Advanced Russian*
Examines selected topics in Russian culture and history as depicted in readings, the media, and Russian and Soviet films. Language work emphasizes increasing facility with spoken Russian and developing writing skills. Includes work on advanced grammar and syntax. Five class meetings per week. Prerequisites: RUSS 0350 or RUSS 0400 or placement. L. DEBENEDETTE.

0770. *Utopian Spaces in Fantasy Worlds in Literature and Film: East and West*
A survey of Russian, Czech, Polish, and Austrian 19th- and 20th-century works of fiction that depict altered states of reality. Readings (in English translation) range from folk tales and tales of the supernatural, 19th-century utopias and works by such major writers as
Turgenev and Dostoevsky, to accomplished novels of the 20th-century. Showings of contemporary fantasy and science fiction movies from the U.S., Russia, England, France, and Czechoslovakia.

0930. **Cultures and Literatures of the Russian and Soviet Empires**
Examines in depth various topics that constituted the cultural and literary landscape of the Soviet Union, examining their antecedents in the Russian empire and their reemergence in the post-Soviet world. Topics include: the Caucasus, from Tolstoy to modern Chechnya; Orientalism; the Civil War and Pasternak; Akhmatova and the experience of the totalitarian state. Enrollment limited. Written permission required. C. CAREY.

0990. **The Black Experience in Russia and the Soviet Union**
A study of the African-American experience in Russia and the Soviet Union through the prism of autobiographies, biographies, diaries, travel journals, and memoirs from the 18th century to the present, of actors, American Communists, domestic servants, journalists, musicians, poets, political activists, publishers, stage designers, students and writers, including W.E.B. Du Bois, Harry Haywood, Langston Hughes, Paul Robeson and Richard Wright. Enrollment limited. Written permission required. C. CAREY.

For Undergraduates and Graduates

1000. **Russian Modernism and the Arts**
Russian culture in a period of revolutionary upheaval: developments in literature, film, design, visual and applied arts. Avant-garde experimentation and the creation of tradition: primitivism, futurism, constructivism, and other movements in literature and the arts. A. LEVITSKY.

1020. **Russia Rediscovered**
Explores Russian culture in the pre-Revolutionary era (ca. 1861–1905): encounters between elite and popular culture in a period of immense social upheaval, in particular the attempt to recover indigenously Russian art forms and rural traditions. Analyzes the expressions of this nativist trend in literature, ethnography, religion, and visual and applied arts, and attempts to sketch out the sociohistorical contexts of this “rediscovery” of native Russian culture. THE STAFF.

1050. **Russian Culture: From Peter The Great to Putin**
An interdisciplinary exploration of Russian cultural history through its literature, art, religion, social and political thought, and film. An examination of a wide range of cultural expressions: religious and civic rituals, values and practices, social customs and popular entertainment. In English. V. GOLSTEIN.

1060. **St. Petersburg: A Window on Russia**
An interdisciplinary exploration of Russian cultural history through its literature, art, architecture, religion, social and political thought, theater and ballet. Elements of Russian culture will be presented through the prism of the city of St. Petersburg, its history, its urban and cultural landscapes. Regular field trips to museums, theater, and city tours focused on specific themes. S. EVDOKIMOVA.

1090. **Exoteric Russia**
A survey of the main currents of mystical, esoteric, occult, and magical theories and practices in Russia from the 11th century onward. Topics include pagan survivals, Orthodox mysticism and magic, heresies and schisms, Freemasonry and Rosicrucianism, Mesmerism and Spiritualism, H. P. Blavatsky, and G I. Gurdjieff. No knowledge of Russian
is necessary. Prerequisite: any one of RUSS 0290, 0310, HIST 1400, 1410, or UNIV 0820, or written permission of the instructor. **The Staff.**

**1100. The Roots of Russian Culture**
Study of the patterns and roots of Russian culture over the last millennium and how Russia’s languages have determined its worldviews and cultural structures (the Whorf-Sapir thesis). Principal topics: Russian spirituality, diglossia, other kinds of literacy; speech and silence as means of knowing and unknowing; the shape of time and the rhythm of space; sacred vs. secular history; etc. Lectures and discussions in English. Prerequisite: Intermediate Russian. **The Staff.**

**1110. Special Topics in Russian Studies I: Advanced Reading and Conversation**
An advanced course recommended for students who are either planning to go or are returning from abroad. Focus on Russian culture as seen through the prism of Russian poetry. Extensive classroom discussion and frequent writing assignments. Prerequisite: RUSS 0600 or written permission. **The Staff.**

**1120. Special Topics in Russian Studies II: Advanced Reading and Conversation**
A continuation of Russian 1110. Examines aspects of Russian culture as manifested in Russian literature. Readings range from fairy tales to contemporary works. Extensive classroom discussion and frequent writing assignments. Prerequisite: RUSS 1110, 1700, or written permission. **The Staff.**

**1250. Russian Cinema**
This seminar will provide a chronological overview of Russian cinema from its beginning to the present. The films will be considered against the background of some historical, political, and theoretical readings. The students will also be encouraged to juxtapose Russian and non-Russian films in order to evaluate the place of Russian cinema within a global film culture. **V. Golstein.**

**1300. Russian Literature in Translation II: Tolstoy to Solzhenitsyn**
Survey of major works of Russian literature of the late 19th and 20th centuries. Traces the development of Russian literature from realism to symbolism and decadence, from revolutionary experiments to socialist realism and dissent. Authors to be studied include Tolstoy, Chekhov, Sologub, Blok, Mayakovsky, Babel, Olesha, Zamiatyn, Bulgakov, and Solzhenitsyn. Lectures and discussion. No knowledge of Russian required. **V. Golstein.**

**1310. Russian Poetry and Poetics**
The technical study of verse; metrics and rhyme; linguistic analysis of poetic language; semiotic aspects of verse semantics, including genre and historical development. Primary focus on Russian verse, but some attention will also be given to other (Slavic and non-Slavic) traditions, as well as to general theoretical issues of poetic structure. Conducted in English. **V. Golstein.**

**1320. Soviet Literature from 1917 to 1953**
Survey of Soviet literature in translation from the revolution to the death of Stalin. Includes Russian literature and the literary milieu of the NEP period, literature of the Thirties, and literature written during the Second World War and the postwar period. Texts by Akhmatova, Babel, Blok, Bulgakov, Ivanov, Lavrenyov, Mandelstam, Mayakovsky, Pasternak, Pilnyak, Shklovsky, and Zamiatyn. **C. Carey.**

**1330. Soviet and Post-Soviet Literature (1953 to Present)**
A survey of contemporary Soviet and post-Soviet literature in translation from the death of Stalin through the Glastnost era to the present. Includes prose writers and poets as well as women writers and authors from non-Russian republics. Texts by Aitmatov, Aksyonov,
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Bitov, Evtushenko, Ibragimbekov, Iskander, Makine, Makanin, Nagibin, Petrushevskaia, Rasputin, Shukshin, Sokolov, Soloukhin, Solzhenitsyn, Tolstaya, Trifonov, Ulitskaya.

C. CAREY.

1340. **The Russian Novel**
Mikhail Bulgakov's *Master and Margarita*, Andrei Bely's *Petersburg*, and Fedor Sologub's *Petty Demon* are read in depth as 20th-century milestones in the development of Russian novel—particularly as continuation and reaction to the prose of Nikolai Gogol and Fedor Dostoevskii, which opens the course. Other authors included in the course: Nabokov, Platonov, Erofeev. In English. V. GOLSTEIN.

1450. **Love, Adultery, and Sexuality**
Literary representations of love, marriage, adultery, and sexuality. Examines the formation of the notion of passionate romantic love, the myths of femininity, and various concepts of love and family. Emphasizes the way in which the notions of love and sexuality are linked to national identity. Readings include several Russian popular and revolutionary feminist writers as well as such classics as Rousseau, Racine, Pushkin, Flaubert, Tolstoy, Chekhov, and Kate Chopin. S. EVDOKIMOVA.

1500. **Approaches to Russian Literature**
Reading in Russian of selected poetry and prose by important authors, among them Lomonosov, Karamzin, Derzhavin, Pushkin, Lermontov, Turgenev, Gogol, Fet, Dostoevsky, Chekhov, Briusov, Akhmatova, Sologub, Remizov, Blok, Bely, Zamiatin, Pilnyak, and Mandelshtam. Lectures in Russian on literary problems, literary terms, and important aspects of literary history. Prerequisites: RUSS 0600 plus RUSS 0290 or 0310 or written permission. A. LEVITSKY.

1600. **Literature and History: Russian Historical Imagination in the European Context**
Relationships between fact and fiction between historiography and historical fiction, between ideology and various ways of reconstructing the past. Readings will include historical fiction of Shakespeare, Schiller, Walter Scott, Pushkin, Tolstoy *War and Peace*, and Pasternak, as well as theoretical texts from Aristotle to Nietzsche, White, and LaCapra. S. EVDOKIMOVA.

1750. **Russian and East European Folklore**
Introduction to the folklore of Russia and the Slavic countries of Eastern Europe, with occasional reference to the folklore of other regions. Among the types of folklore to be discussed: magical incantations, proverbs and riddles, ritual and lyric songs, folktales, epic poetry, and laments. Special attention to the relation of folklore to ritual and to mythology. Lectures and discussions geared to English translations. THE STAFF.

1800. **Pushkin**
For generations of Russian readers and writers, Pushkin has been a cult figure, a true “national poet.” This course focuses on Pushkin as the progenitor of Russian national mythology and examines the seminal nature of his writing. Analysis of the dazzling array of genres which became his greatest achievement: lyric poetry, narrative poetry, novel in verse, prose, drama, history, and other nonfictional narratives. S. EVDOKIMOVA.

1810. **Tolstoy**
Close readings of Tolstoy’s major novels (*War and Peace* and *Anna Karenina*, in particular) and shorter narratives with special emphasis on his iconoclastic ideas about art, religion, and society. Considers Tolstoy’s formal innovation in a broader historical and cultural context. Lectures and discussion. No knowledge of Russian required. S. EVDOKIMOVA.
An examination of Dostoevsky's major texts tracing his development as an artist, thinker, and religious visionary. The texts will be considered against the background of literary and cultural history of Dostoevsky's period. No knowledge of Russian required. V. GOLSTEIN.

The course examines Vladimir Nabokov's (1899-1977) major achievements in prose in both Russian and American periods, paying particular attention to their cultural context (Russian émigré culture of the 1920s and 30s); the questions of his aesthetics, ethics, and metaphysics, as well as his engagement in the dialogue with other European modernist writers, especially with the existentialists. Readings include Nabokov's selected short stories and novels, such as The Defense, Invitation to a Beheading, Despair, The Eye, The Gift, Pnin, or Lolita. In English. M. OKLOT.

Commemorating the hundredth anniversary of the death of the great Russian playwright and short-story writer, this course will examine Chekhov’s innovations in the genre of the short story and in modern theater, as well as his ongoing influences in world literature. Themes include the nature of the Chekhovian comic, subversion of the dominant literary and cultural paradigms and myths, representations of gender and sexuality. In English. S. EVDOKIMOVA.

Independent research project on topics related to Russian culture. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the Concentration Advisor and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

The most important literary currents from the Baroque to early romanticism. Study of style and genre and the development of the literary language. Most lectures are in Russian. A. LEVITSKY.

A practical approach to the analysis of Russian poetry with emphasis on the poetry of Akhmatova, Blok, and others. Open to advanced Russian concentrators.

The origins and character of the Russian Symbolist movement; survey of major poets; the Symbolist novel (Sologub, Bely).

East Slavic literature from the Kievan period to the end of the seventeenth century.

Seminar. Critical reading of selected texts from the Baroque period through the first half of the 19th century. Analysis is based on a study of the infrastructure of each work and the external influences of the period. Conducted mainly in Russian, with a focus on Russian critical terminology and approaches. A. LEVITSKY.

Seminar in Russian Literature
2610A. Chekov
S. EVDOKIMOVA.

2610B. Gogol’s Dead Souls
A research seminar for advanced students, including those with no Russian. Qualified undergraduates may be admitted with the instructor's permission.

2610C. Russian Romanticism
This course will examine the works of Zhukovsky, Batiushkov, Pushkin, Lermontov, Tiutchev, Bestuzhev-Marlinsky, Odoevsky, and Gogol in the context of Romanticist literary culture. Students will also read works by other European authors associated with Romanticism to elucidate the extent of the adherence of Russian writers to Romanticist aesthetics and philosophy. S. EVDOKIMOVA.

2620. Seminar in Russian Literature
2620D. Russian Freemasonry

2710. Seminar in Russian Literature
2710A. Pasternak
THE STAFF.

2710B. Poetic Structure
The technical study of verse; metrics and rhyme; linguistic analysis of poetic language; semiotic aspects of verse semantics, including genre and historical development. Primary focus on Russian verse, but some attention will also be given to other Slavic materials, as well as to general theoretical issues of poetic structure. Open to qualified undergraduates with instructor's permission. THE STAFF.

2710C. In Memoriam in Russian Literature
A study of the philosophical vein in Russian poetry about the meaning of the poetic and cultural heritage of the past, as well as reactions of the rising voices in Russian poetry in succeeding generations to the individual deaths of their immediate predecessors.

2720. Seminar in Russian Literature
2720A. Seminar in Russian Literature: Russian Decadent and Symbolist Literature
This course explores Russian Decadent and Symbolist literature, and its cultural and philosophical (e.g., Schopenhauer, Nietzsche, or Solovev) foundations. The analyzed works represent the achievements of these two overlapping movements in the genres of the long narrative poems, the drama, the short story, the essay, and, first of all, the novel. The authors include: Solovev, Sologub, Ivanov, Kuzmin, Blok, Bely, Briusov, Merezhkovskii. In English. Open for undergraduate and graduate students.

2720B. Seminar in Russian Literature: Pushkin

2720C. Death and Immortality in Russian Poetry

2720D. Derzhavin and his Epoch
In Russian. A. LEVITSKY.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.
2980. Advanced Reading and Research
Only for graduate students. Independent research project on topics related to Russian culture. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the DGS and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

Slavic

For Undergraduates and Graduates

1200. Slavic Fantasy and Science Fiction
Slavic literatures, with emphasis on fairy tales, utopias, and dream sequences to science fiction, which depict altered states of reality. Readings in English, supplemented with films in March and April. Seminar with discussion. Slavic concentrators and graduate students expected to cover much of the readings in the original. Familiarity with Slavic literary histories is not required. A. LEVITSKY.

1300. Sociolinguistics
This course examines the relationship of language to society. In particular, we will explore the role of language when people define and maintain group (ethnic, national) identity and social relationships. Major topics include language and social class, language as a marker of ethnic identity, language and gender, language in social interaction, language contracts, language and nationalism, and language policy. Case-study readings cover (but are not limited to) linguistic situations in Russia, Central and Southeastern Europe, and the former republics of the USSR. Knowledge of Slavic languages is not required. Open to advanced undergraduate and graduate students. Freshmen and sophomores who demonstrate their knowledge of the basic notions in linguistics or their familiarity with the former USSR and East Europe may enroll with the instructor's permission. M. FIDLER.

1760. Film, Theater and Culture of Poland
This course explores Polish twentieth-century culture with a special stress on literature, theatre, film, visual arts, and architecture. After the examining of the romantic roots of Polish twentieth-century culture through the works of two famous Polish poets, Mickiewicz and Krasinski, the course will explore the works of representative Polish modernist and avant-garde artists such as Przybyszewski, Wyspianski, Witkacy, Schulz, or Gombrowicz. The third part of the course is devoted to the Polish contemporary theatre and film, including the workshops of the two legendary European theaters Cricoteka and Gardzience, and films of the famous Polish Film School. In English.

1770. Prague and St. Petersburg: A Tale of Two Cities
An exploration of the mythopoetic universe of Prague and Petersburg through literature and film. Both - one, ancient, the other "modern" - served at one point of the historical continuum as capitals of multinational empires (Holy Roman and Russian), yet also as loci of national identity, both factors thus contributing to their respective enigmatic states. The course will attempt to identify these enigmas and discuss their possible futures in the global polity and culture. A. LEVITSKY.
1780. *Economies and Politics of Transition*

The course identifies, describes, and explains major social, economic and political processes that have started in the late 1980s and early 1990s with the collapse of the communist systems in Poland and other East-Central European countries. The transition from the centrally planned to free market economies and the present challenges and problems associated with joining the European Union will be discussed in the context of the political and social changes and related to specific historical conditions. The course puts a special stress on Poland, which in turn will allow students to develop models of patterns of transition applicable to the entire region of East-Central Europe. In English.

1790. *Eastern European Literature*

This course will examine the selected major works of East European literature, theatre, and film in the context of West European and Russian literatures, giving special attention to the Polish writer, Witold Gombrowicz and the Czech writer, Milan Kundera. The works included in this course will be analyzed, first of all, as artistic responses to the crisis of cultural identity inflicting the whole Europe of the twentieth century. Other included authors: Schulz, Babel, Broch, Witkacy, Platonov, Ungar, Leppin, Kantor, Milosz. In English.

1890. *Slavic Contributions to Literary Theory*

The course focuses on the tension in Russian literary theory between the formalist (Shklovskii, Tynianov) and cultural or existential approaches (Bakhtin). Another issue addressed by the course is the critical genealogy of contemporary literary theory, which finds many of its sources in Formalist Theory and the Bakhtinian approach to literature. In English. For more information visit the Slavic Department web page. The Staff.

1950. *Independent Study*

Independent research project on topics in Slavic Studies. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the Concentration Advisor and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Please check Banner for the correct section number and CRN to use when registering for this course. Each section limited to 10 students; instructor permission required.

1970. *Topics in the Cultural History of the Slavic People*

1970A. *Literature in the Changing Eastern Europe*

Undergraduate seminar on the role of the intellectual in cultures subjected to enormous social and political change. Considers particularly the relevance of the intellectual's private and public selves to the literary, cultural and political life of society. Readings in English.

1970B. *Spirituality in Russian Literature*

Spirituality -- understood as the intimate, spiritual life of individuals as opposed to corporate expressions of religiosity -- occupies a large place in Russian national life, and its exploration has become the central issue of many famous literary texts. The course will examine selected Russian texts -- from symbolism to postmodernism -- from the perspective of the spiritual sensibility that combines atheism, Russian Orthodoxy, Gnosticism, and sectarian or unconscious religiosity. Authors to be studied include: Nabokov, Sologub, Rozanov, Erofeev, Sorokin and Pelevin. In English. M. Oklot.

1970D. *Václav Havel: Dissident, Playwright, and Politician*

For Havel, life under communism represented "an inflated caricature of modern life in general" and the collective experiences of those who lived under such a totalitarian regime" stand as a kind of warning to the West, revealing to it its own latent
tendencies." We will explore this hypothesis by studying Havel's texts and the cultural context where they arose. M. FIDLER.

1970E. Kafka/Schulz
The course explores the prose of Bruno Schulz and Franz Kafka, grasping a profound similarity between those two writers on many levels: cultural, religious, sexual, existential, and artistic. In English. For more information visit the Slavic Department web page.

1981. Independent Research in the Slavic Language(s)
Independent research on various topics in Slavic cultures. Reading, discussion, research must be done in the chosen Slavic language (Czech/Russian). Close work with faculty on project is expected. Prerequisites: minimum RUSS0600/CZCH 0610 (3rd year-level) or placement evaluation by Russian or Czech language coordinator. Enrollment permitted only after the written proposal (instructions in the department office) is submitted to the Concentration Advisor and Chair of the department (deadline: the last day of Add a course without fee period during the semester when the project is undertaken). Each section limited to 10 students; instructor permission required.

1990. Senior Thesis
Only for Slavic concentrators writing their senior theses. For requirements and schedule, contact the department. Each section limited to 10 senior Slavic Studies concentrators.

Primarily for Graduates

2210. Old Church Slavonic
Introduction to Church Slavonic philology. Structural analysis of Old Church Slavonic. Readings in Old Church Slavonic texts. The Staff.

2230. History of Russian
Elementary history of Russian, with emphasis on the standard languages, from the Kievan period to the 19th-century. Readings in early Russian texts. Some acquaintance with Old Church Slavonic is desirable. Not for graduate students in Slavic linguistics, who should take seminars in East Slavic historical dialectology and the history of the Russian literary language (SL 261, 262).

2320. Russian Syntax
Survey of approaches to the relationship between semantics and syntax in Russian. Discussion of morphosyntactic variation in Russian, including gender-number agreement, tense-aspect, case, reflexivization, and pronominalization. Some topics relevant to the teaching of Russian and stylistics.

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. Advanced Reading and Research
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.
Sociology


The Sociology Department offers students ways of gaining a better understanding of the modern world and tools to address social issues with a solid knowledge foundation. Our concentration provides a theoretical and methodological foundation in sociological analysis and allows students to deepen their knowledge in the substantive areas of strength of our department: international development and globalization, demography and population studies, the environment and environmental change, health and medicine, and urban studies. Our students learn skills that allow them to continue their studies, if they desire to do so, or to get research or policy positions in private or non-profit organizations or in state or international agencies.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please see the department’s website at:

http://www.brown.edu/Departments/Sociology/ or visit:

http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

The Graduate Program in Sociology is primarily a Ph.D. program. The objective is the education and the development of professional sociologists for careers in colleges and universities, research institutes, government, business, and nonprofit organizations. Emphasis is placed on the mastery of sociological fundamentals—concepts, theories and research methods—and thorough knowledge of substantive fields.

Areas of specialization within sociology cover a wide range of interests. The faculty at Brown has expertise in several key areas of the discipline, in which we offer training. These areas are: urban sociology, social demography, development organizations, medical sociology, environmental sociology, political sociology, social inequalities, the family, theory, and cultural sociology. These interests capitalize on our historic accomplishments, current faculty strengths, and strong linkages to centers and programs throughout the University (especially the Population Studies Training Center, Watson Institute for International Studies, Center for Gerontology and Health Care Research, A. Alfred Taubman Center for Public Policy and American Institutions, the Initiative in Spatial Structures in the Social Sciences (S4), and the programs in American civilization, ethnic studies, and Afro-American studies). Research and teaching collaboration between sociology faculty members and faculty in other departments, programs, and institutes within Brown University enrich the curricular offerings in sociology. Research and training in computer applications is offered in cooperation with the Social Science Research Laboratory (SSRL) located in the sociology department (Maxcy Hall).
Master of Arts Degree Requirements

The department does not have a separate A.M. program and does not encourage applications from students who only wish to pursue the A.M. degree. Students can earn the A.M. on the way to the Ph.D. or can receive the A.M. if they chose not to complete the Ph.D. program. The A.M. requires a balanced program of eight (8) courses in sociological theory, methods, and substantive areas taken for graduate credit. Four of these courses must be SOC 2430, 2440 and two additional 2000-level or 1870-level courses. A Masters paper is required, equivalent in quality and length of a published paper in a major sociology journal.

Doctor of Philosophy Degree Requirements

Three full years of graduate study are required for the Ph.D. degree. Up to one full year of credit may be transferred from another institution upon recommendation by the department. All students are expected to gain proficiency in theory, methods, statistics, and research that characterize sociology. The program in the fundamentals of the discipline requires students to take a course in sociological analysis; a qualitative methods course (SOC 2430); a sequence on contemporary (SOC 2050) and classical (SOC 2040) theory; and a statistics sequence (SOC 2010 and SOC 2020) and its prerequisite (SOC 1100) if necessary. Students who have previously taken advanced courses in these areas may petition for exemption from any of these requirements.

Teaching experience is required of all Ph.D. students if not waived by prior experience. This requirement can be satisfied either through appointment as a teaching assistant or through participation in Teaching Practicum for a year (SOC 2500, SOC 2510).

All students must pass a preliminary examination in two areas of specialization selected with the approval of the department. The exam is usually taken at the end of the third year of full-time study. Shortly after the preliminary examination, students will be expected to present orally a dissertation proposal to the entire department. The dissertation is written under the supervision of a three-member dissertation committee. Following acceptance of the dissertation by the committee, a final oral examination is conducted covering the dissertation and related fields.

A program brochure with more details is available on request. GRE General scores and TOEFL scores are required for admission.

Courses of Instruction

Primarily for Undergraduates

0010. Perspectives on Society
An introduction to the discipline of sociology from a macro perspective. Students explore how different sociological paradigms lead to contrasting understandings of capitalism, the state, class, race, and gender. In addition, students learn new ways to think about social problems in the United States, in the developing world, and in world history.

0020. Perspectives on Social Interaction: An Introduction to Social Psychology
An introduction to the discipline of sociology examining the individual in social situations. Explores the social development of the person, the development of interpersonal relationships, and the problems of integrating the individual and social system. For each area, the personal and situational factors that bear upon the issue are investigated. The objective is to deepen understanding of the behavior of people in a social context.
0130. **American Heritage: Democracy, Inequality, and Public Policy**
America professes equality but exhibits many forms of inequality in schools, race relations, and income. An examination of contrasting elements of American society and a review of the role social science plays in public debate. To illuminate the debates, key topics, such as welfare, immigration, affirmative action, and environmental equity are considered.

0150. **Economic Development and Social Change**
Emphasis on understanding the interrelations among economic, political, and cultural aspects of change in developing countries. The experience of currently developing nations is contrasted to that of nations which industrialized in the 19th century. Compares the different development strategies which have been adopted by currently developing nations and their consequences for social change.

0170. **The Family**
The state of the contemporary family generates debate within and beyond sociology. That debate is considered by examining different definitions of family, changing gender roles within the family, and the family in cross-cultural context. Special issues include new family forms, such as gay and lesbian families and biological and step-parenthood, as well as changing patterns of work and housework.

0200. **Population and Society**
Introduces some of the major social issues relating to population size, growth, and change in industrialized and developing nations. Mortality, fertility, and migration levels and trends are analyzed. Also considers contemporary issues, such as HIV/AIDS epidemic, population aging, U.S. immigration, and national and international population policy debates.

0210. **The City: An Introduction to Urban America**
What is special about urban life? How and why do cities differ? How has the way we think about the city changed over time? Can we solve urban problems? An interdisciplinary approach to cities in the U.S. and abroad: their history, physical design, spatial form, economy, government, subcultures, and social life.

0230. **Sex, Gender, and Society**
An introduction to the sociological study of sex and gender. More specifically, this course explores how sexuality is perceived, defined, and experienced in the context of society. How sexuality influences our lives, is reflected in social norms, attitudes and beliefs, through public and private policies and practices, and the social institutions is also investigated. This class also focuses on how prevalent gender differences really are in our society and examines the social construction of gender.

0300. **First Year Seminars**
These seminars, limited to freshmen only, are intended to introduce students to sociology (no background in sociology is required). Seminars provide students an opportunity to read, discuss, and produce sociological work in an environment that allows for significant interaction with the teaching faculty. These courses carry full credit in the sociology concentration program.

0300A. **Contrasting Societies**
Offers a cross-cultural examination of major social institutions and characteristics. Addresses questions such as how do families and intergenerational relations differ in various societies? How does the social safety net differ? What is the character of racial and ethnic relations? Integral is a comparison of the United States and other societies. Enrollment limited to 20 first year students. FYS
0300B. Environment and Society
Environmental sociology examines questions such as: How do people perceive and act on environmental problems? How has the environmental movement become an important part of our culture? How has government responded to environmental problems? How do laypeople and scientists differ in their approaches to risks and hazards? What are the physical and mental health affects of environmental contamination? Enrollment limited to 20 first year students. FYS

0300C. The Nature of Community
What is community? How can it best be organized and developed? How can communities contribute to social justice? This course investigates such questions by examining the nature of community life, rights and responsibilities of individuals in relation to communities, approaches to community service, and the roles of leadership, ritual, and narrative in community building. Enrollment limited to 20 first year students. FYS

0300D. Who Am I?
A study of self in contemporary society. We examine the structural and situational forces that shape the self and their impact on personal development, orientations to the world, and interpersonal behavior; we investigate the development of the self as a way of being in the world that makes everyday doings and, ultimately society, possible. For first year students only. Enrollment limited to 20 first year students. FYS

0300E. HIV/AIDS: Politics, Culture and Society
The current HIV/AIDS crisis is not merely medical. It also involves fundamental political, social and economic issues. Through extensive readings, class discussions and the writing of research papers, we will explore issues such as, what are the sociological barriers to changing sexual behavior? Why do some government, but not others, fail to commit resources to fight the disease? How was improved access to expensive drugs achieved? Instructor permission required. Enrollment limited to 20 first year students. FYS

0300F. Unequal From Birth: Child Health From a Social Perspective
Why are the children of immigrants so healthy? How do experiences in families, schools, neighborhoods and the health care system produce unequal health? What are the consequences of health for the economic and social welfare of individuals and populations? We will read, discuss and evaluate social science evidence to understand how social and economic inequalities produce and result from health inequalities among youth. Attention will be given to both industrialized and developing societies, and to potential ways that social policies can equalize children's health. This course is designed for first-year students and should appeal to a variety of interests, including social justice, medicine, research and law. Enrollment limited to 20 first year students. FYS

0300G. Populations in Danger
Examines populations confronted with dangerous social, economic, political, or health crises. These include small Amazon farmers in situations of environmental degradation, Catholics and Protestants in Northern Ireland in economic and social conflict and under peace agreement, Israelis under threat of random attack with neighbors who demand Israel's extinction, Palestinians under Israeli occupation with a largely powerless and corrupt Palestinian Authority, South Africans under HIV/AIDS pandemic, and undocumented Dominican immigrants in Providence. The seminar will include readings on these populations in danger, lectures by
internationally known experts, student presentations and class discussion, and three short essays. Enrollment limited to 20 first year students. FYS

For Undergraduates and Graduates

1010. Classical Sociological Theory
The course explores the work of the four founders of sociological thinking: Marx, Weber, Durkheim, and Simmel. We will read on the transition from feudalism to capitalism, the rise of the nation-state and bureaucracy, the division of labor in modern society, the fate of religion, on the mental reaction to big cities, and the experience of being a stranger. Through these readings, we will explore the promises and curses of modernity, as they are perceived within competing sociological frameworks. Open to Juniors and Seniors only.

1020. Methods of Social Research
This introduces students to the frameworks and methods of conducting sociological research -- from both a qualitative and quantitative perspective. The aim is that students develop the skills to ask and answer interesting and important questions about sociological phenomenon. The focus is on designing and executing research, from identifying an interesting question and reviewing the relevant literature, to collecting and analyzing data, to drawing reliable inferences and presenting meaningful results. There is a heavy focus on reading and discussing academic research and working in research teams. By the end of the semester students will complete their own research projects.

1030. Organizational Theories of the Public and Private Sectors
A general introduction to the study of organizations and their significance in society, and the differences and similarities between public and private sector organizations. Readings include both classic theories of organizations as well as contemporary studies of organizational life cycles, interorganizational and multinational structures, professional and managerial work, and trends toward downsizing, outsourcing, and virtual organizations.

1050. Methods of Research in Organizations
An introduction to the various methods used by social scientists to study organizations and to the skills needed by managers and administrators to soundly evaluate problems and assess performance within organizations. Explores both qualitative and quantitative methods. Students gain experience in developing research questions and linking those questions to appropriate research designs.

1060. Leadership in Organizations
The goal is mastery of the theoretical and practical aspects of leadership. In addition to seminars, readings and papers, students form teams. Each tackles a case where they interview the actors in the case, formulate advice on the leadership approach, appropriate, create a website and organize a class discussion.

1080. Groups in Organizations
Teamwork has become increasingly popular in organizations. Whether structured into the organizational makeup, or temporarily established around specific projects, teams are a critical competency of organizations. They are considered an effective performance unit, and expected to efficiently cope with the fast changes and demands of today's corporate environment. However, deriving the full benefits from teamwork requires correct management of its processes and dynamics. This course dwells on selected issues in team development, internal processes, and members' behavior, as well as management skills needed to effectively lead teams; therefore it can benefit anyone who works in a group, whether as a student or in the business world.
1090. **Theories of Organizational Dynamics and Decision Making**

This course focuses on the internal dynamics of organizations. It examines how individuals' attitudes, actions, and interactions make a difference for organizational processes and outcomes. Rather than focusing on organizational environments, structures, processes or outputs, this course is concerned with the way individuals inside organizations enact organizational structures, actions and performance through their attitudes, actions, and interactions. Topics include the management of effective teams and groups, leadership, power and influence, principles of human motivation, cognition and decision making, social identity and informal networks, organizational culture, and change.

1100. **Introductory Statistics for Social Research**

Introduction to descriptive and inferential statistics: measures of central tendencies and variability, sampling, tests of significance, correlation, and regression. Also includes the use of computers in data analysis. Knowledge of elementary algebra is assumed. Enrollment is limited to 144 students.

1114. **Law and Society**

A broad exploration of contemporary social-science scholarship on law and legal institutions, covering competing theoretical perspectives and drawing examples from diverse empirical settings. Lectures and discussions survey different ways in which social scientists study legal life, seeking contrasts and commonalities across the various perspectives. Coverage includes: Social-psychological models of rule-following and rule-breaking; social-structural linkages between law and the economy, stratification, and politics; and the dynamic relationship between law and social change—including the role of lawyers, judges and juries in giving law "independent causal significance." Strongly recommended: previous coursework in the social sciences.

1120. **Sample Surveys in Social Research**

This course covers the theory and practice of survey research. Topics include questionnaire design and formatting; sample design and selection; interviewing techniques; data base design and data entry; and elementary data analysis and report production. Students individually design and conduct a survey on a topic of their choice, and collectively conduct and analyze a sample survey of the Brown student population. Pre-requisite: SOC 1100 or equivalent.

1250. **Perceptions of Mental Illness**

Perceptions of mental illness form key parts of childhood socialization and adult belief systems. The mad artist, the frightening asylum, the mentally ill relative in the family closet—these are among the many perceptions of mental illness. This course draws on material from many fields—including sociological literature, fiction, biography, music, and art slides—but is organized around the need to understand mental illness in a broad social context.

1260. **Market Research in Public and Private Sectors**

Introduction to data and research methods for private and public sector organizations. Data used in market research include trends in the population of consumers, economic trends, trends within sectors and industries, analyses of product sales and services, and specific studies of products, promotional efforts, and consumer reactions. Emphasizes the use of demographic, GIS, and other available data.

1270. **Race, Class, and Ethnicity in the Modern World**

Applies sociological analysis to understand present and historical cases of ethnic and race relations and conflicts. Topics addressed are the social construction of race and ethnicity; historical processes of racialization; ethnic conflict and the nation state; and the linkages between race, class, and social mobility. Focuses on racial and ethnic relations in the U.S., but also has a strong international comparative component.
1310. Social Change in Latin America
Analyzes the development of modern Latin American societies, focusing on three interrelated processes: the formation of states, the formation of nations, and the formation of socioeconomic systems. The approach is macrosociological, looking at broad processes of structural and institutional change, and historical-comparative, analyzing and comparing how the three processes above developed historically in different Latin American countries.

1330. Remaking the City
Cities are being reshaped by immigration, economic restructuring, and other forces. This course reviews these changes from several perspectives, including the patterns and causes of change, the role of politics and public policy, and how different groups of people (by class, race, and national origin) manage under the new conditions. Readings will emphasize historical and cross-national comparisons.

1400. Political Sociology
Analyzes “American Exceptionalism” through constitutional and cultural controversies. Considers relations between the state and such institutions as the market, the family, associations and churches. Examines the effects of class, race, ethnicity, and gender on American politics.

1410. Aging and the Quality of Life
Provides a broad-based knowledge of the aging process and its impact on the quality of life of elders. Explores physical, psychological, social, cultural factors. Assesses different approaches to meeting needs of elders and providing high quality care and examines consequences of an aging population for social institutions. Prerequisites: SOC 0010 or 0020 and PHP 0070 or 0310, or permission of the instructor.

1430. Social Structure and Personal Development
The relationship between one's place in the social structure and one's own personal growth. Investigates the social aspects of individual growth and change throughout the life course. Also examines social factors involved in the failure to find a meaningful place for oneself in society.

1440. Intimate Violence
Explores sociological perspectives of violence in intimate relationships. Begins with theories of violence, including social learning theory, the frustration-aggression hypothesis, and violence as catharsis. Examines the contributions of gender, race status, media violence, and pornography to the issue. Investigates specific forms of intimate violence: sexual aggression (including “acquaintance rape”), partner abuse, elderly abuse, and child abuse.

1540. Human Needs and Social Services
The development of human services provided by societies for their members. A broad range of social welfare institutions are studied, including income maintenance, family policy, housing, and health. The organization of institutions and professions receives particular attention. Issues of class, race, and gender are covered. Alternative models of human services are discussed.

1550. Sociology of Medicine
The sociopolitical context within which health, illness, and medical care are defined. Sociological materials are used to examine current developments in the health care field. Emphasis on identifying social and political forces that impinge upon the delivery systems and tracing their impact on the roles of practitioners and the health of their clients.

1600. Comparative Development
An exploration of the economic, political, and social changes that constitute development. Both the historical experience of Europe and the contemporary Third World are considered. Major processes examined include state and nation-building, agricultural modernization,
colonialism, industrialization, revolution and socialism, authoritarianism and democracy, and socioeconomic distribution. Emphasis on the countries of Africa, Asia, and Latin America.

1620. *Globalization and Social Conflict*
Examines the effect globalization is having on the economies and societies of the developed and developing world. Focuses in particular on how new forms of global production and exchange are transforming the traditional role of the nation-state, creating new patterns of wealth distribution, and generating new sources of social conflict and political contestation.

1640. *Social Exclusion*
What does it mean to “belong”? Why are some groups rejected and others accepted? This course examines the mechanisms of social integration and segregation, theories of diversity and hierarchy, and policies to reduce exclusion and inequality.

1830, 1840. *Mattering and Dysfunctional Behavior in Adolescence*

1870. *Seminars*
Open to juniors, seniors, and graduate students with instructor’s consent. Note that some 2000-level seminars are open to qualified undergraduates and may count for concentration credit.

1970. *Individual Research Project*
Supervised reading or research. Specific program arranged in terms of the student’s individual needs and interests. Required of intensive concentrators; open to others only by written consent of the Chair of the department.

1930. *Social Entrepreneurship Capstone I*
This is the first in a two-semester course sequence designed as an option to fulfill the Integrative Senior Experience for seniors in the Organizational Studies track of COE. The course will build on concepts studied in SOC 1030 and 1090, and will lead students to synthesize knowledge at several levels: synthesizing across disciplines, across theoretical understanding and practical application, and across private and public sector experiences of entrepreneurship. Students will be organized into client-mentored teams to work on social entrepreneurship projects. Registration requires an application and instructor approval.

1940. *Social Entrepreneurship Capstone II*
Continuation of Semester 1, Social Entrepreneurship Capstone I: completion of client-mentored team projects begun in Semester 1. Registration requires an application and instructor approval if student did not complete Semester 1.

1950. *Senior Seminar*
Advanced research seminar for sociology concentrators in the second semester of work on an honors thesis. Participants examine methods for analyzing, writing, and presenting thesis material and apply peer review techniques in assessing each other’s work. Culminates in presentation of thesis to the department. Students doing independent study research may also participate with the instructor’s permission. Required for “honors” in sociology.

1970. *Individual Research Project*
Supervised reading or research. Specific program arranged in terms of the student's individual needs and interests. Required of intensive concentrators; open to others only by written consent of the Chair of the department. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Research seminar for students writing an honors thesis. Under the direction of a faculty advisor, students construct and carry out a research project. The written report of the research
is submitted to the advisor for honors consideration. A second reader selected by the thesis advisor certifies that the thesis is of honors quality. Please check Banner for the correct section number and CRN to use when registering for this course.

This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in SOC 1990 covers the entire year and is recorded as the final grade for both semesters.

Primarily for Graduates

2000. Theory and Research in Development
Explores a range of substantive debates in development by drawing on empirical and theoretical work from the disciplines of anthropology, economics, political science, and sociology. The course has four objectives: 1) to provide students with a broad understanding of current debates and research on development; 2) to explore a range of substantive issues including growth, inequality and democratization, 3) to develop interdisciplinary analytic skills that can be applied to concrete research questions; and 4) to foster cross-disciplinary conversation and debate.

2010. Multivariate Statistical Methods I
Introduction to probability, descriptive statistics and statistical inference. Coverage of the linear model, its assumptions and potential biases. Emphasis on hypothesis testing, model selection and interpretation through application with real data.

2020. Multivariate Statistical Methods II
This course is a graduate-level introduction to multivariate regression models for categorical and limited dependent variables. Subject matter includes modeling nominal and ordinal outcomes; truncated distributions; and selection processes. The course also reviews strategies for sample design; handling missing data and weighting in multivariate models. The course employs contemporary statistical software. Special emphasis is placed on model selection and interpretation. Prerequisite: SOC 2010

2040. Classical Sociological Theory
This is a graduate-level course requires students to engage in detailed analysis and critical review of sociological thought of the 19th and early 20th centuries. The class will introduce students to the critical thinking, methodological innovation, and historical imagination of sociological theory by reading the original texts of the forefathers of sociology, including Karl Marx, Max Weber, Emile Durkheim and others. Reserved for Graduate students.

2050. Contemporary Sociology
This course focuses on core themes in sociological theory and on developing theoretical skills by engaging in a number of texts by paradigmatic theorists, including Jurgen Habermas, Michel Foucault, Pierre Bourdieu, Edward Said, Timothy Mitchell, Ulrich Beck, and Zugmunt Bauman.

2060. Complex Organizations and Health Policy
Application of organizational theory to health care organizations, with special emphasis on the development of multi–organizational provider structures, health policy formulation and reform and the influence of regulations and technology on healthcare organization relationships. Written permission required for undergraduates.

2080. Principles of Population
An advanced introduction to theoretical and substantive issues in the social scientific study of population. Major areas within sociology are integrated with the study of population, including the comparative–historical analysis of development, family processes, social strat-
ification, ethnicity, ecological studies, and social policy. Primarily for first year Graduate students.

2090. Culture and Social Structure
An analysis of the interrelations of religious ideas, value patterns, and various forms of knowledge on the one hand, and of the societal structures and changes in organizations and roles on the other hand. Offered in alternate years.

2112. Practicum in Social Research
Covers the steps involved in social survey research, from site selection and questionnaire design all the way through data dissemination. It assumes a basic level of familiarity with social science research methods, particularly the logic of causal inference. We will discuss the linkage between research questions, site selection, and questionnaire design. We will also discuss in detail many of the practical considerations involved in fielding a survey, including balancing available funds and personnel with ideal sampling strategies and balancing the focus on a particular research topic with the responsibility to collect enough general information to make the data useful to a variety of users.

2130. Health, Illness and Medicine in Social Context
The influence of social and economic factors on the development of concepts of health and illness, on the cause and distribution of disease, and on responses to disease. Lay-professional disputes over disease identification and intervention. Implications of medicalization (the expanding social jurisdiction of medicine). The importance of the health care system in American society. Selected issues in recent health policy.

2150. Socioeconomic Analysis of Development
Compares economic and sociological perspectives on the problems of development. Topics include problems of conceptualization and measurement, entrepreneurship, capital accumulation, labor force utilization, income distribution, the role of the state, and the impact of international economic relations on developing countries. Prerequisite: a basic undergraduate micro-macro economics course or permission.

2200. Social Capital and Social Networks
Explores the consequences of social capital and social networks for economic development. Examines different types and combinations of social relations, network structures of these relations, institutional environments that impact them, and dynamic forms these social relations take. Multilevel development cases include urban ethnic entrepreneurship, rural Third World communities, business networks (financiers, firms), intranational regions, and state-society relations. Written permission required for undergraduates.

2210. Qualitative Methods
Emphasis on ethnographic field work through participant observation and interviews. Some attention to content analysis and visual sociology. Technical training in developing observational and interview guidelines, data collection, coding, transcript analysis, and computer applications. Strong emphasis on quality writing. Analysis of ethnographic research in book and article format. Attention to recent developments in ethnography, especially reflexivity and autoethnography.

2220. Advanced Quantitative Methods of Sociology Analysis
Analysis of limited variables (variables at a categorical or ordinal level of measurement). Topics include measures of association, contingency table analysis, binomial and multinomial logistic regression, ordered logistic regression, goodness-of-fit tests, and parameter interpretation. Prerequisite: SOC 2010.

2230. Techniques of Demographic Analysis
Procedures and techniques for the collection, evaluation, and analysis of demographic data; measures of population composition, fertility, morality, and migration; construction of life
tables, population and projections, population dynamics; responsible use of demographic methodology. Mandatory S/NC.

2240. Event History Analysis
An introduction to hazard models and their application to event history data in sociology. Topics include survival distributions, standard parametric models, discrete time approaches, partial likelihood models, and the introduction of covariates. Attention is given to practical application and the estimation of these models with software packages, where possible.

2260. Graduate Seminars

2280. Interdisciplinary Perspectives on Population
This course provides an introduction to interdisciplinary perspectives on population, drawing on insights from anthropology, economics and sociology in regards to population questions, theories, and methodologies. The focus is on three topical areas in population studies - understanding fertility change, HIV/AIDS, and population structure and process.

2300. Welfare States
This seminar examines the political sociology of welfare states and social policies in the United States and abroad. It reviews major theories accounting for the origins and subsequent development of welfare states, explains the “exceptional” nature of American social policy, and discusses recent welfare reforms in the US and Europe as well as welfare state prospects in less developed countries.

2310. Health Institutions and Professions
Structure and operation of health professions and health care institutions, both historically and at present. Emphasis on structural determinants of health—such as race, class, and gender differences in disease, mortality, environmental exposures, and health utilization—and the importance of nonmedical interventions in improving health status and reducing inequalities.

2320. Migration
A review of the major patterns and differentials in international and internal migration in cross-cultural perspective. Emphasizes theoretical models of migration. Offered in alternate years.

2350. Social Movements in Health
Study of social movements dealing with health and illness, with emphasis on contemporary movements such as women’s health, environmental justice, environmental health, breast cancer activism, asthma activism. Examination of historical formation, recruitment, links to other movements, lay-professional interactions, research ethics, effects on science and medicine, and impacts on society.

2360. Fertility
An introduction to the study of the social determinants of human fertility. Contemporary and historical populations are considered. Theories and frameworks used to guide fertility research are reviewed. Special topics include: fertility decision-making, gender and fertility, work and fertility, adolescent fertility, and population policies and family planning programs. Written permission required for undergraduates.

2430. Fields and Methods of Social Research
Introduction to strategies sociologists use to formulate theories and conduct methodologically sound research. Hypothesis formulation and research design; special emphasis on identifying causal mechanisms, techniques of operationalization, and choice of relevant comparisons.
2460. Sociology Paper Writing Seminar
This course is intended to improve writing skills that are especially relevant scholarship in Sociology. Key issues include the logical flow of ideas, awareness of the audience, clarity of expression, completeness, and (because these writing products will be peer reviewed) anticipation of potential reviewers' objections, and communicating what is new and interesting about the work. Students will be required to provide a draft of a paper or proposal that has potential to develop into a 25-35 page manuscript. The course is open to graduate students in sociology and to doctoral students in other programs by permission of the instructor. Enrollment limited to 12.

2500, 2510. Teaching Practicum in Sociology

2600. Comparative Historical Analysis
The seminar focuses on the application of theory and method in historical sociology. It will combine the reading of exemplary works, both classical and current, in comparative-historical sociology, with an exploration of historical methods that involves methodological readings but focuses on students use of archives in their own individual research. For graduate students only.

2610. Spatial Thinking in Social Science
This course reviews ways in which social scientists have incorporated concepts about space, place, and distance into their theories and research. Examples are drawn from many substantive areas, including the spatial organization of communities, spatial inequalities, and mobility. Separate laboratory meetings introduce methods of spatial analysis encountered in the course readings, including an introduction to GIS and related mapping tools.

2960. Special Topics in Sociology

2970. Preliminary Examination Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980, 2981. Reading and Research

2990. Thesis Preparation
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

South Asian Studies

John Emigh, Professor of Theatre, Speech and Dance; Andrew Foster, Professor of Economics; Lina M. Fruzzetti, Professor of Anthropology; Vernon Henderson, Professor of Economics; Ashok Koul, Senior Lecturer in Hindi-Urdu; Dore Levy, Professor, Comparative Literature and East Asian Studies; Marc Perlman, Associate Professor of Music; Peter Scharf, Senior Lecturer in Classics; James Van Cleve, Professor of Philosophy; Meera Viswanathan, Associate Professor of Comparative Literature and East Asian Studies; Donna M. Wulff, Associate Professor of Religious Studies.

Brown’s involvement with the Indian subcontinent dates back to the early nineteenth century, and interest in the area has been growing at the University for the last twenty-five years. In 1986, this interest culminated in the creation of an undergraduate concentration program in South Asian Studies. The concentration is designed to help students understand South Asia: its contemporary situation, its diverse cultures, its rich past, and its historic and
ongoing influence. Comprising the contemporary states of India, Pakistan, Nepal, Bhutan, Bangladesh, and Sri Lanka, South Asia affords an exceptionally rich and varied range of fields of study. Many of these fields are represented by members of the Brown faculty. This breadth is reflected in the flexibility students have in designing their concentration in accordance with their interests.

Undergraduate Program
For a complete description of the standard concentration program leading to the A.B. degree, please visit http://www.brown.edu/Administration/Registrar/concentration.html.

Center for Statistical Sciences
The Brown University Center for Statistical Sciences (CSS) was founded in 1995 to foster research and statistical education at Brown Medical School and the University at large. Center activity and personnel have grown over the years to the present configuration of over nearly forty faculty members, staff biostatisticians, graduate student assistants, and administrative and computing support personnel. The Center is located at 121 S. Main Street and has state-of-the-art computing facilities and networking infrastructure.

Research: CSS faculty, students, and staff conduct methodologic research in a number of areas of biostatistics, including statistical methods for the assessment of diagnostic tests and biomarkers, longitudinal data analysis with missing data, causal inference, time series analysis, spatial and network data analysis, neurosciences, health services and outcomes research, and meta-analysis. The Center also serves as the biostatistics core for both national and local biomedical research projects. Owing to its expertise in the evaluation of diagnostic tests and markers, CSS hosts the Biostatistics Center of the American College of Radiology Imaging Network (ACRIN), a nationwide collaborative funded by the National Cancer Institute to conduct multi-center studies of imaging modalities for cancer screening, diagnosis, and disease management. CSS is also home to the biostatistics cores of the Brown/Lifespan/Tufts Center for AIDS Research, and several other projects in areas including behavioral medicine, diagnostic test evaluation, and health services and outcomes research.

Education: Center faculty developed the Graduate Program in Biostatistics, which leads to ScM and PhD degrees in Biostatistics and also offers courses to broad student audiences (http://www.stat.brown.edu/Grad/). Center faculty also developed the Brown undergraduate concentration in Statistics, in collaboration with departments across the campus (http://www.stat.brown.edu/Education.aspx). The Center organizes the Brown Statistics Seminar, which is held on Monday afternoons. The seminar features talks on current developments in statistical methodology and is open to the entire Brown community (http://www.stat.brown.edu/Seminars.aspx). In addition, Center faculty and staff organize methods working groups, hold ad-hoc seminars, and offer short courses for audiences from Brown and beyond.

Director: Constantine Gatsonis, Ph.D., Professor of Medical Science and Applied Mathematics. Core faculty: Professor: Joseph Hogan; Associate Professors Hernando Ombao, George Papandonatos (research); Assistant Professors: Fenghai Duan (research), Ilana Gareen (Research), Eunhee Kim, Crystal Linkletter, Tao Liu (Research), Zhijin Wu, and Zheng Zhang (Research).

For additional information please visit the Center’s webpage at: http://www.stat.brown.edu/
The Department of Theatre Arts and Performance Studies is the intellectual and artistic center at Brown for faculty and students interested in the aesthetic, historical, literary, practical and theoretical explorations of performance in global perspective -- theatre, dance, speech, performance art, and performative "roles" in everyday life. The Department’s distinguished faculty consists of leading scholars and artists who are at the forefront in researching and teaching new and innovative methodologies produced by the intersection of the study of craft and the study of history and theory.

Every season, the Department mounts five theatre productions and three dance productions. Students are active in every aspect of production -- learning the rigors of craft through participation in production as well as through class work in acting and directing, dance, playwriting, movement, history, theory, design, technical theatre, intermedial performance, and performance ethnography.

A Doctoral Program in Theatre and Performance Studies, an MFA Program in Playwriting, and the Brown/Trinity MFA Program in Acting and Directing, all augment our thriving undergraduate program. Rites and Reasons Theatre in Africana Studies, and myriad student theatre, dance and performance groups on campus contribute to a vital educational environment for the study of performance.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit: http://www.brown.edu/Administration/Registrar/concentration.html.

Graduate Programs

For a complete description of all graduate programs and requirements please visit: the Department website at: http://brown.edu/Departments/Theatre_Speech_Dance/grad/.

Brown/Trinity MFA Programs in Acting and Directing; Consortium faculty: Stephen Berenson (Director of the MFA Programs), Curt Columbus (Artistic Director of Trinity Repertory Company), Thom Jones (Head of Voice and Speech), Brian McElney (Head of the Brown/Trinity MFA in Acting), Brian Mertes (Head of the Brown/Trinity MFA in Directing), Daniel Stein (Head Movement and Physical Acting).

Courses of Instruction

Primarily for Undergraduates

0030, Introduction to Acting and Directing

Explores basic acting/directing concepts from a variety of perspectives including the use of the actor's imagination/impulsivity in the creation of truthful, dramatic performance; the
body, as a way of knowing and communicating knowledge; and the voice, as a means of discovering and revealing emotion/thought. Areas of emphasis vary with instructor. First year students only. Please attend the introductory meeting for the Theatre, Speech and Dance Department for interview information. Interviews are conducted in the beginning of September after which placements for all sections in both fall and spring semesters will be decided. Applicants who miss the first interviews should contact the professor to schedule another time. Interview and written permission required. Enrollment limited to 18 first year students. C. M. CRAWFORD and STAFF.

0060. **Introduction to Playwriting Workshop**
A workshop for students with little or no previous playwriting experience: practicum and theory in various playwriting styles and techniques. Weekly writing assignments and analyses, and development of a major play. Playwriting courses are also available in the Department of English. Instructor permission required. E. TERRY-MORGAN.

0100. **Playwriting I**
A workshop for students who have little or no previous experience in writing plays. Students will be introduced to a variety of technical and imaginative considerations through exercises, readings and discussions. Course is not open to those who have taken Advanced Playwriting (TSDA 1500, formerly LITR 1010C). Enrollment is limited to 17 undergraduates per section. A limited number of spaces are reserved for incoming and transfer students. S/NC.

0200. **Playwriting II**
Emphasis is placed on dramatic conventions, such as monologues, dialogue, mise-en-scene and time. Writing includes frequent exercises in various theatrical approaches. This course is limited to undergraduate students. Instructor permission is required. Prerequisite: TSDA 0100 (formerly LITR 0110C). All writing samples should be sent by the first day of class electronically to Erik_Ehn@Brown.edu with "PW II Sample" in the subject line. Permission will be given once the manuscripts have been reviewed. S/NC. E. EHNI AND STAFF.

0220. **Persuasive Communication**
Provides an introduction to public speaking, and helps students develop confidence in public speaking through the presentation of persuasive speeches. Primarily for seniors. Limited to 18. Instructor's permission required. No permission will be given during pre-registration; interested students should sign up well in advance on the TSDA 0220 waitlist (form is at http://www.brown.edu/Departments/Theatre_Speech_Dance/) and attend the first day of class. Attendance is mandatory. Enrollment is limited to 18. The application/waitlist process does not apply to students registering for the Summer term through the Office of Continuing Education. B. TANNENBAUM.

0230. **Acting**
Focus on elements of dramatic analysis and interpretation as applied to the art of acting, and, by extension, directing. Monologues, scene study, and improvisation are basis for comment on individual problems. Reading of dramatic texts and theory. Substantial scene rehearsal commitment necessary. Attendance mandatory. Not open to first-year students. Enrollment limited to 20. L. MARSHALL AND STAFF.

0250. **Introduction to Technical Theatre and Production**
This course is an introduction to the basic principles of stagecraft, lighting and sound technology and the different elements of theatrical design. Instructor permission required. Enrollment limited to 15.

0260. **Stage Lighting**
This course is an introduction to stage lighting. Enrollment limited to 20.
0270. Clothing and the Human Experience: Costume History
A survey of the history and concepts of clothing with a strong emphasis on the art, artists, and political-social movements influencing each major period. Aims to give the theatre designer an increased knowledge of research approaches and resources. The application of historical materials to stage-worthy costumes are discussed. Lab required. Written permission required.

0280. Costume Design and the Theatre
Introduction to the various elements of costume design in all performance forms and media. Examines the role of the costume designer in relation to other theatre artists. Stresses research techniques and their application. Lab required. Instructor permission required.

0310. Beginning Modern Dance
Introduction to the art of movement. Focuses on building a common vocabulary based on ballet, vernacular forms, improvisation, Laban movement analysis, American modern dance, and the body therapies. Individual work is explored. One and one-half hours of class, four days a week. Enrollment limited to 40. S/NC. J. A. STRANDBERG and M. R. BACH-COULIBALY.

0320. Dance Composition
Focuses on building the individual’s creative voice. A movement vocabulary is developed from Western techniques (ballet, American modern dance, Laban/Bartenieff movement analysis, vernacular forms, space-harmony/movement physics, and the body therapies) along with group improvisations and collaboration with artists in other disciplines. Enrollment limited to 40. S/NC. J. A. STRANDBERG.

0330. Mande Dance, Music and Culture
Examines, by theory and praxis, the techniques and philosophy of dance in Mande culture. Each dance is taught as a highly codified language, with detailed phrasing structures, focus, center, variations of intonation, and qualitative choice. The specific ethnicities are studied in relationship to their music and dance variations. Participants must be physically fit. Enrollment limited to 50. S/NC. M. R. BACH-COULIBALY.

0410. Persuasion and Public Controversy
Examines the role of persuasion in defining controversial public issues and producing social agreements and judgments. Includes units on classical, symbolic, and institutional perspectives on persuasion. The overall goal is to improve our critical consumption of public argumentation. No background in argument is required or assumed. Preference given to first- and second-year students.

0500. Topics

0500A. Introduction to Dramaturgy
The class will focus on the practice, theory and history of theatrical dramaturgy. Dramatic action, stage storytelling craft and time design will be examined while also exploring and establishing alternative theories of perception and performance organization. Special attention will be paid to the dramaturg’s relationship to the making of new work.

0500D. Surveillance, Performance, and Culture
This course will introduce students to a range of social, political and artistic applications of surveillance technologies in the 20th and 21st centuries. Through a mix of theoretical and practical explorations, students will examine surveillance technologies as tools of socio-political discipline as well as tools of performance in social and artistic frameworks. From artists using technologies of surveillance to create interactive performance and installation works, such as The Surveillance
Camera Players, Institute for Applied Autonomy and the Shunt Collective, to social software systems such as Facebook we will explore the ways in which we have culturally embraced and responded to techniques and technologies of surveillance in our aesthetics and everyday lives.

0800. First Year Seminar
Enrollment limited to 20 first-year students.

0800A. 21st Century American Drama
This course is designed to familiarize students with contemporary American playwriting from 2000-2007. We will explore how these plays and performances reflect our current moment. Playwrights may include Jorge Cortinas, Sara Ruhl, Tony Kushner, Juliana Francis, Young Jean Lee and Carl Hancock Rux.

0930. The Actor's Instrument
Advanced vocal and physical technique for performers. Development of the actor's voice and body with the goal of increasing their effective use as the means of artistic expression on the stage and, by extension, in the media. Emphasis will vary. Course may be repeated once for credit, with permission of TSDA concentration advisor. Prerequisite: TSDA 0230. Enrollment limited to 16. S/NC only.

0930A. The Actor's Instrument: Voice
A complete and well-seasoned actor has the ability to perform with specificity and ease, both vocally and physically. Specificity comes from an integration of speech and movement technique. Ease is only possible when a mastery of technical skills reaches the point where the actor can integrate them without loss of spontaneity. This is a lifelong process that begins by learning the fundamentals of technique and the continual refinement of them on a personal level. The goal of this class is to give the student the fundamental techniques of voice and speech in relation to the body. In the event of over subscription, student will be enrolled on the basis of seniority. Prerequisite: TSDA0230. Enrollment limited to 16. S/NC only.

0930B. The Actor's Instrument: Improvisation
This course is designed to help students explore the development of relationships in theatrical space without the benefit (or confinement) of a script. By cultivating and developing basic performance skills including spontaneity, self-awareness, creative use of the body and mind, access to the imagination, and collaborativity, this course has applications for actors and other performers interested in all types of performance as well as those interested in improvised performance specifically. One of the intentions of this course is to generate truthful, creative, and collaborative play, which can lead naturally to material that is funny or humorous as an organic outcome of the moment. However, "comedy" or "improv comedy," which has a different set of intentions altogether, will be strongly discouraged in this course. "Getting laughs," as a goal in and of itself, manufactures unproductive pressure to "be clever" or to "succeed" in ways that are inconsistent with truly creative engagement.

0930C. The Actor's Instrument: Stage Movement for Actors and Directors
Students will be engaged in a process of exploration that centers on the physical relationship of the actor to the physical reality of the stage including sound, props and costumes. Work with a broad spectrum of contemporary and classic movement theories/approaches to constructing performance. Enrollment limited to 18.
0960. **Musical Theatre Topics**
Individual topics may include: lyric writing, song writing, construction of libretti, and musical theatre production. Course may be repeated for credit, with permission of TSDA concentration advisor. Enrollment limited to 12. Permission of instructor required. S/NC only.

0960A. **Musical Theatre Songwriting**
A practical study in the creation of songs for the musical theatre. Students enrolled in this course will develop the skills necessary to write the music and lyrics for pieces intended for use in dramatic works. American and international musical theatre writers from the last eighty years will be studied and analyzed. Those enrolled may choose a focus of composition, lyric writing, or both. They will present and perform (or arrange performances of) new material (and rewritten material) each week to be examined by the class, culminating in a cabaret of new works. While beginners are encouraged to join, this is not a music theory course, and composers are expected to have a basic knowledge of theory (or self-taught skills).

0960B. **Musical Theatre Writing Workshop**
A practical study in the creation of new works for the American musical theatre. Students enrolled in this course will learn the craft of musical theatre writing, and will be able to workshop their material for their peers. Musicals from the last eighty years will be studied and analyzed. Those enrolled may choose a focus of composition, lyric writing, playwriting, or any combination thereof. Collaborators are welcome to work together in this class, and those looking for potential collaborators will be paired with other students if they so desire. While amateur composers are encouraged to join, this is not a music theory course, and composers are expected to have a basic knowledge of theory (or self-taught skills).

0960C. **The History of Musical Theatre**
A study of the history of American Musical Theatre from Tin Pan Alley to today's Broadway musicals. Students enrolled will study primary-source libretti, musical scores and interviews, as well as historical articles and essays on musical theatre and society. Special emphasis will be placed on musicals and their implication in helping to shape and define American social history, including topics such as national identity, race relations, and the treatment of minorities.

For Undergraduates and Graduates

1000. **Intermediate Dance**
Designed to expand the student's knowledge of and proficiency in dance as an art form. Mainly a studio course, but selected readings, papers, critiques, and field trips are important components of the course. Prerequisite: TSDA 0310 or the equivalent is required. Enrollment limited to 40. S/NC. J. A. STRANDBERG and M. R. BACH-COULIBALY.

1040. **Interpersonal Communication**
This course introduces principles of interpersonal communication by using dyads and small groups. Topics include: the self in interpersonal communication, verbal messages, nonverbal messages, message reception, and interpersonal relationships. Attendance mandatory.

1100. **Theatre Management**
An overview of the process of theatrical performance from script selection to closing, with emphasis on production and stage management. In addition, the role of front-of-house operations and the various theatrical unions are studied as components of different types of theatre organizations, such as regional theatres, opera companies, Broadway shows, and university theatres. Prerequisite: TSDA 0250.
1160. *Style and Performance*
For qualified sophomores, juniors, and seniors who offer TSDA 0230 as a prerequisite. Period scene study and monologues are basis for comment on individual progress in acting/directing. Extensive reading of dramatic texts and historic research materials. Work in voice, movement, dialect, and poetic text. Substantial commitment necessary for preparation of class scenes. Attendance mandatory. Limited to 20. Instructor's permission required. No permissions will be given during pre-registration; interested students should sign up on the TSDA 1160 waitlist (form is at http://www.brown.edu/Departments/Theatre_Speech_Dance/) and attend the first day of class. S/NC. L. MARSHALL.

1210. *Solo Performance*
An exploration of the challenges and rewards of performing solo. Students research, write, and perform a one-person show. Other projects may include performance art, stand-up comedy, and monologuing. Substantial time commitment. Attendance mandatory. For advanced students with appropriate background and experience. Submit proposal and resume in the fall. For guidelines and information contact Lowry_Marshall@brown.edu. Permission required in advance. Enrollment limited to 20. L. MARSHALL.

1220. *The Development of the American Theatre from Colonial Times to 1915*
Concentrates on theatre production, actors, business management, architectural styles and changes, styles of acting, and selected representative plays. Suggested for concentrators in theatre arts, American civilization, and American literature.

1230. *Performance Theory: Ritual, Play and Drama in Context*
What is ritual? What is play? What is nemesis? What is an act? This course offers an introduction to basic texts in Performance Studies applied to the study of ancient and medieval theatre in global perspective. Students will learn fundamentals of performance theory while studying the histories of ancient Greek and Roman theatre, Medieval European ritual, Indian Sanskrit drama and theatrical form, Yoruban traditional performance, and modes of cross-cultural comparison. R. C. SCHNEIDER.

1240. *Performance Historiography and Theatre History*
This course will provide an introduction to performance history and historiography by concentrating on analysis of dramatic texts, theatrical events, festival performances and "performative" state and religious ceremonies from 1500-1850. We will explore incidents in Asia, the Americas and Europe as related to state consolidation, colonization, incipient nationalism(s), urbanization, cultural negotiation, and the representational practices they enacted. Enrollment limited to 35. P. YBARRA.

1250. *Twentieth-Century Western Theatre and Performance*
The study of key figures and movements in 20th-century Western theatre and performance, from approximately 1870 to 2000. We explore naturalism and alternative strategies to realism such as symbolism, futurism, surrealism and constructivism, along with myriad figures in the modern and postmodern "avant-garde."

1270. *Non-Western Theatre and Performance*
Considers examples of festival theatre that deploy masks or strategies related to masking and asks why transformative play is so important in these holiday performances. Examples include: New Guinean pay-back ceremonies, civic festivals of Bali and ancient Greece, Yoruba Gelede festivals, and contemporary passion plays in Iran, India, and Vermont. Extensive use of films, slides, audio, and video.

1280. *Topics in Theatre Studies*
1280A. *Acting for the Camera*
Introduces students to theories of acting for camera to develop the practical skills required for film and television performance. Attention will be paid to the ways in
which stage techniques can be adapted for use in media performance. Students will prepare scenes and monologue material written specifically for film and television. L. MARSHALL.

1280B. The Creative Ensemble
Develops skills in acting, improvisation, directing, teaching, and writing. Through research, performance and collaboration, participants explore individual/group talents and creative passions. Ensemble-created final performance project. Prerequisite: TSDA 0230 or equivalent.

1280C. Advanced Stage Lighting
1280F. Introduction to Set Design
A survey of the history and concepts of scenic design with emphasis on the art, artists and the social/political movements influencing the major period. Aims to give the designer a foundation in research approaches. Also to provide an examination of stylistic approaches and innovations in the context of the historical period.

1280H. Modern Asian Performance
This course studies contemporary Asian performance with a special focus on modernity. Students are encouraged to move beyond a Western historiography toward an understanding of alternative modernities. This course explores most nations in the Asian continent and covers wide theoretical and aesthetic ground; from performances of healing to revolutionary theatre to diasporic utterances. Essentialized and Orientalist notions are problematized. This course aims to familiarize students with different historical instances of Asian performances, while at the same time enabling critical thinking about the relation between theory and practice by paying close attention to the questions of gender, identity, aesthetics and politics.

1280J. Introduction to Dramaturgy
Seminar in the theory and practice of theatrical dramaturgy, with a particular emphasis on new play development in the contemporary American theatre. Examines basic historical theory, contemporary theatrical texts, production dramaturgy, and the role of the dramaturg in the rehearsal and development process.

1280L. Modern American Drama
Modern American Drama is a broad overview of the field, from O'Neill through Kushner and Parks. Particular attention will be paid to the theatrical, social and performance context of the plays under study, although the plays themselves will be the only assigned texts.

1280N. New Theories for a Baroque Stage
This course re-conceptualizes and re-models seventeenth-century “baroque” theatricality through the lenses of Russian formalist theory, phenomenology, (post-)surrealist literature and objects, Oulipian literature of constraints, Deleuzian theory, ontological-hysteric theatre, film, etc. S. GOLUB.

1280O. New Works/World Traditions: Innovation and Tradition
From research to performance, develops new dance theater pieces that are rooted in Mande dance and American dance. Includes study with Mande, American, and European artists in building a body of repertory for the concert stage. May be repeated for credit. By audition. S/NC. M. R. BACH-COULIBALY.
1280T. Contemporary Mande Performance
This course examines the influences of contemporary society upon traditional Mande Performance. Equal emphasis will be given to the theory and practice of embodied performance as it responds to selected music traditions, oral literatures, and aesthetic traditions. Films, readings, guest lectures and collaborative research projects will help to facilitate a deeper understanding of contemporary Mande society and its artistic production. Students MUST register for a conference and a lecture section. M. R. BACH-COULIBALY.

1280V. Theatre and Conquest in the Americas, from Cortes to NAFTA
Explores the intimate relationship between theatre and conquest in the Americas as contained in missionary accounts, plays, performances and visual art from Cortés arrival to the present. Students will analyze plays and performances that stage the Spanish Conquest, consider the theatrical procedures of the conquest and examine theatrical representation as a methodology of conquest in the Americas. Written permission required. P. YBARRA.

1280Y. Issues in Performance Studies
Introduces students to a wide range of performance practices. Instead of following a linear trajectory of development, this course embraces wide regional, political and historical instances of performance to provide a global lexicon of aesthetic practice. Audio-visual media are extensively used throughout the course. Questions about how scholarship can enrich artistic practice are also explored.

1281A. Director/Designer Collaborative Studio
Students will explore the relationship between director and designer within the production process. The main objective is to improve collaboration and production output by learning the language, tools, and skills involved in each area of discipline so as to enhance creative output. Enrollment limited to 17 students.

1281B. Postdramatic Theatre (and Beyond)
This course offers a close look at avant-garde theatre practice in the German speaking countries since the 1990s and will introduce current tendencies in theorizing performance as that theory relates to the practice. Starting from the notion of "Postdramatic Theatre" (H.T. Lehmann), we will discuss the politics of (re-)presentation and spectatorship, analyzing as well as experimenting with their implications for performance, for writing for performance, and for writing about performance. (In English).

1281C. Memory Plays: Theatricality and Time
This course will read philosophy and critical theory about memory and time beside dramatic works and performance art that take up the topic of history, repetition, and temporality in live art. E. EHN.

1281J. Farce
This is a physical acting class exploring farce and comedic improvisation in high and low art and performance. The class will involve an investigation of the work of Moliere and other playwrights inspired by Commedia dell'Arte, classical and contemporary. We will examine texts, excavate comedy, explore extension of gesture and technique of exaggeration and improvisation.

1281K New Media Theory and Composition: Performing With Media
This studio course is for choreographers, dancers, directors, film-makers, performance artists, designers or anyone interested in the collision between New Media (primarily
projection and sound environments) and theatrical performance (e.g. dance & theater). Through the creation of new works we will explore practical issues, compositional strategies, and aesthetic aspects of hybrid performance. Beginning with a directed collaborative project, students will then create independent multimedia performance works. Though some instruction in media applications will be offered, this is primarily a class for students wishing to explore aesthetic and performative issues rather than in-depth study of technology.
S/NC only.

1281L. Critical/Performance Ethnography
This course introduces students to key theories and methods of critical/performance ethnography. Because critical ethnography concerns the rhetorical, ethical, and political effects of what ethnographers do, performance is a fundamental dynamic in this seminar. We will explore performance as theory, method, event, and everyday occurrence. We will examine the interpenetrating relationships among performance, ethnography, economy, and culture. Since culture is made visible to us through its representations, e.g., its structures, dramas, symbols, metaphors, habits, everyday practices, landscapes, language patterns, etc., performance becomes a primary point of entry and inquiry where we may be/act, see/hear, feel/sense, and think/evaluate within an Other world and our own. The aim of this seminar then is to come to understand what is at stake in the practice of gathering and telling stories - the core of the ethnographer's trade.

1281M. Introduction to Costume Construction
An introduction to the study and practice of core costume construction skills. Topics include basic machine, hand sewing and patterning techniques.

1281N. Practice: Exploring Contemplative Practice in Creative Process
An experimental dialogue between Buddhist and Catholic Contemplative Practices as a ground for creating performance works; an interdisciplinary/interfaith/inter-institutional exploration. Students from both Brown and RISD will be participating. Instructor permission is required and will be granted on the basis of a) an interview with one of the teachers (which may be scheduled at the time of the first session), and b) a short statement of goals and intentions (reasons for taking the course) not to exceed one page, due to Erik_Ehn@brown.edu prior to the first session. Enrollment limited to 12. E. EHN.

1290. Advanced Costume Design
Costume design and rendering approaches to various genres of performing arts, including opera, musicals, and dance. Designed for the serious student of theatrical design. Advanced work on rendering emphasizing character, practicality, line, form, and color. Lab required.

1300. Advanced Scenic Design and Technical Production
The examination of the working relationship between designer and director. An emphasis on the design abilities needed to communicate varied visual approaches. Developing the creative, theatrical vocabulary needed to turn a director's vision into a fully articulated set design. A substantial amount of plays will be read and researched. Drafting and model rendering techniques will be applied. Instructor approval required prior to registration.

1310. Advanced Modern Dance
Designed for dancers who have attained an advanced level in any dance technique. The purpose is to help such dancers come to understand both intellectually and kinesthetically the diversity of one of the few indigenous American art forms: modern dance. Enrollment limited to 40. S/NC. J. A. STRANDBERG and M. R. BACH-COULIBALY.
1320. **Choreography**
Designed for those who have had some experience in composition and would like to work, under supervision, on making dances. Emphasizes making full-length dances for small and large groups and demands a sophisticated use of space, dynamics, and music. Further emphasis on viewing and interpreting classic and contemporary works from a choreographic viewpoint. S/NC. J. A. STRANDBERG.

1330. **Dance History: The 20th Century**
An exploration of the major figures and trends in modern dance. While the main focus of the course is on American Dance, attention is given to earlier European and other dance traditions that have contributed to the American dance heritage. May be of particular interest to Americanists, art historians, dancers, and theatre majors. J. A. STRANDBERG.

1340. **Dance Styles**
This course focuses on the diverse styles, techniques and movement theories of Modern Dance. The students will practice the techniques and styles and will also study biographical material, view films, and attend live performances when possible. Enrollment limited to 40. S/NC. J. A. STRANDBERG and M. R. BACH-COULIBALY.

1350, 1360. **Dance Performance and Repertory**
Half course credit each semester. A study of dance repertory through commissioned new works, reconstruction, coaching, rehearsal, and performance. Guest artists and consultants from the American Dance Legacy Institute. Enrollment is by audition. Limited to skilled dancers. Instructor permission required. S/NC.

This is a year-long course whose first semester grade is normally a temporary one. Neither semester may be elected independently without special written permission. The final grade submitted at the end of the course work in TSDA 1360 covers the entire year and is recorded as the final grade for both semesters. J. A. STRANDBERG.

1380. **Mise en Scene**
A reconstruction of the idea of a stage and a frame on the evidence of theory, novels, plays, and especially films-the seen and the unseen-using the organizing strategies of mystery. Art's "impossible" brokering of the real and the representational in a dialectic of space is considered from a multiplicity of perspectives in diverse works. Fall enrollment limited to 45. Instructor permission required. S. GOLUB.

1400. **Advanced Performance**
An investigation into abstract and nonlinear modes of performance, working from fragmentary and recombined narrative, dramatic, and found sources. Seeks to evolve a conceptual approach to performance of the individual actor-director-writer through supervised and independent exercises and projects. Prerequisite: TSDA 0230. For juniors and especially seniors. Enrollment limited to 20. S/NC. S. GOLUB.

1430. **Russian Theatre and Drama**
An overview of Russian theatre and drama from the 18th century to the late 20th century. Emphasis on plays as texts and historical documents, and on theatrical conditions, productions, and innovations. All readings are in English. Russian area studies concentrators are encouraged to enroll. Instructor permission required. S. GOLUB.

1440. **Seminar on Selected Figures in Theatre and Drama**
May be repeated for credit.

1500. **Advanced Playwriting**
The purpose is to progress through a series of writing exercises working through purgation, illumination and unity. Course work includes a body of exercises, significant writing, workshop conversations and conferences. Advanced Workshops provide students with a forum for extended practice of the art of writing. Students must submit writing samples by
the first day of classes electronically by sending to Erik_Ehn@Brown.edu. Please list "Advanced PW" in subject heading. Permission will be issued by the instructor as soon as the manuscripts are reviewed. S/NC.

1500A. Advanced Playwriting: Guhahamuka
Guhahamuka is a Kinyarwanda word meaning "breathlessness," sometimes applied to the wordlessness that befalls survivors of trauma. We will progress through a series of graduated exercises designed to work-out the fundamentals of writing for the live encounter. Emphasis will be on the uses of testimony and language that pushes into spaces where language doesn't fit, doesn't belong, fails, and then converts itself to different energies. How a writer's technique images spiritual practice and avails of the useful impossibilities of incarnation and transcendence. See TSDA 1500 description for writing sample instructions. E. EHN.

1520. Seminar in Theatre Arts
Seminar designed primarily for senior theatre arts concentrators, required during Semester VII. Topics focus on career planning and theatre arts subjects not dealt with in other courses. Enrollment limited to 25.

1610. Political Theatre of the Americas
This course will explore the political theatre and performance in the Americas (Latin America, the US and Canada). The course employs the term political theatre in a broad sense, but will be concerned primarily with the use of performance in indigenous rights, queer rights, and gender equity campaigns; anti-globalization, anti-consumerist, anti-militarization and anti-corruption movements (including election fraud) and general critiques of socioeconomic inequity. We will examine the strategies used by actors and participants in theatrical performances, performance art, and political protests that use the tools of performance so as to explore the rich relationship between politics and performances. There are no prerequisites, but one course in either Latin American Studies or Theatre and Performance Studies is recommended. The course has no enrollment limit.

1630. Performativity and the Body: Staging Gender, Staging Race
Bodies come in many shapes, colors, and sizes. In performances practices, the body is an instrument sometimes used to "talk back" to the ways shapes, colors, and sizes are haunted by histories of racialization, sexual discrimination, and other biases. This class explores various feminist and race critical theories in tandem with work of performance artists, visual artists, and theatre artists.

1640. Theatre and Conquest in Greater Mexico: From Cortes to NAFTA
Explores the intimate relationship between theatre and conquest in the Americas as contained in missionary accounts, plays, performances and visual art from Cortés arrival to the present. Students will analyze plays and performances that stage the Spanish Conquest, consider the theatrical procedures of the conquest and examine theatrical representation as a methodology of conquest in the Americas.

1650. 21st Century American Drama
Course is designed to familiarize students with contemporary American playwriting from 2000-2005. We will explore how these plays reflect our current moment with attention to conceptions of gender, sexuality, national identity, trauma and memory. Playwrights may include Jorge Cortinas, Sarah Ruhl, Tony Kushner, Juliana Francis, Sabina Berman, and Carl Hancock Rux.

1670. Latino/a Theatre and Performance
This course will be an introduction to Latino/a theatre concentrating on the following themes: borders, diaspora and exile, political and personal identities, sexuality, gender and
violence, and Latino re-imagination of U.S. and Latin history. We will read Chicano/a, Cuban American and Nuyorican drama and performance art. No prerequisites.

1690. Performance, Art and Everyday Life
Enrollment limited to 16.

1970. Independent Reading and Research
Intensive reading and research on selected topics arranged in terms of special needs and interests of the student. A written proposal must be submitted to the instructor and the chair of the theatre arts department before the project can be approved. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

1990. Senior Honors Thesis Preparation
To be taken by all students accepted into the theatre arts honors program. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

Primarily for Graduates

2100. Seminar in Dramatic and Theatrical Theory
Theory of drama from Greeks to Grotowski. Raises questions that are crucial to thinking about directing and acting in the theatre—the nature of theatrical space, political and aesthetic implications of mimesis and narrative form, and the role of theatre in society. Enrollment limited to 20.

2120. Revolution as a Work of Art
A study of Russian revolutionary culture and new personhood, ca. 1905-1930, with readings from Russian fiction, philosophy, art criticism, dramatic and political theory, and cultural and theatre history. Topics include the revolution of the spirit, the culture of the future, iconography and spectacle, charismatic authority, and revolutionary terror. For graduate students and qualified juniors and seniors. All readings are in English. Those who can may read some materials in Russian. Enrollment limited to 20.

2200. Graduate Seminar in Theatre History

2200A. Abstraction and Resistance
A study of the uses of abstraction in modernist and postmodern theatre and drama, film, painting, and narrative fiction and of the engagement of resistance as a performative strategy for conceptualizing such nominally unframed and alogical texts. The works of selected theatre directors and playwrights, philosophers and theorists, novelists, filmmakers, and artists are examined and discussed.

2200E. Historiography

2200F. Archive Culture, Memory, and Repetition
If live performance is ephemeral, what is its function in archive culture? Theatre, visual culture, orature, and "performatives" will be explored for temporality, memory, and remains. Enrollment limited to 20. Written permission required. S/NC

2310. Graduate Playwriting I
With Word as the bodying forth into social reality of original experience, the structures, purposes and ethical risks of writing for performance are examined; experienced through the reading of each other's works-in-progress, through the reading of essays and in session exercises. Graduate Workshop in Playwriting ordinarily limited to Graduate students; however, on occasion, undergraduates will be admitted with permission of the instructor. Writing samples must be submitted electronically by the first day of class to
Erik_Ehn@Brown.edu. Please use "Grad PW" in the subject line. Permission will be given once manuscripts have been reviewed. S/NC.

2315. **Collaborative Languages**
A course for artists and scholars to develop a lexicography for theatrical collaboration. The course will explore a variety of collaborative approaches to performance creation through practical exercises, viewing archival video of contemporary performers, guest lecturers, and analyzing collaborative techniques used by a variety of performance creators. This course is limited to participants in the MFA program in acting, directing and playwriting. Instructor permission required. S/NC.

2500. **Acting, Brown/Trinity Rep Consortium**
This course is open only to students of the Consortium. It will include fundamental exercises, textual analysis, rehearsal techniques, character and scene work designed to provide the student actor with a working method based upon the general principles of the Stanislavski system. A major part of this course will include rehearsal and performance responsibilities.

2510. **Voice: Power and Range for the Actor**
This course is open only to students of the Consortium. It will provide a progression of exercises to free, develop and strengthen the voice as the actor’s instrument. The classes focus on relaxation, physical awareness, breath, freeing the channel for sound developing the resonators, releasing the voice from the body, articulation, self-expression, and the link to text and acting.

2520. **Movement: Form, Center and Balance**
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. It will develop a physical vocabulary through floor work, choreographed combinations and movement improvisation, helping the actor develop an understanding of space, strength of movement, and physical life onstage.

2530. **Directing: Composition and Staging**
This course is open only to the MFA Consortium program. It will include information and exercises addressing how to stage a play, balance the space, and transition from scene to scene. It will also focus on the director’s responsibility to the actors, and ways in which to help them create their roles.

2550. **Acting: Realism and Modernism**
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis 20th century playwrights. In addition to the works of Anton Chekhov, students may perform scenes from plays by Tennessee Williams, Arthur Miller, Clifford Odets, Wendy Wasserstein, Peter Parnell, Paula Vogel, Edward Albee and Harold Pinter.

2560. **Voice: Phonetics**
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. The course will teach articulation, self expression, and link to text and acting. Additional work is devoted to speech and diction, with an introduction to the International Phonetic Alphabet (IPA) and a progression through Standard American Speech to rudimentary dialect work.

2570. **Movement: Physical Life and Language**
This course is open only to students of the Brown University/Trinity Rep MFA Consortium program. It will help the student incorporate text and physicality in order to create the inner and outer life of a character. Special attention will be given to the student’s repetitive physical patterns, and new ways will be explored in examining the internal and external life of a character.
2580. *Directing: Collaboration with the Playwright*
This course is open only to students of the MFA Consortium program. It will focus on issues of collaboration between the playwright and the director. Each director will be assigned to work on a new script in cooperation with a playwright. A workshop production will be staged and open to the public.

2600. *Acting: Shakespeare and Moliere*
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in the plays of Moliere and Shakespeare.

2610. *Voice: Verse Text*
This course is open only to students of the MFA Consortium program. It will include advanced vocal work and an introduction to singing in performance. Rhythm and rhyme will be explored in relation to lyrics and verse.

2620. *Movement: The Alexander Technique*
This course is open only to students of the MFA Consortium program. This class will provide a step-by-step understanding and application of The Alexander Technique, which helps to develop body alignment, range of motion, and inner stillness.

2630. *Directing: The Director’s Vision*
This course is open only to students of the MFA Consortium program. Under close supervision, students will direct projects at the Consortium. Each student will be responsible for the creation of either a new or an established script. Students will meet regularly with the faculty to discuss process and progress.

2650. *Acting: Problems of Style*
This is a two-credit course and is open only to students of the MFA Consortium program. This is a scene study class with an emphasis on the problems of style and language in non-realistic plays. In addition to advanced work on Shakespeare’s texts, the course will explore other playwrights, possibly including Ibsen, Strindberg, Shaw and Beckett.

2660. *Voice: Singing with Joy*
This course is open only to students of the MFA Consortium program. Students will work on music, both as soloists and in small groups. The course will address issues of sight reading, breath support, phrasing, and how to stage a song for performance.

2670. *Movement: Stage Combat, Clowning, and Other Physical Form*
This course is open only to students of the MFA Consortium program. It will offer basic instruction in many physical areas including, but not limited to stage combat, juggling, mime, tumbling and clowning.

2680. *Directing: Critical Analysis*
This course is open only to students of the MFA Consortium program. It will include issues of directing, as well as the concerns of an Artistic Director and Associate Artistic Director. Each student will be expected to assistant direct a professional production at Trinity Rep Company.

2700. *Acting: Monologue Performance*
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. Acting assignments will include solo work presented in a variety of ways. These might include a selection of monologues and songs presented by the students to show the full range of his or her abilities. A performance might also include a solo piece written by the student and presented as a single-actor production.
2710. *Voice: Dialects and Accents*
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. This course will teach actors various American regional dialects and international accents including British, Irish, Italian and Russian. Students will examine the language with the use of the International Phonetic Alphabet, and will be expected to perform using the regionalisms and dialect and then teach it to the rest of the class.

2720. *Physical Theatre*
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. This course will explore various kinds of physical theatre, and ways in which the actor can be free, spontaneous and open in rehearsal and performance. Areas of exploration will include Commedia, mask and yoga.

2730. *Directing: Design in the Collaborative Process*
This is a two-credit course and is open only to students of the Brown/Trinity Rep MFA Consortium program. Directing students will study theatrical design including stage settings, costumes, lights and sound. Particular focus will be given to ways in which a director works with a designer to establish his or her vision of the play. Areas of study will include blueprints, floor plans, renderings and focus.

2750. *Acting and Directing: Practical Application*
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. The course will prepare acting students for a graduate showcase which will be performed in New York City and Los Angeles for agents, casting directors, and other professionals in the industry. Directing students will stage a New York showcase of their work for agents, artistic directors, and other theatre professionals. The course will also cover audition and interview techniques. Video work will be explored in detail, examining the difference between stage and on-camera direction and performance.

2760. *Professional Performance*
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. It will include performance work in a variety of venues including, but not limited to, Trinity Rep’s mainstage. Work might include major and/or minor roles at Trinity, as well as understudy responsibilities for the professional company. Based on their participation in this course, students will be awarded their union cards so that they are able to enter the professional area upon graduating.

2770. *Directing: Practical Application*
This is a two-credit course and is open only to students of the Brown University/Trinity Rep MFA Consortium program. Each student will direct a professional full-scale production in one of Trinity Rep’s theatres. In addition to directorial duties, students will assist in casting and designing the play, and will be fully involved in areas of budget, publicity, press relations, marketing and development.

2890. *Special Topics in Theatre, Speech and Dance*

2970. *Comprehensive Examination Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing for a preliminary examination. No course credit.

2980. *Graduate Level Independent Reading and Research*
A program of intensive reading and research on selected topics arranged in terms of special needs and interests of the student. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
2981. *Master’s Thesis Research*
Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.

2990. *Thesis Preparation*
For graduate students who have met the tuition requirement and are paying the registration fee to continue active enrollment while preparing a thesis. No course credit.

**Related Courses**
Courses in dramatic literature and in the relationship of theatre to culture offered in other departments and programs—such as English, Modern Culture and Media, Comparative Literature, Afro-American Studies, Classics, East Asian Studies, French Studies, German Studies, Italian Studies, Hispanic Studies, Anthropology, Music, and Religious Studies—may be taken for credit in the concentration program and the master of arts degree program in theatre arts with the approval of the appropriate advisor. Other courses related to theatre, speech, dance and allied media may also be approved for concentration credit.

**Urban Studies**
The following members of the faculty are associated with the Urban Studies Program:
Professor Howard P. Chudacoff (History); Professor J. Vernon Henderson (Economics); Professor James Morone (Political Science); Professor Dietrich Neumann (History of Art and Architecture); Professor Marion Orr (Political Science); Professor Kenneth Wong (Education); Associate Professor E. Tamar Katz (English); Associate Professor Hilary Silver (Sociology); Assistant Professor Samuel Zipp (American Civilization); Adjunct Associate Professor Mark Herlihy (Urban Studies); Adjunct Assistant Professor Richard Greenwood (Urban Studies); Professor Emeritus Melvin L. Feldman (Urban Studies); Professor Emeritus Patrick Malone (American Civilization); and Professor Emeritus David Meyer (Sociology).

The Urban Studies Program focuses on urban phenomena through the approaches of different disciplines, thus providing an interdisciplinary context in which to understand various dimensions of the urbanization process. Although the program provides sufficient flexibility to allow students to pursue specific interests without being overly bound by requirements, it is designed so that there is a core content. The primary aim of the program is to contribute to a broad, liberal education. Its purpose is to satisfy the needs of those students who are interested in urban problems, but who do not feel well served by the existing departmental programs in a single discipline. The program emphasizes development of the students’ powers of analysis and their ability to communicate in a convincing fashion. As a result, it develops an excellent background for students considering such careers as city planning, law, and business administration that require graduate training.

The program also aims to serve those urban studies concentrators who may want to do graduate work within an urban studies-related discipline, e.g., economics, sociology, political science. They are encouraged to consider two approaches: (1) as part of their program of study, take several courses in the selected traditional discipline; or (2) undertake a double concentration (one in urban studies and one in the selected traditional discipline). Either approach will satisfy standard graduate school admission requirements.
Because the Urban Studies Program aims for an understanding of the social, economic, demographic, and political consequences of urban development and a sensitivity to the spatial and aesthetic implications of such development, one of the central features of the concentration program is its core curriculum, including one grouping of courses in American civilization, history of art and architecture, economics, history, political science, and sociology. A concentration in urban studies includes one listed course from each of at least three of the above disciplines. Also included as a second part of the core curriculum are special urban studies courses designed to extend the students’ thinking into multi- or interdisciplinary areas. Three such courses are required. The flexibility of the program is evident in the choice of two courses from the complementary curriculum. Here, students are encouraged to consider additional course offerings including, but not limited to, those in the traditional disciplines.

Undergraduate Program

For a complete description of the standard concentration program leading to the A.B. degree, please visit the department’s website at: http://www.brown.edu/Departments/Urban_Studies/ or visit http://www.brown.edu/Administration/Registrar/concentration.html.

Courses of Instruction

Primarily for Undergraduates

0210. The City: An Introduction to Urban Studies
What is special about urban life? How and why do cities differ? How has the way we think about the city changed over time? Can we solve urban problems? This course offers an interdisciplinary approach to the history, physical design, spatial form, economy, government, cultures, and social life of cities in the U.S. and beyond. D. R. MEYER.

For Undergraduates and Graduates

1000. Fieldwork in the Urban Community
A fieldwork course with limited enrollment. Each student undertakes a fieldwork project in close collaboration with a government agency, a nonprofit association, or a planning firm. In weekly seminar meetings, the class examines a series of urban issues and discusses fieldwork methodology. Students also schedule regular appointments with the instructor. Restricted to Urban Studies concentrators. Enrollment limited to 8 during registration. Instructor will select additional 2 students after first day of class. Instructor permission required.

1010. Fieldwork in Urban Archaeology and Historical Preservation
Study of the surface and subsurface features of the urban built environment. An introduction to research methods and fieldwork procedures used by archaeologists and historical preservationists who work on urban sites. Students undertake fieldwork projects that involve archival research, close examination of historic structures, and theoretical analysis of the changing urban landscape. Priority given to Urban Studies concentrators and American Civilization grad students. Other students selected on first day of class. THE STAFF.

1200. The United States Metropolis, 1945-2000
This lecture and discussion course will provide students with an introduction to the history, politics, and culture of United States cities and suburbs from the end of World War II to the
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close of the twentieth century. Readings are drawn from recent work in the political, social, and cultural history of U.S. cities as well as primary sources rooted in the period under study.

1420. Urbanization in China
Examines urbanization processes and urban public policy in China. Also draws on historical and recent experience in the U.S. Policy areas including policies affecting urbanization, migration, and industrial location; policies affecting housing, land use, and urban reform; and policies affecting fiscal decentralization and infrastructure investments such as transportation. Prerequisite: ECON 0110. Open to 10 juniors and seniors. J. V. Henderson.

1870. Seminars in Urban Studies

1870A. American Culture and the City
This course explores American culture and the way it shapes our cities. Topics include the American dream, race, immigration, urban dilemmas and the seduction of suburbia. We read a book (readings include Alexis de Tocqueville, Richard Wright, Tom Wolfe, and Margaret Atwood); and screen a film (movies include Wall Street, Traffic, Crash, Malcolm X) each week. Prerequisite: POLS 0220. Priority given to Urban Studies concentrators.

1870D. Downtown Development
Study of the revitalization of central business districts (CBDs) in large United States cities. Topics include the CBD as a land use system, retail change, the rise of white-collar offices, gentrification near the CBD, and the political economy of CBD redevelopment. Providence's CBD used as a case example; guest speakers discuss its change; field trips are taken. Enrollment limited to 15 during registration. Instructor will select additional 5 students after first day of class. Instructor permission required. D. R. Meyer.

1870E. Green Cities: Parks and Designed Landscapes in Urban America
Examines the cultural meaning and public use of greenspace in American towns and cities. Covers city parks and metropolitan park systems; the landscaping of riverfronts, streets, cemeteries, and company property; and the contributions of landscape architects such as Olmsted and Manning. Begins in the 17th century with the creation of Boston Common and ends by reviewing the latest greenway plans for Providence. Priority given to Urban Studies concentrators and American Civilization grad students. Other students selected on first day of class.

1870F. Housing and Homelessness
What is homelessness and where does it come from? Can affordable housing solve the problem? This seminar examines homelessness, low-income housing policies, segregation, gentrification, privatization of public space, and related processes that make it difficult to house the poor. Open to Urban Studies concentrators and by permission based on demonstration of research skills. Enrollment limited to 20. H. Silver.

1870H. Rivers and Cities
Rivers promote urban development and serve as important resources and cultural amenities for communities. This interdisciplinary seminar looks at the use and abuse of selected rivers which have run by or through American cities from the colonial period to the present. Enrollment limited to 20. Written permission required.
The course examines the recent evolution of the American city. We will consider various external forces that act upon the city, principally (a) migration patterns, (b) economic and technological change, and (c) public policy. We will also consider how various groups and political leaders respond to these forces and on what resources they draw. Priority given to Urban Studies and Political Science concentrators. M. E. Orr.

The Politics of Community Organizing
Introduces key issues concerning community organizing. Focuses on the life, skills, and tactics of Saul Alinsky and the national organization he founded, the Industrial Areas Foundation (IAF). Analyzes the work of the IAF in a number of urban settings. Seeks to develop theories and models for studying community mobilization in urban America. Priority given to Political Science and Urban Studies concentrators.

Urban Regimes in the American Republic
A probing of topical issues in both their theoretical antecedents and their contemporary manifestations. Examines the intellectual debates and the scholarly treatments surrounding issues of power in the city, urban redevelopment policy, urban poverty, urban educational policy, and race in the city. Enrollment limited to 20. M. E. Orr.

The Cultural and Social Life of the Built Environment
This seminar investigates the relationship between people and place. It considers the ways that people create and experience the man-made landscape, how they understand place through various aesthetic forms, and political conflict over space and place. We look mostly at the history and contemporary development of cities and suburbs in the United States. Students will prepare a final project on a specific aspect of the built environment; they will be encouraged to focus their research on Providence or another local community. Enrollment limited to 20. Priority given to Urban Studies concentrators and seniors; instructor permission required otherwise. M. E. Orr.

Representing the Twentieth-Century City
Will explore the impact of a variety of techniques of representation on the formulation and conceptualization of a variety of "urban problems" in twentieth-century Europe and America. Will employ an active, "hands-on" approach, and therefore centers on a series of projects: in addition to reading classic works in urban planning history and the history of science, participants will choose their own "urban problem" to explore throughout the semester. They will conduct an in-depth interview with a key figure involved in contemporary debates about this problem, write an "ideas piece" or editorial about it, and, finally, submit a research paper. Enrollment limited to 20 juniors and seniors. M. E. Orr.

Independent Reading and Research
A specific program of intensive reading and research arranged in terms of the special needs and interests of the student. Open primarily to concentrators, but others may be admitted by written permission. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course.
Visual Art

Professors Edwards, Feldman (Emeritus), Fishman, Mayer (Emeritus); Associate Professors Bostrom, Malik (Emeritus); Assistant Professors Myoda, Osborn, Tarentino; Adjunct Lecturers Ansel, Gonsher, Stupar.

Undergraduate Programs

For a complete description of the following standard concentration programs leading to the bachelor’s degree, please visit:
http://www.brown.edu/Administration/Registrar/concentration.html

Visual Art

For additional information regarding the Department of Visual art, please visit the department’s website: http://www.brown.edu/Departments/Visual_Art/

Courses of Instruction

Primarily for Undergraduates

0100. Studio Foundation
An introduction to basic visual art concepts, exploring a range of materials with emphasis on experimentation and analysis of visual relationships. Drawing is a vital part of this course. Admittance to this course will be determined by an online lottery, which can be accessed through the VISA 0100 Lottery link in the Student menu in Banner Web. VISA 0100 or 0110 is a prerequisite to any advanced studio course work at Brown or the Rhode Island School of Design. Under certain circumstances a student may petition for a waiver of this requirement upon submission of a portfolio.

0110. Advanced Studio Foundation
Some students arrive at Brown with a greater understanding of visual art principles than most, yet need an introduction to other aspects before taking more advanced courses. Figure drawing is practiced throughout the semester, utilizing a variety of media. Weekly outside assignments explore diverse themes and become the subject of comprehensive class discussions. Serves as a prerequisite to upper-level courses, as does VISA0100. Admittance to this course will be determined by a portfolio review. Students must submit their portfolio to the Visual Art department office; digital images submitted on a CD are preferred. D. STUPAR.

0120. Foundation Media: Sound and Image
This foundation studio course focuses on the production and theory of screen-based digital media artwork and introduces the computer as a medium and a tool for art. The principles and techniques web design, and sound and image production are addressed in readings, screenings, and a number of specific projects. During pre-registration, the course is open to Visual Arts concentrators; all others may enroll with instructor permission. After pre-registration ends, registration for all students is by instructor permission only. Enrollment limited to 12. P. MYODA.

0130. 3-D Foundation
This is an extensive study in form and structure intended to develop spatial understanding and the fundamentals of 3-dimensional design and construction. Students will explore the structural, compositional and conceptual implications of basic materials, such as wood, metal, plaster and found objects. Projects are designed as a means for investigating a variety
of sculptural processes. Students will learn casting techniques, safe usage of power tools and welding equipment. In addition special emphasis will be placed on creativity, critical thinking and the ability to successfully articulate ideas visually. Instructor permission required. Students who are not admitted during pre-registration or were unable to pre-register are advised to attend the first meeting of the class.

For Undergraduates and Graduates

1110. Drawing I
Drawing from nature, still life, the model, and the imagination in a variety of media. A continuing series of outside assignments emphasized. Visits to galleries and museums and pertinent exhibitions may be undertaken. The portfolio of the individual student will be the basis of evaluation. Great emphasis is put on classroom participation. Pre-requisite: VISA 0100 or 0110. This course restricted to 20 students. 18 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting.

1120. Drawing II
Drawing from the imagination, the model, and landscapes in a variety of media. Great emphasis is placed on creative work and on classroom participation. Prerequisite: VISA 0100 or 0110. This course restricted to 20 students. 18 seats will be available during pre-registration. This class will satisfy VA concentration requirement for drawing. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

1130. Drawing for Projection
A studio course which will address the issues and techniques of drawing for motion, animation and/or projection. We will undertake one semester-long project undertaken with several short parallel works. Enrollment limited. Written permission required. S/NC.

1210. Printmaking
Lithography, Etching, Silkscreen or Relief printing will be taught depending on the semester. May be repeated for credit. Enrollment limited. Written permission required.

1240. Art of the Book
Examines the book, structurally and conceptually, as traditional craft, and artist's medium. Students will learn the materials, tools and techniques of bookbinding, as they explore the expressive possibilities of the book form. Topics and projects will include non-adhesive bookbinding, hardcover cloth and leather bound books, clamshell boxes, book repair and papermaking. Studio work will be augmented with field trips, artist visits, and guided exploration of the special collections at the John Hay Library. While students may take VISA 1240 only, they may not enroll in 1250 without 1240 as a prerequisite. Pre-requisite: VISA 0100 or 0110. This course restricted to 15 VISA Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

1250. Art of the Book
Examines the artist’s book from the printer/publisher perspective. Students will learn the basics of book design, traditional typography and the letterpress printing, as they consider the book and its related printed matter in the service of content. The course will be run as a fine press publishing house in which students will produce individual and group projects, including bookplates, broadsides, and books. Studio work will be augmented with field
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trips, artist visits, and guided exploration of the special collections at the John Hay Library. Prerequisite: VISA 0100 or 0110, and VISA 1240. This course restricted to 15 students. 5 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

1310. Painting I
Designed to accommodate a variety of interests and aptitudes. Provides basic instruction in media and painting procedure, but emphasizes the development of the image as a visual statement. Covers the building of stretchers, basic color principles, and painting media and procedures. Slides and related books and articles are discussed. Individual criticism is given; participation in regularly scheduled group discussions is required. Pre-requisite: VISA 0100 or 0110. This course restricted to 18 VISA Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting. Not all restrictions apply to students registering for the Summer term through the Office of Continuing Education. W. EDWARDS and L. BOSTROM.

1320. Painting II
The advanced class covers information beyond the introductory level. Individual criticism is emphasized. Students are required to complete all structured assignments and to participate in regularly scheduled discussions. Prerequisite: VISA 0100 or VISA 0110, and VISA 1310. Instructor Permission required. This course will be restricted to 18 VISA Concentrators and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class. L. BOSTROM and W. EDWARDS.

1410. Sculpture: Material Investigations
This studio course addresses basic sculptural methods, i.e., additive and subtractive modeling, casting, and assemblage, and common sculptural materials, i.e., wood, metal, plaster, and found objects. Demonstrations and workshops on a number of sculptural tools and materials form the foundation for this studio. Students develop sculptural solutions to a given set of problems. Contemporary issues raised in critiques and readings. Extensive outside work is expected. Students are invited to take this course more than once, as the problems can be customized for those with more experience. Pre-requisite: VISA 0100 or 0110 or VISA 0130. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class. P. MYODA.

1420. Sculpture: Conceptual Propositions
This studio course explores a number of contemporary sculptural theories and practices. Students develop sculptural solutions to a given set of problems, using materials and methods of their choosing. Contemporary issues raised in critiques and readings. Completion of VISA 1410 or comparable experience in some type of three-dimensional practice is suggested, but not required. Demonstrations and workshops on a number of sculptural tools and materials will be given as needed. Students are invited to take this course more than once, as the problems can be customized for those with more experience. Extensive outside work expected. Prerequisite: VISA 0100 or VISA 0110 or VISA 0130. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting of the class. P. MYODA.
1430. Elm Tree Project
This is an intensive studio course requiring a considerable out of class time commitment. Enrollment limited. Written permission required. R. Fishman.

1510. Photography I
Introductory course in black and white photography, emphasizing core photographic concepts, possibilities, history, genres, technical information, and techniques. A variety of lens-less and lens based exercises will be introduced blurring the boundaries between the “traditional” sense of photography (as means of mechanical reproduction) and other studio based media such as drawing or painting. Large and medium format cameras will be introduced, but students should have their own 35 mm film camera. Pre-requisite: VISA 0100 or 0110. This course restricted to 15 VISA Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration or were unable to pre-register should attend the first meeting.

1520. Photography II - Digital Photography
Will explore digital image processing in color and B&W. Using digital cameras, computer editing software, digital printing, as well as critical analysis of computer digitized images will be covered. The execution of visual problems and in-class presentations as well as theoretical readings allow students to examine the content and function of digital imaging technology and production in modern photography. A digital SLR type camera is required. Prerequisite: VISA 0100, VISA 0110, or VISA 0120. Prerequisite: VISA 0100, VISA 0110, or VISA 0120. This course restricted to 15 VISA Concentrators, and others by permission of the instructor. 10 seats will be available during pre-registration.

1710. New Genre: Site and Sound
This studio course provides an overview of contemporary sound art and sound installation, facilitates the development of site-based sonic artwork, and encourages a critical approach to sound and audio practice. Work will be developed for and from specific sites with special emphasis placed on modes of listening and the physical characteristics of sound itself. Examples of site-specific sound work in a variety of formats including performance, installation, sculpture, literature, and radio are presented and analyzed. Readings and assignments will coincide with these areas and regular listening exercises are incorporated throughout the class. The format for the class includes lectures and discussions, lab time, and technical training in sound production as necessary for the production of sound-based works. Prerequisite: VISA 0120. This course restricted to 15 students. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting. May be repeated once for credit.

1720. New Genre: Physical Computing
This semester will focus on the theme of Physical Computing. This studio course is an intensive introduction to electronic devices for use in artmaking and includes hands-on experience working with sensors, motors, switches, gears, lights, simple circuits, microprocessors and hardware-store devices to create kinetic and interactive works of art. Demonstrations, lectures and critical discussion of work will be given to develop concepts and technical skills. Prerequisite: VISA 0120. This course restricted to 15 students. 10 seats will be available during pre-registration. Students who are not admitted during pre-registration should attend the first meeting. May be repeated once for credit.

1800. Seminars in Production
Topics change from year to year and instructor to instructor. In each session enrollment is limited to 20. Written permission will be given after the first meeting. Topics might include: Public Art, Problems of Documentary, Approaches to Digital Cinema, the
Radiophonic and Radio, Accessorizing, Painting, Installation of Mixed Media, etc. May be repeated for credit. Enrollment limited. Written permission required.

1910. **Individual Study Project in the Practice of Art**
Work on an approved project leading to the presentation of a portfolio, under supervision of an individual member of the staff. Project proposals must be filed with the department no later than the first week of the semester.

1990. **Honors**
Section numbers vary by instructor. Please see check Banner for the correct section number to use when registering for this course.

**Visual Art Graduation Requirement**
All Visual Art concentrators are required to arrange and present an individual exhibition of their work in their final semester. This requirement does not carry course credit, but is a graduation requirement.

**Courses at the Rhode Island School of Design**
It is possible for undergraduates enrolled at Brown to take courses in studio work and art history at the Rhode Island School of Design (RISD) and to have such work credited toward their degree requirements. Four courses may be taken at the RISD for Brown credit during a student’s undergraduate career. If more courses are needed, the student must petition the Committee on Academic Standing for approval. For information on applying RISD courses toward fulfillment of the visual art concentration, see the description of the concentration at [http://www.brown.edu/Administration/Registrar/concentration.html](http://www.brown.edu/Administration/Registrar/concentration.html).

Forms and instructions for cross-registration at RISD are available in the Brown registrar’s office.

**Watson Institute for International Studies**
Professors Peter Andreas, Nathaniel Berman, James Blight, James Der Derian, Catherine Lutz, Barbara Stallings (Director), Kay Warren; Senior Fellows Sue Eckert, Mark Garrison, Susan Graseck, Catherine Kelleher, Sergei Khrushchev, Xu Wenli; Associate Professors (Research) Peter Andreas, Keith Brown, Brian O’Neill, Nina Tannenwald; Watson Fellow Geoffrey Kirkman; Assistant Professors (Research) Leiven Jiang, Simone Pulver; Research Associate Liza Bakewell; Professors At Large Fernando Henrique Cardoso, Shirley Brice Heath; Faculty Fellows Ross Levine, Patrick Heller.

The Watson Institute for International Studies ([www.watsoninstitute.org](http://www.watsoninstitute.org)) is dedicated to research and teaching on international affairs. Named for Thomas J. Watson Jr. ’37, the institute analyzes the most pressing global problems of our time and seeks initiatives to address them from a multidisciplinary and multinational perspective. Working at the intersection of academia and policymaking, the institute analyzes globalization and inequalities; the international flow of ideas, arms, and capital; and other matters of world policy.
The institute houses five undergraduate programs—Development Studies, International Relations, Latin American Studies, and Caribbean Studies, Middle East Studies, and South Asian Studies. Institute faculty add over 25 courses to the Brown curriculum each year. The Graduate Program in Development is also based at the institute. In addition, Brown undergraduate and graduate students actively participate with faculty on institute research projects. Additionally, the institute also provides curriculum and professional development opportunities for high schools nationwide, through its institutional partnership with the Choices for the 21st Century Education Program.

Watson’s core faculty is complemented by faculty associates from across the university and an ever-changing cohort of visiting scholars and practitioners from around the world. Each year, they publish more than 100 research findings as books, major policy reports, book chapters, journal articles, documentaries, and electronic publications.

Joint initiatives across the university include strong inter-departmental collaborations, such as those with the Anthropology, Economics, History, Political Science, and Sociology Departments, as well as relationships with such Brown centers as the Center for Latin American and Caribbean Studies, and the Office of International Affairs. Beyond the university, the institute collaborates on research with educational institutions, foundations, governments, and intergovernmental and nongovernmental organizations (NGOs). Many of the seminars, workshops, and conferences sponsored by the institute each year are born of these partnerships.

The institute also houses and supports three major academic journals: *Studies in Comparative International Development*, the *Review of International Political Economy*, and the *Brown Journal of World Affairs (BJWA)*. Founded in 1993, BJWA is a widely recognized scholarly publication in the field of international studies, edited and managed entirely by Brown undergraduates.

Research, teaching, and events at the institute increasingly involve the use of media, such as video, various forms of Internet broadcasting, and interactive web-based commentary. Media is also analyzed for its role in shaping international affairs.

For more information about the institute and its programs, contact Geoffrey Kirkman, deputy director, at 401-863-7945 or geoffrey_kirkman@brown.edu.

**Wayland Collegium for Liberal Learning**

The Francis Wayland Collegium for Liberal Learning was established in 1980 as a community of faculty interested in exploring significant issues of human life using global and interdisciplinary perspectives.

The Collegium’s work proceeds in three closely related directions. First, it sponsors lunch talks by faculty on their research, and lectures by well-known outside speakers. Second, it sponsors grants for faculty study groups and seminars. Finally, it also promotes curricular innovations through a program of course development grants. Grant proposals can be submitted online. They are due annually at the beginning of the first week of February.

Faculty who especially share the Collegium’s concerns are appointed as Fellows, for renewable periods of three years, and one member is Senior Fellow. The Collegium is directed by an Executive Committee consisting of six fellows, the Senior Fellow, and the dean of the College.
Extradepartmental Courses

University Courses

In an intellectually creative atmosphere, ideas for new academic approaches and new kinds of courses may and should arise. Among these courses are offerings that address themselves to major themes and problems requiring a different perspective than generally governs departmental offerings. They provide students with the opportunity to integrate their understanding of major areas of learning and explore relationships among diverse forms of human experience; or to relate one or more disciplines to a broader context; or to focus on large and fundamental problems that need to be approached through several disciplines or by ways not found in existing disciplines. University courses originate with individual instructors and are retained in the curriculum only so long as these instructors wish to teach them.

 Primarily for Undergraduates

0300. The Hispanic Experience in the United States
This seminar will consider how Hispanics are transforming the United States even as they evolve as a people. We will discuss Hispanicity as an ethnic and racial identity, debate the ethical dilemmas posed by undocumented immigration, the significance of the unprecedented geographic dispersal, and what the burgeoning second generation portends for the future contours of economic inequality.

0400. Beyond Narnia: The Political Theory and Writings of C.S. Lewis
C.S. Lewis was one of the most widely read authors of the 20th Century, yet much of his philosophical, theological and political theories are unfamiliar. His fiction and philosophical writings will be explored to better understand his perspective on modern humanity, the relationship of man to family, the community and the state. C.S. Lewis had a very clear philosophy on the importance of the individual and how he relates to the larger social structures. Morality and the role of individuals as they interface with others around them and their responsibility for working with society both at community level and at the macro-state level will be explored. Instructor permission required. T. P. FLANIGAN.

0540. Introduction to Contemplative Studies
Introduction to the new field of Contemplative Studies focusing on identifying methods human beings have found, across cultures and across time, to concentrate, broaden and deepen conscious awareness. We will study what these methods and experiences entail, how to critically appraise them, how to experience them ourselves, and how they influence the development of empathy, health, and well-being. Preference will be given to students who have taken RELS 0040, "Great Contemplative Traditions of Asia." Enrollment limited to 20. H. D. ROTH.

For Undergraduates and Graduates

1100. Imagining an Equitable University
The course studies moments over the past half century in which the University was faced with a need to be more inclusive, with an emphasis on issues of race and gender. Our goal is to create an alternative history of Brown that enables new voices to evaluate how the process of governance has worked. Participation by President Simmons depends on her availability. Interested students should apply using the application found at http://example.com/apply.
Applications are due by April 30th. S/NC. K. S. Sacks.

1160. Drug and Alcohol Addiction in the American Consciousness
The roots of our responses to addiction lie deep in the American consciousness. Conceptions of drug and alcohol addiction are explored in works of history, law, policy, and literature. Students take an active role in leading seminar discussions. Reading and writing assignments are rigorous. There is no final examination. Enrollment limited to 20. Written permission required. D. C. Lewis.

1400. The Cultural History of Disability Minorities in the United States
Due to the efforts of people with disabilities to secure their civil rights, “disability” has begun to be perceived as a social identity and role rather than solely a medical condition. This course analyzes the cultural history of disability, giving attention to cross-cultural comparisons. Broad topics include: concepts of disability; disability and bioethics; images of disability in film, the media, art, and literature; and political movements of people with disabilities. C. Poore.

1520. The Shaping of World Views
To many students, an exclusive emphasis on specialized studies fragments the “world” in which they live. A widespread feeling of loss pervades the minds of students who often come to universities to learn right from wrong, to distinguish what is true from what is false, but who realize at the end of four years that they have deconstructed their freshman beliefs, values, and ideologies, but have created nothing to replace them. This course examines the diversity of worldviews both synchronically and diachronically and surveys various explanations for such diversity. Enrollment limited to 30. Conducted in English. O. T. Almeida.

1700. Transformation of the Research University
This seminar will focus on recent transformations of the academic, instructional and administrative character of the elite American research universities. Emphasis will be on selected pressure points (such as research funding, diversity, technology, market influence) that drive change and shape the future. Enrollment limited to 20. W. S. Simmons.

Independent Study Plans

Independent Study Projects
(Including Internship)

Most academic departments offer students opportunities to work independently with one of its faculty members. Students may approach a professor, and request to do a departmental independent study which, if successfully arranged, takes place under the rubric of the sponsoring department’s course code (i.e. ECON 1970 or SOC 1970.) When such an option is not available the student may choose to propose an Independent Study Project (ISP) through the College Curriculum Council. Each course proposal must have the approval of a faculty sponsor who shall be responsible for the scrutiny of the proposal, the evaluation of the work done, and the assignment of a grade. The faculty sponsor is not expected to give regular tutorial instruction.

Proposals for Independent Study must be submitted in accordance with guidelines established by the College Curriculum Council on a form provided by the dean’s office. The proposals will be reviewed by the College Curriculum Council to assure the academic quality of the proposed course and to avoid undue duplication. Independent study proposals for the fall semester are due by April 1 and for the spring semester by November 8.
Group Independent Study Project

Group Independent Studies are cooperative inquiries in which participating students bear major responsibility for both planning and conduct of the work. They provide an opportunity for academic pursuits which might not be available in regular courses. They carry course credit.

Each Group Independent Study is sponsored by an instructor who holds a teaching appointment in Brown University and whose central functions are to assess the proposed study, to provide advice during the work, and to be responsible for the evaluation of each student’s work. Group Independent Studies permit instructors to interact with more students than independent studies can realistically permit. A Teaching Assistant or Teaching Associate may sponsor a Group Independent Study if the department chair recommends that he or she be permitted to do so.

Proposals for Group Independent Studies should be made on a form provided by the dean’s office. They will be reviewed by the College Curriculum Council to assure the academic quality of the proposed study and to avoid undue duplication. Proposals for the fall semester should be turned in by April 1 of the preceding spring semester; proposals for the spring semester are due November 8th of the fall semester.

Each group should be sponsored by an instructor holding a teaching appointment at Brown University who is prepared to assess the proposed study, to provide advice during the project, and to be responsible for the evaluation of each student’s work. Normally this person will be a faculty member. Under exceptional circumstances a graduate student with appropriate expertise and teaching experience would be eligible to be a sponsor. In this case, the proposal must be accompanied by a curriculum vitae for the graduate student and a statement of qualification and recommendation from the chair of the graduate student’s department. The chair will assume ultimate responsibility for the academic quality of the GISPs. The College will not offer remuneration for sponsors of GISPs.

At the end of each Group Independent Study, a joint student-faculty evaluation report of the accomplishments of the project must be submitted by the faculty sponsor to the College Curriculum Council. Note: students and instructors interested in setting up a Group Independent Study should consult the document, “Guidelines for Group Independent Study,” which is available in the dean’s office and the Curricular Resource Center.
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Academic Facilities and Educational Resources

Libraries

University Library

The Brown University Library supports the educational and research mission of the University by serving as the local repository for and principal gateway to current information and the scholarly record. The library contains more than 3.8 million volumes and 6 million items, including printed and electronic books, periodicals and e-journals, maps, microforms, videos, sound recordings, sheet music, manuscripts, electronic media, government documents, and resources in other formats. Currently the Brown University Library is one of the largest and most notable academic libraries in New England and holds several world-renowned special collections. The University library system includes five libraries on campus and the Library Collections Annex, a high-density storage facility located about four miles from campus. The John Carter Brown Library is an independent research library also located on the Brown campus.

The library website http://library.brown.edu/ is the principal gateway to the collections and services available for library users at Brown. Josiah, http://josiah.brown.edu/, the Brown University Library online catalog, provides access to information about holdings in all the libraries at Brown. Expenditures for acquisitions in 2008-9 totaled over $8.5 million. The Library has received over 65,000 journal titles and has licenses for more than 300 research databases. The library complements its local collection by providing Brown users with access to over 50 million additional volumes via direct borrowing agreements with consortial partners (a supplement to traditional interlibrary loan services). A growing portion of the library’s resources today are digital, providing users with more immediately accessible information in a format that suits their research preferences. More information about the library’s collections and services is available at http://library.brown.edu/.

John D. Rockefeller Jr. Library

The Rockefeller Library http://library.brown.edu/about/rock/, otherwise known as “the Rock,” houses the collections in the social sciences and humanities. On the first floor near the entrance, users will find the circulation desk where they can check out books for borrowing, seek reference assistance, or inquire about library services and policies. The entire building allows for wireless connections to the Brown network and the Internet. Computer clusters are available on Levels 1 and 2; a separate graduate student cluster is available on Level 2. The Rock provides a variety of spaces to suit different work styles, including open, comfortable seating as well as group study rooms in the Laura & David Finn Reading Room on Level 1, an “absolute quiet” study room on Level A, and individual study carrels located throughout the building. The Alfred and Laura Hecker Center for Library Technology, a state-of-the-art classroom for library instruction, is located on Level 1. Josiah, the library’s online catalog, and other search tools and online resources can be searched from workstations located throughout all the libraries as well as from any device.
with access to the Internet. Books and bound periodicals are shelved together in open stacks arranged by Library of Congress call numbers. The library’s main collection of newspapers is housed in the Periodicals Reading Room on the first floor. East Asian material, located on level 3, includes the Gardner Collection which consists of mostly historical Chinese material from the Ch’ing Dynasty (1644–1912). A small café in the lobby of the Rock provides a convenient place for a study break or to meet informally with friends or colleagues.

**Sciences Library**

The Sciences Library [http://library.brown.edu/about/scili/](http://library.brown.edu/about/scili/), a 14-story high-rise building, contains the library’s resources in the physical, biological, and medical sciences. Library services are offered from Level A (one floor below the lobby level) in the Susan P. and Richard A. Friedman Study Center [http://library.brown.edu/about/friedman.php](http://library.brown.edu/about/friedman.php), a modern, comfortable, and technologically equipped 24-hour study environment for Brown students in the heart of campus. The Friedman Study Center is open 24/5 and features individual and group study areas, computer clusters, and common areas designed to meet students’ needs for academic and gathering spaces. A café is located in the lobby of the Sciences Library. Additional computer clusters and study spaces are available on the Mezzanine level. Books and bound periodicals are shelved together by Library of Congress call numbers on the upper floors of the Sciences Library. There is an extensive map collection including U.S. Geological Survey depository maps on Level 8. The Science Center is located on Level 3 and offers work, study, and lecture spaces as well as tutoring and advising resources for math and science students. The Media Services department (part of Computing and Information Services) is located on Level 14, and provides assistance to the Brown community in the use of instructional technology equipment for classrooms and events.

**John Hay Library**

The John Hay Library [http://library.brown.edu/about/hay/](http://library.brown.edu/about/hay/) is the location for most of the University’s rare books, manuscripts, special collections and archives. Among the notable materials in “the Hay” are the renowned Harris Collection of American Poetry and Plays, the Sheet Music Collection, the McLellan Lincoln Collection, the Anne S. K. Brown Military Collection, the Lownes History of Science Collection, the papers and works of H. P. Lovecraft, the Smith Collection of books on Magic, and the Amnary Brown Collection of incunabula. Other notable collections include the Hall-Hoag Collection of Extremist and Dissenting Literature, the Katzoff Collection of Gay and Lesbian Literature, the Poulin and Ciaraldi Collections of Comic Books and Illustrated Novels, the Miller Collection of Wit and Humor, the Kirk Collection on Alcoholism and Alcoholics Anonymous, the Laughlin Collection of Modern American Poetry, and the Leab Collection on George Orwell. A detailed listing of special collections in the John Hay Library is available at [http://library.brown.edu/collatoz/](http://library.brown.edu/collatoz/). Exhibitions of materials from the collections are mounted year-round. The University archives [http://library.brown.edu/collections.archives/](http://library.brown.edu/collections.archives/), dating from 1763, contain copies of the official records and publications of the University and the papers of many of its departments, officers, and affiliated groups. All materials are paged at the reader services desk for use in the reading room, which is also available for general study. Materials in the library do not circulate outside the building. The Walter L.S. Bopp Seminar Room, a state-of-the-art instruction and meeting space, is located on the third floor of the John Hay Library.
Virginia Baldwin Orwig Music Library

The Orwig Music Library http://library.brown.edu/about/orwig/ houses the general collections of music materials, including books, periodicals, scores, and sound recordings. The study space is particularly convenient for students living in the East campus area. A listening facility for sound recordings, audio cassettes, and compact discs is also available; the recordings do not circulate. Digital audio files may be placed on reserve using OCRA (Online Course Reserves Access), a system that streams required listening assignments to students registered in Brown University classes; see http://library.brown.edu/reserves/ for more information.

Art Slide Library

Located on the fourth floor of the List Art Center for the convenience of its most frequent users, the Art Slide Library http://library.brown.edu/about/asl/ acquires digital images, slides, photographs, printed reproductions, microfiche, reference books, and electronic resources to support the general needs of the Brown University community for visual materials pertaining to art and art-related subjects, including architecture and archaeology. The resources include a growing collection of digital images as well as approximately 300,000 slides, 39,000 photographs, and 10,000 microfiche. In collaboration with the Center for Digital Scholarship, the ASL provides scanning services for faculty who need digital images of visual culture for teaching. A local image database is available via Luna Insight software. Anyone affiliated with the University is welcome to use items from the collections for teaching on campus, student presentations, research, or related educational activities. The staff of the Art Slide Library is available to answer humanities reference questions and to provide training in the use of the digital image collections.

John Carter Brown Library

The John Carter Brown Library http://www.brown.edu/Facilities/John_Carter_Brown_Library/ is a separately administered and independently funded library, operating under its own policies and procedures. In the field of Americana, it is one of the outstanding libraries of the world. Among the some 50,000 volumes printed before 1825 are numerous books and pamphlets describing the growth of the European colonies in the New World and the impact of the discovery and exploration of the New World upon Europe. The library also has an extensive collection of maps dating from 1477 to the mid-19th century. While the resources of the John Carter Brown Library are available to anyone who needs to use them, the library is designed to serve those engaged in advanced scholarly research. Use of the reading room is restricted to those making use of the collections. The John Carter Brown is a closed stack library, and all materials must be paged by the staff. The library regularly mounts exhibitions open to the general public.

Library Services

Access to Library Buildings

The primary goal of the libraries at Brown University is to support the instructional and research needs of the Brown academic community. Currently, the libraries are open and provide services over 110 hours per week during the academic year with additional hours available during reading and exam periods. In addition, the Friedman Study Center in the Sciences Library is open overnight (5 nights per week) for studying. A Brown University identification card or other proof of Brown affiliation is necessary to gain access to the
Rockefeller and Sciences libraries. Following is a brief listing and description of some of the library services. More complete information and assistance are available at http://library.brown.edu/ or from staff at any of the service points throughout the libraries.

Locating and Using Library Materials
Josiah, the Brown University Library online catalog http://josiah.brown.edu/, and the library’s other search tools and online resources, can be searched from workstations located throughout all library buildings or from any device with access to the Internet. The book stacks in Rockefeller, Sciences, and Orwig libraries are open and allow users direct access to the collections for browsing purposes. Materials shelved off-campus at the Library Collections Annex can be requested for delivery to campus (usually within 24 hours). Details about loan periods are available on the library’s web page. Materials at the John Hay Library must be retrieved by staff from the closed stacks and used within the library; please inquire at the Hay Reader Services Desk for more information.

Library staff provide a variety of general and specialized services to assist students, faculty, and staff members of the Brown community. Library staff promote academic success by advising students and faculty on how to use a wide range of information resources available though the library. Subject specialists are available to consult on research topics, instruct in the use of library resources and tools, evaluate sources of information, and help users navigate the research process.

An increasing portion of the library’s collections is available digitally through licensed or networked resources. The library currently has licenses to over 300 research databases and approximately 52,000 full-text online journals. Detailed lists of electronic titles are available through Josiah and on the library web site. Instructions for accessing licensed content from off-campus are available at http://library.brown.edu/offcampus/.

Access to Other Libraries
Beyond the immediate collections available on campus, Brown students and faculty have direct access to more than 50 million volumes through special borrowing agreements with partner libraries. Titles from these libraries — including Columbia, Cornell, Dartmouth, University of Pennsylvania, Princeton, Yale, and the academic libraries in Rhode Island — can be searched and requested using easyBorrow, the library’s web service for expedited borrowing and delivery of books to the Brown campus (see http://library.brown.edu/services/illoptions.php for details). In addition, Brown has reciprocal agreements for on-site access to a number of libraries in the region and throughout the nation. More information about these and other options for obtaining materials from other libraries is available from the library’s web site or from staff at any of the service points throughout the libraries.

Center for Digital Initiatives
The Center for Digital Scholarship (CDS) coordinates the library’s efforts in building its digital collections. CDS focuses on producing digital materials for use in scholarship and teaching efforts at Brown; digitizing “signature collections” from Brown’s world renowned special collections; developing databases, programs, and applications to enhance access to and use of these materials; and providing consultative services for library and academic units undertaking digital projects. A growing collection of digitized materials, faculty projects, databases, search tools, and finding guides is available at the library’s web site: http://library.brown.edu/cds.
Services for Users with Disabilities

The library works closely with the University’s Disability Support Services to accommodate Brown students, staff, and faculty with special needs. The main entrances to the Rockefeller and Sciences libraries are wheelchair accessible. The John Hay Library is also accessible via the entrance at the rear of the building, where a phone is available to gain admittance by calling the staff at the Reader Services Desk. The service desks in the Rockefeller, Sciences, and Hay libraries can arrange to have materials retrieved from the stacks and provide other special services as required for users with physical disabilities. The Rockefeller Library currently has a computer workstation with magnification and reading software for the vision impaired.

Museums

Gardner House

Gardner House, located at 106 George Street, is the University guest house and a historic house museum. It was built in 1806 for Joseph Hale, a mason, and for many years was a single family residence. Later it was partitioned into a multifamily dwelling, and, during the early 1930s, the owner offered room and board to Brown students.

In 1932 the house was acquired by Brown University. Shortly thereafter, George Warren Gardner, M.D., a member of the Brown Class of 1894, and his wife Jessie Barker Gardner, offered to donate to the University their home on Orchard Avenue and all their antiques. In return, arrangements were made to restore Gardner House and for the Gardners to occupy it for as long as they lived. In accordance with their agreement with the University, upon their deaths, the house became available to Brown as a historic house museum and a guest house. It has been maintained for these purposes since 1948.

In 1979, renovated, Gardner House was reopened as the President’s guest house for distinguished guests of Brown University.

Haffenreffer Museum of Anthropology

The Haffenreffer Museum of Anthropology curates over 100,000 archaeological and ethnographic objects from around the world. The Museum is also the federally designated repository for significant arctic collections from Alaska. The Museum’s Collections and Research Center and offices are located at the museum’s original site on the 375-acre Mount Hope Grant in Bristol, Rhode Island, eighteen miles from Providence--Museum and land having been a gift in 1955 from the heirs of Rudolf Haffenreffer. In 2005, the Museum opened a 2,000 SF gallery on campus, in Manning Hall on the main green. Museum education outreach programs are run from Manning Hall and Giddings House on campus. Since 1955, the Museum has close intellectual and historical ties with the Department of Anthropology, being led by a director with a faculty appointment in the department, offering courses and a master's degree in anthropology-museum studies, guiding undergraduate and graduate students in co-curation of exhibitions. The gallery in Manning Hall is open Tuesday-Sunday, 10-4. For more information see http://brown.edu/Facilities/Haffenreffer/index.html or contact the office manager at 401-253-8388.
Laboratories

The University provides extensive, modern laboratory facilities designed for undergraduate instruction, graduate instruction, and research. The major laboratory facilities include the following.

Physical Sciences Laboratories

Barus and Holley Building: a seven story building housing both the School of Engineering and the Department of Physics. In addition to classrooms and faculty offices, the building contains over fifty laboratory rooms. These rooms are equipped with the latest scientific apparatus permitting research in fields such as: bio- and nano-mechanics, picosecond ultrasonics, low-temperature physics and superconductivity, surface physics, colloidal physics, liquid crystal physics, solid-state physics, magnetic properties of solids, nonlinear optics, high-energy and elementary particle physics, laser systems, microwaves, servomechanisms, instrumentation, solid state electronics, microelectronics, creep and fatigue of materials, materials preparation, transmission and scanning electron microscopy and electron microprobe analysis, scanning tunneling and atomic force microscopy, x-ray diffraction, soil mechanics, dislocation dynamics, dynamic inelasticity, binocular vision, coal gasification, speech recognition; robotics, image processing and computer systems, and the CVD (Chemical Vapor Deposition).

Chemical Laboratories: The instructional laboratories and classrooms are housed in MacMillan Hall. The research programs in inorganic, organic, physical, and biochemistry as well as the offices of the Department of Chemistry are housed in the adjacent Geology-Chemistry building. Facilities include a machine shop, and an electronics shop. The laboratories are equipped with modern instruments for research in chemistry, including NMR, ESR, IR, Raman, UV and mass-spectrometers, X-ray and electron diffraction systems, several state-of-the-art laser facilities, and equipment for ESCA, Auger and photoacoustic spectroscopy. The laboratories contain an extensive array of computational and graphics workstations, linked via networks to departmental minicomputers, to the university’s mainframe, and to remote databases and supercomputing facilities.

Geo-Chem Building, MacMillan Hall, and Lincoln Field Building: These buildings house the Department of Geological Sciences. In addition to classrooms and faculty and graduate student offices, the buildings contain laboratory space and research equipment and facilities including an extensive computing network of workstations and minicomputers which are linked via Ethernet to a campus parallel computing facility and to national networks and supercomputing facilities. Software packages are available for hydrological computations. The MacMillan Undergraduate Science Center houses undergraduate geoscience and environmental science laboratories, office and laboratory space for concentrators, as well as a computer center, well-equipped lecture halls, and a lounge. Planetary Geoscience facilities include a sophisticated image processing and analysis facility, the Brown/NASA Reflectance Experiment Laboratory (RELAB), and an extensive collection of photographs, images, and maps from all planetary exploration missions. Brown/NASA Regional Planetary Data Center makes available to researchers data from the U.S. Space Program. Experimental and analytical labs include: pollen, micropaleontological, and alkenone paleotemperature laboratories, Elzone particle counter, elemental analyzer and the Environmental Stable Isotopes Laboratory for analysis of δ15N, δ18O, δD and δ13C in carbonates and organic samples, several multicollector gas and solid-source mass spectrometers, hydrothermal, gas, and piston cylinder apparatus, electron microprobe/
scanning microscope, X-ray fluorescence analysis facility (XRF), an X-ray diffraction unit, a computer controlled rotary shear gas apparatus for frictional sliding experiments, modified Griggs-type solid medium deformation apparatus (3) for high and low temperature and pressures as well as various strain rates. A jointly owned ion microprobe and a campus Electron Microscope Facility for SEM and TEM studies are available, as well as Raman spectroscopes in other departments. We currently have a radiogenic isotope laboratory and a Thermal Ionization Mass Spectrometer for the analysis of (Rb-Sr, Sm-Nd, U-Pb) in whole rocks and minerals. We are building a new state-of-the-art clean lab for isotopes analysis. Field equipment includes estuarine water sampling equipment (with boats, moorings, CDTs and fluorometers), Leica laser surveying equipment, two ground penetrating radar systems (GPR), portable field spectrometers, gravimeter, field seismic equipment, and equipment for geomagnetic and magnetotelluric measurements.

Life Sciences Laboratories

Genomics Core Facility: The facility provides state-of-the-art genomics and proteomics equipment to researchers at Brown University and to the entire Rhode Island research community, as well as assistance with experimental design, trouble shooting, and data analysis. For more information regarding the services and equipment that will be found at the facility, please go to: http://www.brown.edu/Research/CGP/core/.

Leduc Bioimaging Facility: The facility, open to all investigators, provides equipment and training dedicated to high-resolution imaging in the life sciences. It includes a Transmission Electron Microscope, a Scanning Electron Microscope, two Fluorescence Microscopes, a Fluorescence Stereomicroscope, three Confocal Laser Scanning Microscopes, and software for image analysis. The facility also maintains equipment for sample preparation, including a critical point dryer, sputter coater, and microtomes for ultrathin sectioning. The facility currently offers training and equipment at two locations: in Sidney Frank Hall for Life Sciences and the Laboratories for Molecular Medicine. The facility maintains nine main imaging systems and serves more than 200 users.

Molecular Pathology Core Research Laboratory: The laboratory provides instrumentation and supports personnel in research efforts for both the COBRE mentors and their junior associates, as well as specialty immunohistochemical services for the Department of Pathology. The 1250 square foot facility is equipped with an Arcturus AutoPix automated laser capture microdissection instrument, Olympus BX41 with CoolSnap Camera from Media Cybernetics and Image Pro-Plus Software, Stratagene MX4000 quantitative Real Time PCR system, BioRad iCycler, Agilent BioAnalyser, Ventana Discovery automated immunohistochemistry processor, microtome and cryostat, Beecher tissue arrayer and 40 cubic feet of 80 degrees Celsius freezer space for the tumor bank. For more information contact Trish Meitner, at 401-444-8482.

MRI Research Facility (MRF): The facility occupies a 3000 sq. ft. research suite located in the Sidney Frank Hall for Life Sciences on Brown’s main campus. The centerpiece of the Facility is a state-of-the-art research dedicated Siemens 3 Tesla TIM Trio. The scanner is equipped with 32 receiver channels for significant gains in signal-to-noise ratio and acquisition speed. The MRI Research Facility provides infrastructure and support to facilitate research and educational activities using magnetic resonance imaging technology. The MRF is affiliated with the University's Institute for Brain Science and is a resource available both to Brown researchers and those at Brown affiliated hospitals. Ongoing research includes studies of brain structure and function in normal and clinical populations.
as well as studies of other body systems, non-invasive animal imaging and materials science.

**NSF/EPSCoR Proteomics Facility:** The facility shall have a broadly-inclusive philosophy to ensure rapid and equal access to the facility's services for the entire Rhode Island research community. In addition to the acquisition of instrumentation, the NSF/EPSCoR Proteomics Core Facility will undertake the training of research in emerging proteomic techniques, a component that is essential to maintaining a productive and professional level of service. The NSF/EPSCoR Proteomics Core Facility shall have a strong commitment to be at the leading edge of current and developing technologies and provides consultation on their application. For more information, contact James Clifton, (401) 863-7095 (James_Clifton@brown.edu).

**Outcomes and Biostatistics Core:** The core participates in a wide variety of activities, including consultation on design and analysis for small pilot projects, development of study design for major projects (e.g. R01 proposals), assistance and advice on database construction and management, collaboration on large projects where outcomes measurement and statistical analysis considerations are nontrivial, development of new statistical methodology, and mentorship for junior investigators and fellows. To request services from the biostatistics core, please contact one of the core co-directors. You should describe your project in detail, explain your statistical needs, and provide pertinent deadlines. A member of the core will respond to set up an intake meeting. For more information, contact Joseph Hogan, (401) 863-9243 (jwh@brown.edu).

**Plant Environment Center:** The Center, consisting of research greenhouses, a classroom laboratory and Conservatory, is located at 91 Waterman Street. We provide an educational research facility which is primarily available to those in the Department of Ecology and Evolutionary Biology, a part of the Division of Biology and Medicine. The facility is comprised of 3 research greenhouses approximately 5,000 sq.ft. used for research experiments and a teaching plant collection for biological science classes. There is also a Conservatory of approximately 2000 sq.ft. The collection includes many plant families, including a diverse collection of Cycads, Orchids, Aroids, and many plants from the Amazon region. Many of these plants have medicinal and ceremonial uses and are part of our Ethnobotanical collection.

In addition to the greenhouse facilities, we have five E7/2 Conviron Plant Growth Chamber units, as well as one eighty square foot walk-in chamber. These units are used by graduate students and professors with very specific cultural requirements for optimal plant growth. For more information, contact Fred Jackson, Manager (401) 863-3077 (Fred_Jackson@brown.edu).

**Walter S. Hunter Laboratory** houses most facilities for research and teaching in psychology. Psychology is the branch of the life sciences that studies how we perceive, learn about, and remember the world around us, how we develop physically and socially, and how we interact with our fellow humans. Modern psychology studies both human and animal behavior, employs both observational and experimental methods, and incorporates many levels of analysis— including biological and neural, evolutionary, cognitive, and social.
The Harriet W. Sheridan Center for Teaching and Learning was founded in 1987 to provide professional development in pedagogy for faculty, post-doctoral fellows and graduate teaching assistants to support the quality of undergraduate and graduate instruction within the University. Today, the Center supports members of the Brown teaching community across the disciplines in building reflective teaching practices which ensure that a diverse student body has the best possible environment for learning. The Center plays a crucial role in facilitating the ongoing development of the mutually productive relationship between teaching and research among faculty, post-doctoral fellows, graduate students, and undergraduate students in the open Brown curriculum. The Center also assists graduate students prepare for productive professional teaching careers after graduation from Brown.

To serve the needs of its constituencies, the Sheridan Center offers a variety of programs, services and publications. Programs include public Teaching Forums, the Sheridan Teaching Seminar lecture series, and four Sheridan Center Teaching Certificate programs (I: Building a Reflective Teaching Practice; II: Classroom Tools; III: Professional Development Seminar for Advanced Graduate Students; and IV: the Teaching Consultant Program). The Center also offers orientations and seminars for new and junior faculty, including the Junior Faculty Roundtable. Specific topics and concerns are addressed in seminars for faculty and graduate students.

A variety of Consulting Services provide the Brown teaching community with individual feedback on classroom performance, course revision, conference/poster session presentation skills, and broader impact statements for grant applications. Through the network of faculty and graduate student liaisons to academic departments, the Center assists with the design and implementation of seminars on discipline-specific teaching and learning. The Center also maintains a resource library of books, articles, journals and videotapes on teaching and learning issues for members of the University teaching community.

Sheridan Center publications (in both printed and electronic form) include The Teaching Exchange, Handbooks and a web site. The Teaching Exchange is a bi-annual forum for the exchange of ideas about pedagogy within the Brown community. Handbooks include Teaching at Brown, Constructing a Syllabus, The Teaching Portfolio, and Teaching and Persuasive Communication and Teaching to Variation in Learning. The videotape Effective Teaching for Dyslexic/All College Students is distributed nationally to facilitate understanding of learning diversity in the classroom. The Center's web site (http://www.brown.edu/Administration/Sheridan_Center/) offers 24/7 access to information about teaching resources, Center activities, on-line editions of all publications, and two unique, interactive, pedagogical workshops. The Sheridan Center is centrally located in Lippitt House at 96 Waterman St. For information about the Center and resources for teaching at Brown, please contact: (401) 863-1219; or Sheridan_Center@Brown.edu; Brown University, Box 1912, Providence, RI 02912.

Director: Kathy M. Takayama, Ph.D.
Associate Director: Laura E. Hess, Ph. D. (Humanities and Social Sciences).
Postdoctoral Research Associate: David Lorch, Ph.D. (Life and Physical Sciences).
Computing Services

Computing and Information Services (CIS) is the centralized support organization at Brown University for information technology. CIS is responsible for maintaining distributed and centralized computing service on campus, supporting academic and administrative departments in the effective and efficient use of these technologies, and promoting an understanding of evolving technologies. It provides a broad range of computing support services based on a diverse set of hardware, including a mainframe, mid-range servers and desktop computers, all linked through a campus backbone and departmental networks. The department is also responsible for the communications infrastructure of the University, providing voice, data and video services.

CIS directly supports the entire Brown community by providing customer-focused services for personal desktop hardware and applications. The Help Desk offers technical support to students, faculty and staff both at its offices on the first floor of the CIT building and in dorms and offices through its Service on Site (SOS) program. The community can also download a comprehensive suite of desktop applications from CIS's web site (http://www.brown.edu/cis), a good starting point for an introduction to available computing resources.

One of CIS's most mission-critical roles is providing the technological services necessary to support Brown's research and instruction. Faculty can benefit from technology tools such as the course management system (WebCT) and the Personal Response System, seminars and training, and one-on-one consultations offered by the Instructional Technology Group, which also collaborates with the Sheridan Center for Teaching and Learning and the University Library. The Faculty Grants Program allows faculty to pursue specialized projects in academic research, teaching, and scholarly communication using advanced information technology. The program is overseen by the Scholarly Technology Group. The Student Technology Assistants (STA) also offer assistance to Brown University faculty and graduate TAs in the creation of digital course material.

Staff can take advantage of hundreds of classes each year on productivity and web publishing software offered by Computer Education. Students can register for evening classes on technology they may encounter in both their academic and professional careers.

Much of CIS's crucial work occurs behind the scenes. This includes the management of both the hardware and software infrastructure for campus-wide services such as electronic mail, high speed Internet connectivity, BOCA (Brown Online Course Announcement), applications distribution, the on-line purchasing system, shared file services, and instructional services. These reside on highly reliable central Unix, Novell, NT, and mainframe business and information systems. This distributed computing environment is connected by a campus-wide network of in-building and inter-building wiring over which voice, data and video services are transmitted in the more than 230 buildings housing Brown employees and students.

The transmission of all this critical data occurs within a firewalled environment overseen by CIS's IT Security group. They are charged with the development and delivery of security standards, policies, best practices, and solutions to ensure information security across the University.

Other computing resources includes the public clusters located in the CIT building and the Rockefeller and Science libraries. The clusters are staffed by student consultants and offer both Macintosh and Windows computers as well as scanners, printers and data storage devices. Internet kiosks are also available, providing walk-up service 24 hours a day at convenient campus sites to help locate a person or resource, or quickly check email when
on the run. In the summer of 2006, CIS began a project to provide wireless access to the network across campus including all of the residence halls.

CIS is housed in several buildings. Support services such as the Help Desk and Service & Repair, are located in the CIT building, on the corner of Brook and Waterman Streets. More information is available at http://www.brown.edu/cis.

Office of Continuing Education

The Office of Continuing Education (CE) is responsible for the Summer Session which provides credit-bearing courses on campus, at Pfizer, and at international sites, as well as a large array of non-credit summer courses for pre-college students and Continuing Studies courses offered year-round for adult learners in the Southern New England Region. The division was created in 2003 through a merger of the Special Studies Office and the Office of Summer Studies, and was renamed the Office of Continuing Education in 2009 in recognition of expanding efforts to offer academic programs year round and to new student populations.

The Special Students program provides non-degree adult students the opportunity to apply and register for University courses. The Pfizer program is a joint offering of CE and the Medical School, providing graduate level credit courses that may lead to the AM degree in Biology for employees at the Pfizer plant in Groton, Connecticut. International students also come to the Brown campus to study English and to take many other courses through the multiple programs offered by this office.

In 2006 the former Brown Learning Community was replaced with the Continuing Studies program, encompassing a broad array of non-credit courses for adult learners. College and pre-college courses on campus, online, and in international and other sites away from campus (as close as the Haffenreffer Estate and as far as Hawaii) are developed for summer, winter break and year-round offering.

The Office of Continuing Education now provides opportunities for faculty to develop innovative curricular offerings and manages the registration, student life and curriculum support services that make possible access to Brown’s academic expertise for over 3,000 non-degree students each year. For more information please visit: www.brown.edu/ce or call (401) 863-7900.

University Events and Conference Services

The University Events and Conference Service Office was merged into the Department of Facilities Management in July, 2010. Adopting the concept of a twelve-month business model, this area aims to provide high quality, cost-effective event-planning services for the Brown community and outside groups. Restructured in Winter ‘05 to become a more service-oriented, “one-stop-shop”, the office strives to provide logistical coordination for all types of meetings, programs, and events from academic symposia and departmental receptions to corporate retreats, association meetings, and summer sports camps. University Events and Conference Services is dedicated to meeting the individual needs of each conference group while maintaining the high level of quality expected of events at
Brown University. This office enables faculty and staff on campus, and agencies off campus, to work with a single office which then interacts with all campus service offices to arrange for the booking of campus meeting space, facilities services, catering, residential arrangements, media services and all other meeting and event components.

Research at Brown University

For information please visit the following website: http://research.brown.edu/.

Arrangements with Other Institutions

American Academy in Rome
Free tuition in the School of Classical Studies in the Academy is available to qualified graduates, and occasionally to qualified undergraduates, of Brown University who are admitted to the Academy. For further information consult the Chair of the Department of Classics or communicate directly with the Executive Secretary, American Academy in Rome, 7 East 60th Street, New York, New York 10022.

American School of Classical Studies at Athens
The establishment at the American School of Classical Studies of a fund of $10,000, known as “The Albert Harkness Fund for the Benefit of Brown University,” secures the privilege of reduced tuition in the School for all adequately prepared graduates and, in exceptional cases, undergraduates of the University. Information concerning the School may be obtained from the Chair of the Department of Classics.

With the extensive Gennadius collection of works on Greek art, literature, and history, including Byzantine and more recent history of the Near East, the American School also offers exceptional advantages to students of Byzantine history, archaeology, and literature. During the summer the School also operates a six-week archaeological study tour of Athens and other sites of interest in Greece. This session is open to advanced undergraduate and graduate students.

Intercollegiate Center for Classical Studies
Brown University is a member of the Intercollegiate Center for Classical Studies in Rome. Qualified undergraduates may apply to study during their junior year at the center, which is maintained and staffed by classical scholars from cooperating institutions. For further information consult the Chair of the Department of Classics.

American Schools of Oriental Research
As a charter corporate member of the American Schools of Oriental Research, Brown participates in the sponsorship of archaeologically related study and research in ASOR programs in Jerusalem, Amman, and Nicosia. The programs of the ASOR institutes are
centered in Ancient Near Eastern and Mediterranean studies. Information concerning ASOR may be obtained from the Department of Religious Studies and the Program in Judaic Studies.

Exchange Scholar Program
For advanced graduate students. For information please see the Graduate School website: (http://www.brown.edu/gradschool/academics-research/partnerships-exchanges/exchange-scholar-program).

Rhode Island School of Design
As a result of a cooperative arrangement, all students of Brown University (undergraduate, graduate, and medical) may elect certain courses at the Rhode Island School of Design. Registration is on a space-available basis and is subject to written permission of the RISD instructor and the RISD Registrar. Students register for such work under Brown course numbers. Fall, spring, and winter term courses may be taken under this arrangement. Because Brown does not have a winter term, winter term courses will appear on the student’s spring registration and will be counted as one of the five courses for which the student is eligible to register. Students wishing to take RISD courses in the summer should consult with a dean. A grade of C or better at RISD is required for degree credit at Brown. Additional information regarding policies and procedures for cross-registration at RISD may be found on the Brown registrar’s Web site: http://brown.edu/Administration/Registrar/guidelines/registration/index.html#risd.

The Brown University-Tougaloo College Partnership (BTP)
On May 18, 1964 - the 10th anniversary of the Supreme Court's landmark Brown v Board of Education decision - Brown University in Providence, RI, and Tougaloo College a historically black college in Jackson, MS, developed a ‘cooperative agreement’. With the issues of Civil Rights confronting both institutions, they stepped into a relationship that despite early understandable conflict, has remained a unique collaborative venture that engages the culture, academia, and histories of these two distinctive institutions.

For over 40 years, this relationship has transformed and inspired lives through student and faculty academic and cultural exchanges, collaborative research ventures, and administrative initiatives.

There are Advisory Boards and Committees on each campus that govern and oversee all activities. These groups meet regularly to design projects and programs that continually reflect the needs of each institution and of society at large.

Through our various program and projects, over 500 students and faculty have participated in the BTP since inception.

Students, faculty, and others having an interest in BTP and wishing additional information about it should visit the web site at: http://www.brown.edu/Administration/Brown_Tougaloo.

Urban Education Semester
The Urban Education Semester (UES) is an interdisciplinary immersion program that introduces students from all academic backgrounds to the complexity of issues facing urban public education. The program addresses topics ranging from theories of child development
and child-centered learning to creating mission-driven schools and the systemic implementation of policies and school reform.

Open to undergraduates attending member colleges of The Venture Consortium, the program offers supervised fieldwork in a diverse selection of classrooms and educational settings in New York City public school classrooms. The coursework as well as individual and group-oriented advising are offered by faculty at Bank Street College of Education, which has been cited as one of the top three teacher preparation programs in the country. Through a programmatic design that integrates theory and practice, students are encouraged to examine their classroom placement experiences, where they spend three days a week, alongside the theoretical frameworks they study in their courses at Bank Street. Students receive a full semester of credit, and students receiving financial aid will continue to do so.

For additional information please visit: http://www.brown.edu/Administration/Dean_of_the_College/courses/ues.php or http://www.brown.edu/Administration/Venture/.
Prizes, Premiums, and Honors

Complete details concerning endowed funds from which prizes and premiums are paid and special conditions which must be taken into consideration in making awards may be obtained from Stephen Lassonde, Deputy Dean of the College.

The University reserves the right to withhold any award for any reason it deems valid.

**Prizes for Excellence in Preparatory Studies**

Prizes for excellence in certain preparatory studies are awarded each year during the first semester to members of the entering class on the basis of special examinations as described below. Examinations separately judged with separate awards but covering the same material are conducted simultaneously for both men and women.

The competitions in Greek, Latin, and Mathematics are open to all freshmen. However, those in the French, German and Spanish languages, respectively, are open only to those freshmen whose knowledge of the language concerned has been gained through secondary school studies rather than from family or community contacts.

**The President Francis Wayland Prizes**, derived from the income of a fund presented in 1843 by President Wayland, and later increased, are awarded each year to those members of the freshman class who upon examination are found to excel in preparatory Greek and Latin.

**The Hartshorn Prizes in Mathematics**, derived from the income of a fund presented to the University in 1872 by Joseph Charles Hartshorn of the class of 1841, are awarded each year to the two members of the freshman class who are found to excel in an examination on elementary algebra (through quadratic equations and the binomial theorem) and plane geometry.

**The Hypatia Prizes in Mathematics**, derived from the income of a fund named for Hypatia of Alexandria, and presented anonymously in 1951, parallel for women freshmen the Hartshorn prizes for men.

**The Albert Bushnell Johnson Prizes in French** are derived from part of the income of the Albert Bushnell Johnson Fund bequeathed to the University in 1949 by Edward K. Aldrich, Jr. and are awarded each year to the two members of the freshman class who are found to excel in preparatory French.

**The Caesar Misch Prizes in German**, established in 1913 by a gift of Mrs. Marion L. Misch, are awarded to the two members of the freshman class who are found to excel in preparatory German.

**The Asa Clinton Crowell Prizes in German**, derived from the income of a fund established in 1928 by alumnae of the University, are awarded to the two women members of the freshman class who are found to excel in preparatory German.

**The Lope de Vega Prizes in Spanish**, established in 1962 by anonymous gift, are awarded to two men of the freshman class who are found to excel in preparatory work in Spanish.
THE GABRIELA MISTRAL PRIZES IN SPANISH, established in 1962 by anonymous gift, are awarded to two women of the freshman class who are found to excel in preparatory work in Spanish.

Prizes and Premiums for Excellence in Undergraduate Studies

THE KIM ANN ARSTARK MEMORIAL AWARD IN POETRY is derived from a fund established in 1971 by Mr. and Mrs. Lester D. Arstark in memory of their daughter. It is awarded annually for a poem or poems “in celebration of life.”

THE DEREK CANFIELD BARKER PRIZE was established in 1994 through a gift from Richard C. Barker ‘57 and Abbie D. Paterson ’57 in memory of their son, Derek. The purpose of this prize is to recognize students who have shown qualities of leadership, who have triumphed over adversity, and who have worked to bring the Brown community together through community service.

THE ALBERT ARNOLD BENNETT, CLASS OF 1872, AWARD FUND was established by an anonymous donor through several gifts made between 1941 and 1949. The fund is in memory of the Reverend Albert A. Bennett, D.D., pioneer missionary to Japan, and is available annually for award purposes, but not continuously for any one object.

THE PHILo SHERMAN BENNETT PRIZE was established in 1904 by Philo Sherman Bennett for the “best essay discussing the principles of free government.”

THE HONORABLE THOMAS WILLIAMS BICKNELL MEMORIAL AWARD was established in 1963 by the National Society of Sons and Daughters of the Pilgrims as a memorial to Thomas Williams Bicknell. The prize is awarded for an essay in American history.

THE BRAND MUSICAL PREMIUM is derived from a fund established in 1960 by William C. H. Brand as a memorial to William and Mina R. Brand and is divided equally between two seniors of Brown University, one man and one woman, on the basis of merit.

THE TRISTAM BURGES PREMIUM IN ENGLISH, instituted in 1953, is given at the end of the junior year to the woman student “with the highest standing in rhetoric, English composition, and public speaking.”

THE BUXTEHUDE PREMIUM FOR MUSICAL EXCELLENCE was established by a gift from an anonymous donor to provide annual premiums for one or more undergraduates in the junior year.

THE THOMAS CARPENTER PRIZES FOR ELOCUTION, derived from the income of a fund established in 1867 by Thomas Carpenter, are awarded each year to the three students to whom are assigned the first, the second, and the third rank of excellence in elocution.

THE THOMAS CARPENTER AND LYDIA CARPENTER PREMIUMS were established in 1869 by Lydia Carpenter, on behalf of her late brother. They are assigned at the end of the academic year to the two members of the senior class who, “already on scholarships, shall, in the judgment of the faculty, unite in the highest degree the three most important elements of success in life—ability, character, and attainment.”
THE HOPE CHATTERTON PRIZE IN MUSIC, to memorialize Hope Chatterton, was instituted in 1946, by anonymous donation. A prize is given in the spring to a woman student who in public audition is deemed to excel in piano performance.

LEALLYN B. CLAPP PRIZE for an outstanding undergraduate thesis in chemistry. The prize honors Professor Clapp, who retired in 1983 after a long and distinguished career in the Brown chemistry department.

THE CLASS OF 1873 PRIZES are derived from the income of a fund presented in 1877 by the class of 1873 and are awarded each year to seniors for essays on such topic(s) as the “faculty may, from time to time, deem most expedient.”

THE CLASS OF 1906 MEMORIAL PREMIUM was established in 1956 by the will of Harry Knowles, Brown 1906. Currently the premium is awarded to a student who has completed with highest distinction the honors program in Russian studies.

THE CLASS OF 1952 PREMIUM is derived from the income of a fund established in 1952 by the Class of 1952, at the College. It is awarded annually to an outstanding student at the end of his or her junior year, on the basis of excellence in scholastic achievement and extracurricular activity.

THE CLARKSON A. COLLINS, JR., PRIZE IN AMERICAN HISTORY is derived from the income of a fund given to Brown University in 1941 by Letta I. Collins in memory of her son. An annual prize is offered for the best paper on any approved topic dealing with the American Merchant Marine or Navy. Competition is restricted to men in the junior or senior class.

THE ROBINSON POTTER DUNN PREMIUM is awarded from the income of a premium scholarship fund presented to the University in 1872 by pupils and friends of Professor Robinson Potter Dunn is given, at the end of the junior year, to the student “with the highest standing in rhetoric, English composition, and public speaking.”

THE ADOLPH CONRAD ELY PREMIUM IN GERMAN is derived from a fund bequeathed in 1941 to Brown University by Adolph Conrad Ely, teacher, of the class of 1894. A premium is awarded annually to the senior with highest standing in Germanic languages and literature.

THE BETH LISA FELDMAN PRIZE IN ENGLISH COMPOSITION is derived from a fund established in 1966 by Mr. and Mrs. Robert Feldman. This competition is open to all students of the University. Preference is given to the writing of stories for children.

THE WILLIAM LEOPOLD FICHTER PREMIUM IN SPANISH was established in 1962 by anonymous gift. The premium is awarded to a member of the junior class who has the highest standing in courses in Spanish language and literature.

THE IRVING LYSANDER FOSTER PREMIUM IN FRENCH is awarded from the income of a fund established in 1940 by Warren Woden Foster and Hatie Foster Moore in memory of
their father, Irving Lysander Foster, of the class of 1893. The premium is awarded at the end of the academic year to that freshman who excels in French.

THE LAFAYETTE SABINE FOSTER PRIZE IN GREEK is derived from the income of a fund bequeathed in 1880 by the Hon. Lafayette Sabine Foster, of the class of 1828. This income is to be paid annually “to that scholar of the institution who passes the best examination in the Greek language, the examination to be made in the first, third, sixth, and twenty-fourth books of Homer’s Iliad, or in the Oration on the Crown by Demosthenes.”

THE GASPEE CHAPTER DAUGHTERS OF THE AMERICAN REVOLUTION PRIZE. This prize, instituted in 1895, is now paid from the income of a fund presented to Brown University in 1899. The prize is awarded annually to that woman student who presents the best paper written as a class assignment in an American history course.

THE WILLIAM GASTON PREMIUM SCHOLARSHIP is provided by the income of a fund established in 1899 by the widow and the children of the Hon. William Gaston. LL.D., of the class of 1840. The scholarship is awarded to a member of the senior class solely upon scholarly merit.

THE WILLIAM GASTON PRIZE FOR EXCELLENCE IN ORATORY. From the income of a fund established in 1894 as a memorial to the Hon. William Gaston, LL.D., of the class of 1840, a prize is awarded annually to the member of the graduating class who presents the best original address.

THE PRESTON GURNEY LITERARY PRIZES are derived from the income of a fund bequeathed in 1928 to Brown University by Preston Gurney, of the class of 1866. From the income of the endowment two prizes are awarded annually to members of the senior class for the best essays on approved literary topics.

THE FRANCES MASON HARRIS ’26 PRIZE established in 1983, is awarded annually to a woman undergraduate or graduate student for a book-length manuscript of poetry or prose-fiction.

THE MARION HASSENFELD PREMIUM IN MUSIC is paid from a fund bequeathed in 1960 by Marion Hassenfeld. It is an annual award to a woman student who “excels in music or music appreciation.”

THE MINNIE HELEN HICKS PRIZE IN ENGLISH is awarded at the end of the senior year to the woman student who has “the highest standing in the courses in English literature and language.”

THE MINNIE HELEN HICKS PRIZES IN ART are awarded from income of the Minnie Helen Hicks Fund, for creative work in art by women students.

THE MINNIE HELEN HICKS PRIZES IN CLASSICAL APPRECIATION, instituted in 1953 from income of the Minnie Helen Hicks Prize Fund, is currently awarded to the woman undergraduate who presents the best paper in the course in Greek art and archaeology or in Greek and Roman history, these being offered in alternate years.

THE MINNIE HELEN HICKS PRIZES FOR ELOCUTION parallel, for women students, the Thomas Carpenter Prizes for Elocution established in 1867 for men students.

THE RATCLIFFE HICKS PREMIUM IN ENGLISH, established in 1915, from income from the Ratcliffe Hicks Fund of 1907, is awarded at the end of the senior year to the male student who has “the highest standing in the courses in English literature and language.”
THE RATCLIFFE HICKS PRIZES AND PREMIUMS FOR EXCELLENCE IN DEBATE, established in 1891 by the Hon. Ratcliffe Hicks, of the class of 1864, and by bequest in 1907, are awarded annually for intercollegiate debates and interclass debates.

THE DAVID HOWELL PREMIUM is awarded from income of a premium scholarship fund presented to the University in 1866 by Gamaliel Lyman Dwight in honor of his grandfather, David Howell. The premium is given at the close of the first semester of the senior year to the student who, “having a good record of deportment, has the highest rank in Mathematics and Natural Philosophy.”

THE DOMENICO A. IONATA FUND, established by gifts of the family of Domenico A. Ionata, Class of 1926, provides for a premium to be awarded annually to that senior concentrating in engineering who demonstrates an unusual degree of creativity and imagination in an independent study project.

THE JIN PRIZE FUND was established in 1997 in honor of the late Professor Young-Son Jin and his wife, Mrs. Kyunghee Jin. This prize will be awarded to the most outstanding graduating senior on the basis of academic achievement and service.

THE PROFESSOR I. J. KAPSTEIN FUND, established by friends, students, and colleagues of Professor Kapstein, provides a premium for that undergraduate who has done the best work in the areas of literature, creative writing, or theater arts.

THE JAMES F. KIDWELL PRIZE IN GENETICS OR POPULATION BIOLOGY is awarded each year to a graduating biology concentrator for excellence in course work and research in these areas. The prize is in honor of Professor Kidwell.

THE NOAH KRIEGER MEMORIAL FUND was established in 1995 by family and friends of Noah Krieger, Class of 1993. Awards from this fund are given annually to one or more seniors studying in the A. Alfred Taubman Center for Public Policy and American Institutions who have demonstrated outstanding accomplishment and intellectual ability.

THE SAMUEL C. LAMPORT PRIZES IN INTERNATIONAL UNDERSTANDING, first offered in 1943 by annual gift of the Trustees of the Samuel C. and Miriam D. Lamport Foundation, are now awarded from the income of a fund donated to Brown University in 1952 by these trustees. The prizes are offered to undergraduate students for papers on international understanding, with emphasis on cooperation and tolerance.

THE LUCIUS LYON PRIZES IN LATIN are derived from the income of a fund presented in 1893 by Mrs. Caroline L. Lyon, in memory of her husband, Lucius Lyon, of the class of 1844. The prizes are awarded on the basis of a special examination relating to any or all of the following subjects: the Latin language, Latin literature, Roman history.

THE GEORGE H. MAIN ’45 FUND, established by gifts of the family and friends of George H. Main, class of 1945, provides for a premium to be awarded annually to that senior in engineering who is distinguished by his diligence and devotion to studies rather than for high grades and who holds promise of success in his field.

THE MURIEL HASSENFELD MANN PREMIUM IN MUSIC is paid from a fund bequeathed to the University in 1960. An annual award is made to a woman student who excels in music, music appreciation, or both.

THE HENRY PARKER MANNING MATHEMATICAL PRIZES, instituted in 1936 by annual gift, as the “Calculus Prizes,” are now paid out of the annual income of a fund established
THE BISHOP MCVICKAR PRIZES were instituted in 1909 by the Rt. Rev. William Neilson McVickar, Bishop of the Protestant Episcopal Diocese of Rhode Island, 1898–1910, and are now awarded from the income of a fund established in 1923 in his memory by his sister, Miss E. C. McVickar. The prizes are awarded for the best papers submitted under conditions designated by the Department of Religious Studies.

THE ALEXANDER MEIKLEJOHN PREMIUM IN LOGIC is paid from income of a fund established anonymously in 1951. The premium is awarded to a freshman, sophomore, or junior who excels in logic and related subjects.

THE EVA A. MOOAR PREMIUM is derived from a fund established in 1967 by the gift of Mrs. Edward M. Kanzler (Lydia W. Mason ’31) honoring Eva A. Mooar, Pembroke Dean of Admissions 1926–54. It is awarded annually to that woman student of the senior class “whose achievement over her college years gives evidence of the greatest mental growth and who has contributed to the college and to the community.”

THE WALTER JOSEPH NELSON MEMORIAL PREMIUM FOR EXCELLENCE IN MUSIC, instituted in 1957, is paid from an expendable fund given to the University by friends of the late Dr. Walter J. Nelson, Brown 1934.

THE JAMES ALDRICH PIRCE PRIZE is awarded from the income of a fund established in 1927 by Miss Florence Pirce in memory of her brother, a member of the class of 1892. The prize is currently awarded to the male undergraduate who presents the best paper in the course in Greek art and archaeology or in Greek and Roman history, these being offered in alternate years.

THE MORRIS L. POVAR PRIZE IN PHYSIOLOGY OR ZOOLOGY is awarded annually to a senior biology concentrator for outstanding academic performance and research. The prize was established in honor of Professor Povar.

THE ROYCE FELLOWSHIP, established by a generous gift from Charles M. Royce, ’61, recognizes undergraduates who have gained distinction for their outstanding scholarship, leadership, creativity, and service.

THE HAROLD SCHLOSBERG MEMORIAL PREMIUM IN PSYCHOLOGY is derived from income of a fund established in 1964 by the colleagues, former students, and friends of Harold Schlosberg, professor of psychology and chair of the department, 1954–1964. It is awarded annually to an outstanding senior concentrating in psychology.

THE MURIEL FAIN SHER MEMORIAL PREMIUM IN PSYCHOLOGY is derived from the income of a fund established in 1952 by the friends of Muriel Fain Sher. It is awarded...
annually to the most outstanding woman student in the senior class “showing the greatest promise in the field of Psychology.”

THE SUSAN ROSS STEINFIELD MEMORIAL FUND was established in 1984 by the family and friends of Susan Ross Steinfield, class of 1961. Awards from this fund are made to seniors who have contributed significantly to the performing arts during their undergraduate years.

MARGARET B. STILLWELL PRIZE awarded each year by the John Russell Bartlett Society for the best collections of books developed by undergraduates attending colleges in the state of Rhode Island. Entry forms available at the John Carter Brown Library.

THE GILBERT STUART PRIZES IN ART have been awarded since 1965, from income of the Gilbert Stuart Prize Fund, established in 1955–56 by friends of Brown University and of the art department, and named in honor of the renowned painter, a native of Rhode Island, for creative work in art.

THE TECHNICAL ANALYSIS CORPORATION AWARDS given annually by Dr. David M. Rosenbaum ’56, President of TAC, to an undergraduate member of Sigma Xi and Tau Beta Pi who best exemplifies the ideal of “whole person” by demonstrating excellence and initiative outside science and engineering.

THE ROHN TRUELL PREMIUM IN APPLIED MATHEMATICS is derived from income of a fund established in 1968 by friends of Rohn Truell, former professor and chair of the Division of Applied Mathematics. It is awarded annually to a member or members of the senior class concentrating in applied mathematics, who during their studies at Brown have achieved high distinction.

THE MARJORIE HARRIS WEISS MEMORIAL PREMIUM IN HISTORY is awarded annually to the outstanding undergraduate woman student majoring in history.

THE ROSAMOND WINSLOW WOODWIND PRIZE established by Mr. and Mrs. Marcellus D. Lemaire and friends of Miss Rosamond W. Lemaire, Pembroke 1961, is given on the basis of a public audition.

Advanced Awards

THE SAMUEL T. ARNOLD FELLOWSHIPS were established in 1964 by Thomas J. Watson, Jr., ’37, in memory of Samuel T. Arnold, class of 1913, who was dean at Brown from 1929 to 1949 and later provost of the University. The fellowships provide unusually promising seniors with a year of foreign travel and independent study following graduation.

THE HARVEY A. BAKER FELLOWSHIPS were established in memory of Harvey A. Baker, class of 1903, by his wife. These fellowships support the first year of graduate or professional study for students who “have high scholastic standings, have participated in college activities, and have shown qualities of leadership” at Brown.

THE ANNE CROSBY EMERY ALUMNAE FELLOWSHIP provides financial assistance to women in the graduating class who continue their education in professional or graduate school. The fellowship was established in 1914 by the Alumnae Association to honor Anne Crosby Emery, the second dean of the Women’s College of Brown University.

THE BERNARD ROY POLLOCK MEMORIAL PRIZE established in 1984 to honor the memory of Bernard Roy Pollock of the class of 1948, is awarded to a graduating senior,
accepted at an accredited law school, who “best exemplifies the personal and professional characteristics which made Bernie Pollock an outstanding member of the communities in which he lived and worked.”

THE WILLIAM ROBERT POTTER, 1887, PREMIUM IN CHEMISTRY, was established in 1942 from income of a fund bequeathed by William R. Potter. The premium is awarded “on the basis of a thesis of highest merit submitted by a postgraduate student specializing in chemistry.”

THE BARRY JAY ROSEN PREMIUM IN MOLECULAR BIOLOGY was established in 1966 by friends and associates of Barry Jay Rosen, a graduate student at Brown from 1962–1965, who was awarded the Ph.D. degree posthumously in 1966. The premium is awarded to a graduate student for high achievement in the field of molecular biology.

THE BROWN CHAPTER OF SIGMA XI AWARD FUND was given to Brown University in 1954 by the Brown Chapter of Sigma Xi for an award toward the encouragement of science, whether for research, teaching, or otherwise.

Honorary Societies

Phi Beta Kappa

The Rhode Island Alpha of the Phi Beta Kappa Society was established at Brown University in 1830. Phi Beta Kappa seeks to reward “acquisition of liberal culture; command of cultivated expression in speech and writing; intellectual honesty and tolerance; breadth of intellectual interest; understanding not merely knowledge.” In terms of present day concerns and curricular structures, this is interpreted to mean that Phi Beta Kappa seeks to recognize, and thus to encourage, intellectual distinction among undergraduates, as attested by substantial formal evidence of outstanding academic accomplishment in the course of a broad educational experience. Excessively narrow preoccupation with any discipline or field of study may constitute grounds for disqualification even in cases of unquestionably superior academic performance. At least 40% of a candidate’s course work must be in mathematics, humanities, or the social sciences.

Election to Phi Beta Kappa is very competitive. Although not more than one-sixth of the candidates for the bachelor’s degrees (A.B. and Sc.B.) may receive invitations to become members, in recent years no more than one-tenth of a class has generally been invited into membership.

Additional information is available at:
http://www.brown.edu/Administration/Dean_of_the_College/degree/

Sigma Xi

The Society of the Sigma Xi was founded in 1886 for the encouragement of original investigation in science, pure and applied. The Brown University Chapter, established in 1900, sponsors lectures in a variety of scientific disciplines during the academic year.

Nominations for membership are made by representatives of the various science departments. From the list of nominees the Board of Electors, meeting in February each year, elects those deemed eligible. This Board consists of the Chapter President, the Chapter Secretary, who acts ex-officio as Chair, and a representative from each of the following departments: Applied Mathematics, Biology and Medicine, Chemistry,
Cognitive and Linguistic Sciences, Computer Sciences, Engineering, Environmental Studies, Geological Sciences, Mathematics, Neuroscience, Physics, Psychology.

Tau Beta Pi

The Tau Beta Pi Association, national engineering honor society, was founded at Lehigh University in 1885 to mark, in a fitting manner, those who have conferred honor upon their alma mater by distinguished scholarship and exemplary character as undergraduates in engineering, or by their attainments as alumni in the field of engineering, and to foster a spirit of liberal culture in the engineering colleges of America. Each chapter has full control of its individual affairs, the control being vested primarily in the undergraduate members. An alumni advisory board may act in an advisory and judiciary capacity.

To be eligible for election to membership as an undergraduate, the student must be in either the junior or senior year. To be eligible as a junior, scholastic records must fall within the top eighth of the class and as a senior the top fifth. Distinguished scholarship, while the primary requisite for admission, is not considered the sole criterion. After the scholarship requirements have been fulfilled, the selection is based on integrity, breadth of interest both inside and outside of engineering, adaptability, and unselfish activity. An alumnus, either of Brown University or other accredited engineering schools, may be elected to membership if he or she has a proven record of character, ability, and integrity, the election still being made by the undergraduate chapter.

The Rhode Island Alpha Chapter was installed at Brown University on February 12, 1954. At the time of the installation of the chapter, in addition to the charter members, 128 alumni members were initiated, mostly alumni who would have been eligible for membership in the society had the chapter existed prior to their graduation.

Rosenberger Medal

The Susan Colver Rosenberger Medal of Honor is awarded by designation of the Faculty. Provision for the medal was made in 1919 by Jesse L. Rosenberger as a memorial to his wife, with the stipulation that it be used to recognize “specially notable or beneficial achievement in scholarship, in authorship, in public life of any kind, or relating to the
advancement of the public welfare, or for whatever it may be thought best thus to honor and commemorate. . . .” The recipients and years of past awards are the following:

<table>
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<tr>
<th>Name</th>
<th>Year</th>
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<td>William Williams Keen</td>
<td>1925</td>
<td>Thomas John Watson, Jr.</td>
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<td>1928</td>
<td>Henry Merritt Wriston</td>
<td>1976</td>
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<td>Howard Robert Swearer</td>
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<td>Fred Tarbell Field</td>
<td>1940</td>
<td>Otto Eduard Neugebauer</td>
<td>1987</td>
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<td>Henry Dexter Sharpe</td>
<td>1944</td>
<td>Roderick Milton Chisholm</td>
<td>1992</td>
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<td>Zechariah Chafee, Jr.</td>
<td>1947</td>
<td>Vartan Gregorian</td>
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<td>Warren Randolph Burgess</td>
<td>1953</td>
<td>Sheila E. Blumstein</td>
<td>2001</td>
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<td>Rowland Roberts Hughes</td>
<td>1955</td>
<td>Artemis A.W. Joukowsky</td>
<td>2005</td>
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<td>1956</td>
<td>Martha Sharp Joukowsky</td>
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<td>1959</td>
<td>Claiborne deBorda Pell</td>
<td>2006</td>
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<td>Waldo Gifford Leland</td>
<td>1965</td>
<td>Stephen Robert</td>
<td>2007</td>
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<td>Charles C.J. Carpenter</td>
<td>2009</td>
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**Summary of Degrees**

As of May 2009, there were enrolled the names of 113,125 graduates, both men and women. Of this number 87,898 had received the bachelor’s degree; 22,514 had received advanced degrees; 2,713 had received the degree of doctor of medicine; 1,547 had received honorary degrees.

For additional information regarding degrees and enrollments, please visit the website for the Office of Institutional Research at: http://www.brown.edu/Administration/Institutional_Research/

**Honorary Degrees Conferred by the University**

**Commencement May 27, 2007**

- Stanley M. Aronson, Doctor of Medical Science
- Christopher J. Berman, Doctor of Humane Letters
- Kate Burton, Doctor of Fine Arts
- Scott S. Cowen, Doctor of Laws
- Norman C. Francis, Doctor of Fine Arts
- Marvalene Hughes, Doctor of Laws
- Riley “B.B.” King, Doctor of Music
- Craig C. Mello, Doctor of Science
- Samantha Power, Doctor of Humane Letters

**Commencement May 25, 2008**

- Edwidge Danticant, Doctor of Letters
- Judith Jameson, Doctor of Fine Arts
- Matthew J. Mallow, Doctor of Humane Letters
- Charles Robert Redford, Doctor of Fine Arts
Shih Choon Fond, Doctor of Science
Wendy J. Strothman, Doctor of Humane Letters
Maria T. Zuber, Doctor of Science

September 19, 2008
Ellen Johnson Sirleaf, Doctor of Laws

Commencement May 24, 2009
Richard C. Barker, Doctor of Humane Letters
Mary Lindsay Elemendorf, Doctor of Humane Letters
Jerry Fishman, Doctor of Science
Jessie C. Gruman, Doctor of Humane Letters
Jim Yong Kim, Doctor of Medical Science
David E. Saltzman, Doctor of Humane Letters
Fareed Zakaria, Doctor of Laws

June 29, 2009
Trude Dothan, Doctor of Science

Commencement May 30, 2010
Morgan Freeman, Doctor of Fine Arts
Barbara Liskov, Doctor of Science
Nelson Mandela, Doctor of Laws
Shahrnush Parsipur, Doctor of Letters
Cecile Richards, Doctor of Humane Letters
David Rohde, Doctor of Letters
Romila Thapar, Doctor of Humane Letters
Gordon Wood, Doctor of Letters
The Brown Alumni Association

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Neil Parikh ’11, Connecticut
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Russ Tyler ’71, Connecticut

For additional information please visit: http://alumni.brown.edu/about/baa/board.html
Brown Alumni Magazine

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For additional information please visit: http://www.brownalumnimagazine.com/F
Summary of Enrollment

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