Engineering

The School of Engineering directly offers graduate programs leading to Master of Science, Master of Science in Innovation Management and Entrepreneurship, Master of Arts in Design Engineering, and Doctor of Philosophy degrees.

In addition, the School of Engineering, in collaboration with the Division of Biology and Medicine, offers an interdisciplinary graduate program leading to the Master of Science and Doctor of Philosophy in Biomedical Engineering.

For more information on admission and program requirements for the Sc.M. or Ph.D. degrees in Engineering, please visit the following websites:

Five-Year Sc.B./Sc.M.: https://engineering.brown.edu/graduate/programs-guide/five-year-scbscm-requirements (https://engineering.brown.edu/graduate/programs-guide/five-year-scbscm-requirements/)

Sc.M. in Engineering: https://engineering.brown.edu/graduate/programs-guide/scm-requirements (https://engineering.brown.edu/graduate/programs-guide/scm-requirements/)

Sc.M. in Program in Innovation Management and Entrepreneurship (PRIME): https://prime.brown.edu/

Brown-RISD Master of Arts in Design Engineering (MADE): https://design.engineering.brown.edu/

Ph.D. in Engineering: https://www.brown.edu/graduateprograms/engineering-phd (https://www.brown.edu/graduateprograms/engineering-phd/)

Master of Science (Thesis Option)

- Candidates must complete a coherent plan of study based in engineering or engineering science consisting of eight graduate or advanced level courses and an acceptable thesis, which is normally sponsored by a member of the engineering faculty.
- The program must include ENGN 2010 and ENGN 2020 (Mathematical Methods in Engineering and Physics) or their equivalent (must be 2000-level)
- For some programs,ENGN 2010 and/or ENGN 2020 can be replaced by an alternate/applied mathematics course or 2000-level engineering/science course. This substitution can only be made with the approval of the appropriate Graduate Representative and the Director of Graduate Studies. The final program must contain at least one advanced mathematics/applied mathematics course.
- Two additional 2000-level engineering courses other than ENGN 2980 (Special Projects: Reading, Research, Design) must be included.
- Three additional 2000-level engineering courses other than ENGN 2980 (Special Projects: Reading, Research, Design) must be included. Courses in engineering management (PRIME) are not acceptable for use as one of the 2000-level engineering classes.
- The remaining courses may included up to two ENGN 2980 class and up to three 1000-level Engineering or other approved science classes. Students should choose courses in consultation with the student's advisor to develop a coherent program.
- The proposed program of study must be approved by the Director of Graduate Programs in the School of Engineering.

For students in a Master of Science in Engineering program (Thesis Option), the approved course sequence is 2-2-2-2, where the student takes two courses in each semester. However, the program strongly recommends a sequence of 3-2-2-1 where the student takes 3 courses the first semester, 2 the second, 2 the third, and 1 the fourth. **Any deviation from this schedule can result in additional tuition.**

Note: Students enrolled in a Ph.D. program, including first-year fellowship students, should understand that an application to receive an Sc.M. (Non-Thesis) in Engineering must be approved by the student's research advisor.

Master of Science (Thesis Option)

PHYS 2020	Mathematical Methods of Engineers and Physicists	1
or ENGN 2010	Mathematical Methods in Engineering and Physics I	
ENGN 2020	Mathematical Methods in Engineering and Physics II	1
Two additional 2000-level Engineering courses (other than ENGN 2980)		2
Three additional Engineering or approved science courses (not more than two 1000-level courses)		3
ENGN 2980	Special Projects, Reading, Research and Design	1
Total Credits		**8**

Master of Science (Non-Thesis Option)

- Candidates must complete a coherent plan of study based in engineering or engineering science consisting of eight graduate or advanced level courses.
- The program must include ENGN 2010 and 2020 (Mathematical Methods in Engineering and Physics) or their equivalent (must be 2000-level)
- For some programs, ENGN 2010 and/or ENGN 2020 can be replaced by an alternate/applied mathematics course or 2000-level engineering/science course. This substitution can only be made with the approval of the appropriate Graduate Representative and the Director of Graduate Studies. The final program must contain at least one advanced mathematics/applied mathematics course.
- Three additional 2000-level engineering courses other than ENGN 2980 (Special Projects: Reading, Research, Design). Courses in engineering management (PRIME) are not acceptable for use as one of the 2000-level engineering classes.
- The remaining courses may include one ENGN 2980 class and up to three 1000-level Engineering or other approved science classes. Students should choose courses in consultation with the student's advisor to develop a coherent program.
- The proposed program of study must be approved by the Director of Graduate Studies in the School of Engineering.

For students in the Master of Science in Engineering program (Non-Thesis Option), the approved course sequence is 3-3-2, meaning the student takes 3 courses the first semester, 3 the second, and 2 the third. **Any deviation from this schedule can result in additional tuition and/or penalties.**

Note: Students enrolled in the Ph.D. program, including first-year fellowship students, should understand that an application to receive a non-thesis Sc.M. in engineering must be approved by the student's research advisor.

Master of Science (Non-Thesis Option)

PHYS 2020	Mathematical Methods of Engineers and Physicists	1
or ENGN 2010	Mathematical Methods in Engineering and Physics I	
ENGN 2020	Mathematical Methods in Engineering and Physics II	1
Two additional 2000-level ENGN courses (other than ENGN 2980)		2

Four additional Engineering or approved science courses (up to 3 may be 1000-level ENGN)	4
Total Credits	**8**

Master of Science (Non-Thesis Professional Track Option)

- Candidates must complete a coherent plan of study based in engineering or engineering science consisting of eight graduate or advanced level courses.
- The program must include ENGN 2010 and 2020 (Mathematical Methods in Engineering and Physics) or their equivalent (must be 2000-level).
- For some programs, ENGN 2010 and/or ENGN 2020 can be replaced by an alternate/applied mathematics course or 2000-level engineering/science course. This substitution can only be made with the approval of the appropriate Graduate Representative and the Director of Graduate Studies. The final program must contain at least one advanced mathematics/applied mathematics course.
- Three additional 2000-level engineering courses other than ENGN 2980 (Special Projects: Reading, Research, Design). Courses in engineering management (PRIME) are not acceptable for use as one of the 2000-level engineering classes.
- The remaining courses may include one ENGN 2980 class and up to three 1000-level Engineering or other approved science classes. Students should choose courses in consultation with the student's advisor to develop a coherent program.
- A paid or unpaid internship is a required component of the program. All internships must be pre-approved by the School of Engineering. Assistance in obtaining internships will be provided by the School and Brown CareerLAB.
- The proposed program of study must be approved by the Director of Graduate Studies in the School of Engineering.
- For students in a Master of Science in Engineering program (Non-Thesis Option), the approved course sequence is 3-3-2, meaning the student takes 3 courses the first semester, 3 the second, and 2 the third. **Any deviation from this schedule can result in additional tuition and/or penalties.**

  Professional Track Internship Information

  Internships are traditionally utilized during the first summer of the Sc.M. program. You should begin early to find a suitable internship (January is generally recommended). Refer to the CareerLAB guidelines and recommendations (https://www.brown.edu/campus-life/support/careerlab/) for resume preparation, interviewing, and general procedures about which you should be aware when deciding on an internship.

  The following resources will help you search for an opportunity that fits your goals:

- The School of Engineering distributes a weekly undergraduate and graduate newsletter that contains many internship opportunities, both at Brown and elsewhere. Email distribution of the newsletter occurs every Monday throughout the academic year
- Handshake at Brown (https://brown.joinhandshake.com/login/) (a password protected site) contains a database of jobs (not all are engineering related)
- Brown has an AfterCollege (https://www.aftercollege.com/career-networks/brown-university/) page that lists both full-time positions and internships
- The School of Engineering runs a Career and Internship Fair every November. Check the School of Engineering website (https://engineering.brown.edu/)'s event calendar for announcements
- BrownConnect (https://brownconnect.brown.edu/) is a networking tool that allows you to contact Brown alumni for advise, networking, and mentoring. The database includes alumni companies and titles, and is searchable with key words.

  Complete the internship approval form (https://www.brown.edu/academics/engineering/sites/brown.edu.academics.engineering/files/uploads/Internship%20Approval%20Form.pdf) and submit it to Associate Dean Jennifer Casasanto (jennifer_casasanto@brown.edu) before the end of the semester (or earlier if you intend to seek CPT approval from OISSS). You must NEVER begin work before your internship is approved.

Master of Science (Non-Thesis Professional Track Option)

PHYS 2020	Mathematical Methods of Engineers and Physicists	1
or ENGN 2010	Mathematical Methods in Engineering and Physics I	
ENGN 2020	Mathematical Methods in Engineering and Physics II	1
Two additional 2000-level Engineering courses (other than ENGN 2980)		2
Four additional Engineering or other approved science courses (up to three 1000-level Engineering courses)		4
Internship (paid or unpaid); must be approved by the School of Engineering		
Total Credits		**8**

For more information on admission and program requirements for the Program in Innovation Management and Entrepreneurship (PRIME), please visit the following website: https://prime.brown.edu/

Other Sc.M. Requirements

International students must be full-time at all times throughout their academic program, with few exceptions which must be approved by the PRIME advisor.