

General Engineering and First-Year Engineering

General Engineering

General engineering encompasses the common curriculum for several interdisciplinary initiatives and programs for engineering students: the first-year engineering program, the entrepreneurial engineering minor, and some of the Dialogues of Civilizations experience courses.

First-Year Engineering Program

Northeastern University's first-year engineering program equips undergraduate engineers with the fundamental building blocks needed for all College of Engineering majors. Our curriculum emphasizes hands-on, teams-based integrated design, leveraging a dedicated makerspace to provide students with an immersive experience.

Through the guiding lens of the engineering design process, the program incorporates ethical thinking, engineering research, along with skill development in CAD, programming, and microelectronics. Student designs come to life with the extensive fabrication tools in our makerspace and with support from peer mentors and staff. Our dedicated first-year teaching faculty possess expertise in engineering pedagogical research and come from diverse engineering backgrounds. Using student-centered teaching practices, they scaffold authentic problem-solving work, preparing students to excel in their future scholarship.

Mission of the Department

The mission of the first-year engineering program is to inspire our students in their pursuit of an engineering education by fostering a diverse and inclusive learning community centered around project-based, experiential learning.

Program Values

To accomplish our mission, we aim to:

- Provide an affirming, experiential first-year engineering education informed by best practices in industry and pedagogical research
- Introduce the fundamentals of problem solving while cultivating systems thinking
- Present engineering problems with authentic complexities that promote value-sensitive design, including social and environmental justice
- Facilitate a hands-on and teamed learning experience through access to design and fabrication tools in our continually evolving makerspace
- Provide our students with the skills needed to function as independent, lifelong learners