

SUMMER SPRINGBOARD
Look Inward. Go Upward.

Engineering – A Project Based Introduction Infosheet

New student admissions for Summer 2027 are open

2-Week Course

This is a two-week program where you'll focus on one course for the entire duration.

Program Highlights

- Students will explore fundamental concepts in fluid propulsion, hydrostatics and hydrodynamics, robotics, structural integrity, engineering process, controls, and practical operations, culminating in building and operating a SeaPerch aquatic robot.
- Emphasizes independent understanding of physics and mathematics through hands-on creation of useful artifacts.
- Learn from professionals in the field about the latest advancements in engineering and technology.

2027 Dates

MIT Campus

- Session 1: June 20 - July 2
- Session 2: July 5 - July 17

*Sessions starting July 5th will start on Monday, not Sunday (due to the holiday). During the first week, classes meet Tuesday through Friday, followed by Monday through Friday in week two.

Academic Program Overview

As part of the overall Summer Springboard experience on the campus of MIT, this course takes place in Kendall Square. This engaging course experience has no prerequisites, making it accessible for freshmen while still offering valuable challenges for seniors, as project decisions will influence task complexity. The teaching philosophy encourages students to independently build on their understanding of physics and mathematics through the creation of practical artifacts. There will be an integrated project that weaves together many smaller projects to ultimately build and deploy a SeaPerch aquatic robot. This course encompasses systems thinking to link physics, structures, fluid dynamics, controls, and electrical power systems. This course promises to ignite students' passion for engineering and equip them with essential skills for their future academic pursuits.

Academics in Action

Explore engineering through afternoon activities, guest speakers, and educational excursions in the Cambridge and Boston areas. In prior summers students have had hands-on experiences visiting various science and technology labs. Through instructor-led activities and independent study, students will connect classroom concepts to real-world practices and explore careers in the field.

Instructors from 2026

Faculty teaching in 2027 will be selected from the Summer 2026 cohort and their assigned sessions will be announced when confirmed

Kevin DiGenova - Sessions 1 + 2

Kevin is a Lecturer in the MIT Department of Mechanical Engineering, where he teaches Measurement and Instrumentation to undergraduates. The course focuses on developing good engineering judgment to execute a real-world project using the fundamentals that students have learned in their previous classes. Kevin brings over 17 years of experience developing complex, inter-disciplinary technologies. His work spans grid-scale flow batteries, robotics, fuel flexibility for gas turbines, organic Rankine cycles, process plant efficiency, and fuel-free compressed air energy storage. Kevin has led systems engineering efforts from initial architecture definition and requirements allocation through integration and verification testing of early commercial units.

Kevin has been closely involved in the development of compliance standards for energy storage systems. He is a member of the Standards Technical Panels for UL 9540, Standard for Energy Storage Systems and Equipment, and UL 1973, Batteries for Use in Stationary and Motive Auxiliary Power Applications. He earned both his bachelor's and master's degrees from the MIT Department of Mechanical Engineering.

Kyra Holmquest - Sessions 1 + 2

Kyra is an experienced Systems Engineer with a background in electrical engineering. She tackles the unique challenges of first-of-a-kind technology by bringing clarity to complex problems and translating scientific findings into practical, engineering solutions. Her systematic approach to early-stage decision making and risk mitigation based on the information at hand minimizes deployment risks, clears up miscommunications, and lowers overall system development cost. Her work spans grid-scale energy storage systems, underwater and UAV robotics, educational robotics, quad and octocopter drones, and high-power CW and pulsed laser systems. She has taught STEM education workshops and is passionate about mentoring interns and junior engineers. Kyra enjoys bringing her experience and systematic problem-solving to new companies, teams, and students to foster technological curiosity and critical thinking. She earned her Master of Engineering from the Cornell in System's Engineering and her Bachelor's of Science from Villanova in Electrical Engineering.

Cristina DiGenova - Sessions 1 + 2

Cristi is a versatile software engineering leader with 15+ years of experience across biotech, consulting, and education. She is skilled in designing and building scalable applications, mentoring engineers, and analyzing systems and processes. Cristi is enthusiastic about developing user-friendly solutions that support scientific research, automation, and hands-on STEM education, and in applying software and systems knowledge to designing educational platforms, content, and experiences. Cristi earned a Master of Science at MIT in the Computer Science and Artificial Intelligence Laboratory (CSAIL), and a Bachelor of Science in Aerospace Engineering at MIT.

Dr. Andrew Bennett - Session 3

Andrew Bennett has more than 35 years of R&D experience developing novel robot systems for land, water and air use. In the 1990's he worked on a variety of autonomous underwater vehicles at the MIT AUV lab, including the Sea Squirt, Odyssey I, Odyssey II and the WHOI Autonomous Benthic Explorer. In the early 2000's he worked for Walt Disney Imagineering Research & Development where he helped create a full-sized walking quadruped robot technology demonstrator and several ride effects installed in Disney's Animal Kingdom's Dinosaur ride. He then went on to become Director of Research at iRobot Corporation where he was in charge of developing the PackBot mobile robot system, which is now in the Guinness Book of World Records; one of which is in the Smithsonian American History Museum. In 2011 Dr. Bennett became the Director of the SCOPE program at the Franklin W. Olin College of Engineering and taught Systems Engineering and Robotics. In 2019 he founded his own startup, Point Road Solutions, which is dedicated to creating engineering solutions for the ocean research community. Currently he is the Education Administrator for the MIT Sea Grant Program as well as a Senior Lecturer in the Department of Mechanical Engineering, where he teaches the senior Ocean Engineering capstone class. Dr. Bennett currently has three patents issued and six more pending. Dr. Bennett earned his Bachelors of Science in Mechanical Engineering and PhD in Ocean Engineering at MIT, and his MS in Mechanical Engineering Design at Stanford.

Tuition Information:

Apply by November 30 to lock in the lowest prices of the year. Tuition increases on December 1

Residential Students:

- **Includes:** all meals, lodging, excursions, academic course, weekend excursions
- **Excludes**: optional airport pickup and drop off service (available for an additional fee)
- **Price**: $6,798

Commuter Students:

- **Includes:** lunch, academic course, excursions, programming from 9am to 5pm, Monday-Friday
- **Excludes:** lodging, breakfast, dinner, weekend excursions
  - Weekend excursions can be added on for $125 per day
- **Price**: $3,298

Supplements:

- **Application Fee**: Starting at $99 (mandatory, non-refundable)
- **Engineering - A Project Based Introduction Course Supplement**: $250 (mandatory)
- **Tuition Protection Plan**: Allows for cancellation for any reason up until the day of the program. Click here for more info.

More info on Airport Transfer

More info on Unaccompanied Minor Service

Apply Now!

Course Structure

There are nine 3-hour class sessions over the two-week course. During week one, students have class from 9am-12pm Monday - Friday. During week two, students have class from 9am-12pm Monday through Thursday. Afternoons in both weeks are dedicated to students' preferred College Readiness Workshops (CRW), True You, and Academics in Action, with Academics in Action including academic excursions, guest speakers, and course-related activities, such as an instructor-led project or student-led, independent study.

Typical Schedule

8AM	Breakfast
9AM	Academic Course / Commuter Student Arrival
12PM	Lunch
1:30PM	Academics in Action or Recreational Activity
3:30PM	CRWs, True You, or Academics in Action
5-5:15PM	Commuter Student Departure
6PM	Dinner
7PM	Clubs
10:30PM	Night Checks

Schedule above is a sampler; real schedules may vary based on program and academic track.

Summer Springboard programs are not run by our campus locations. Universities and their affiliated departments are not responsible for the Summer Springboard program in any way. This program is not sponsored by MIT.