



**SUMMER
SPRINGBOARD**

Look Inward. Go Upward.

Fundamentals of Engineering @ MIT Infosheet

New student admissions for
Summer 2023 are open.



Program Highlights

- This highly anticipated course will be held for the second time on the MIT campus, offering students inside access to some of the most important engineering labs in the world!
- Learn about the Fundamentals of Engineering through hands-on projects and simulations.
- The program starts with a practical introduction to MATLAB computer programming (a pioneering computational programming language in science and technology) that will be used for better delivery of our course material on various science and engineering fields as it is done at MIT.
- Learn from professionals in the field about the latest advancements in engineering and technology.



2023 Dates

Boston

- Session 1: June 25 - July 07
- Session 2: July 09 - July 21



Academic Program Overview

Engineering is an expertise for applying science along with real practical data for solving a problem, given some limitations/specs. In this program, you will learn about fundamental principles behind various engineering fields (mechanical, electrical, computer/programming, aero-astro, civil, ...) from MIT seasoned Instructors/Practitioners. This program will also help you to explore your potential college fields of interest while improving your odds of getting admitted to top Engineering schools. (Maximum Capacity 30 Students Per Session)



Typical Schedule

8:00am |
Breakfast



9:00am - Noon |
Academic Course



1:30 - 3:00pm | Academic
Excursion/ Recreational
Activity

Noon |
Lunch



3:30 - 5:00pm |
Enrichment
Elective

5:00pm |
Commuter
Students Depart



7:00pm |
Evening
Activities

6:00pm |
Dinner

8:00pm | Extended
Commuter Students
Depart

10:30pm | RA
Check-in

Excursions

In the past, students had a first-hand look at the construction site of Winthrop Center in Boston, the world's largest Passive House office center in the world. Our students also visited various Engineering labs at MIT, as well as the Engineering department at Northeastern University.

Instructors

Boston – Dr. Ali Talebinejad, Ph.D MIT

Ali Talebinejad has done his PhD at MIT Artificial Intelligence Laboratory in the area of Robotics and Computer Vision and has received his MS from MIT Mechanical Engineering in the area of System Dynamics and Control. His postdoctoral research was a pioneering work on Tracking Moving Objects Using Video Images at the Canadian Institute for Robotics and Intelligent Systems. His industrial experience includes his work at Parametric Technology Corporation (PTC) on “Pro Engineer” which was the leading software suite in CAD/CAM area at the time. Dr. Talebinejad has been involved in research and teaching in various areas inside and outside MIT from Design, Manufacturing, Numerical Computation, System Dynamics, Control, Robotics, Computer Vision, and Computer Programming, and Calculus. In 2018, he was involved in teaching a course titled “Computational Thinking for Modelling and Simulation” through MIT edX program internationally that attracted over 10,000 students. Dr. Talebinejad is private pilot and a member of the American Society of Mechanical Engineers and Institute of Electrical and Electronics Engineers.

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. Classes are held at MIT. Wednesday afternoons are dedicated to additional academic time (excursions, speakers).

Boston – Dr. Daniel Frey, Ph.D. MIT

Daniel Frey is a Professor of Mechanical Engineering at MIT. Prof. Frey's research is in the field called “robust design” -- a set of engineering practices which help to ensure that engineering systems function despite variations due to manufacture, wear, deterioration, and environmental conditions. To advance the theory and practice of robust design, Frey is working to understand the role of adaptive behavior in experimentation, the ways that methods can exploit the structure of design problems, and the complementary role of experiments and simulations. Prof. Frey's experiences include: designing prosthetic devices, flying aircraft in the U.S. Navy, and content direction of a children's television series. His honors include the MIT Department of Aeronautics and Astronautics Teaching Award, the Everett Moore Baker Memorial Award for Outstanding Undergraduate Teaching at MIT, the R&D 100 Award (received twice). He is a member of the American Society of Mechanical Engineers, the American Statistical Association, and the American Society of Engineering Education. Dr. Frey holds a Ph.D. in Mechanical Engineering from MIT, an MS in Mechanical Engineering from the University of Colorado and a BS in Aeronautical Engineering from Rensselaer Polytechnic Institute

Tuition Information:

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: \$5,398

Commuter Students:

- Includes: lunch, academic course, excursions, programming from 9am to 5pm, Monday-Friday
- Excludes: lodging, breakfast, dinner, weekend excursions
- Price: \$3,098

Extended Commuter Students:

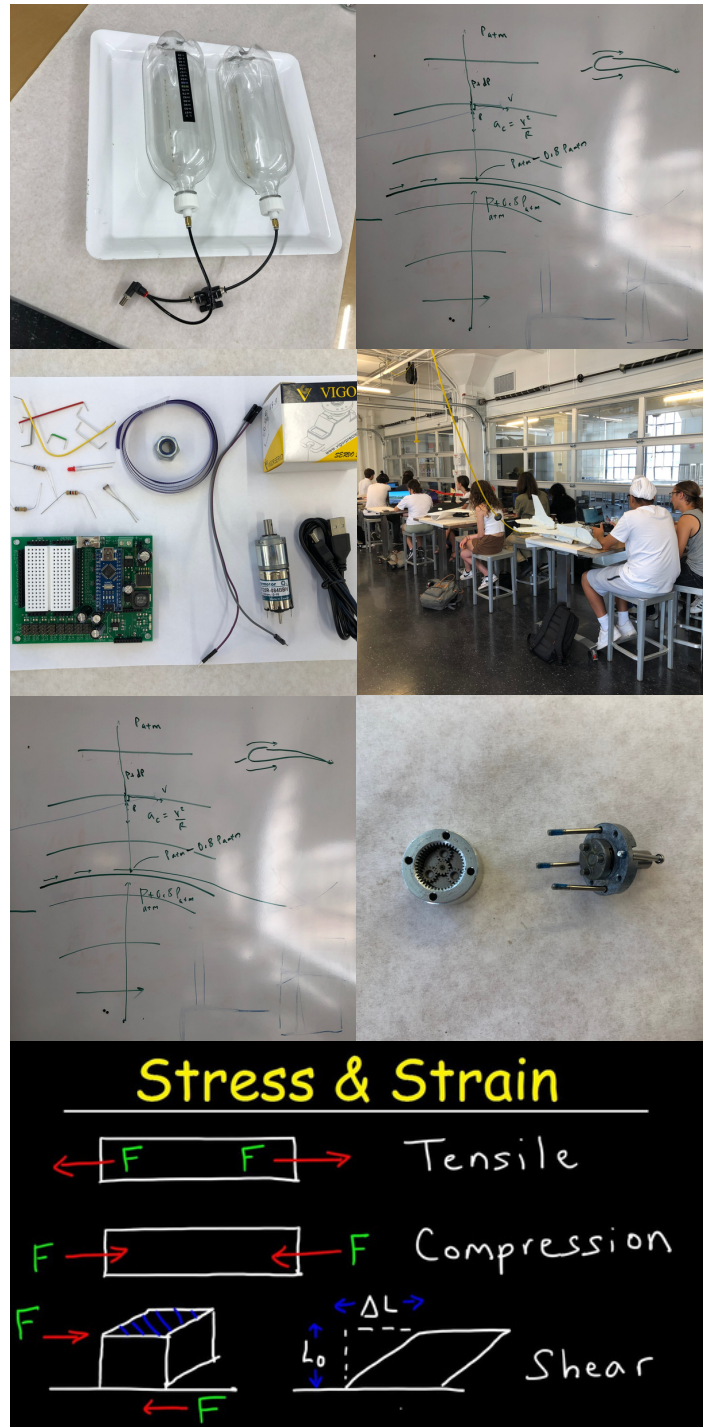
- Includes: lunch, dinner, excursions, academic course, programming from 9am to 8pm, weekend excursions
- Excludes: lodging, breakfast
- Price: \$3,698

Supplements:

- Application fee: \$99 (mandatory, non-refundable)
- Fundamentals of Engineering @ MIT course supplement: \$250 (mandatory)

More info on [Airport Transfer](#)

More info on [Unaccompanied Minor Service](#)



Summer Springboard programs are not run by our campus partners. Universities and their affiliated departments are not responsible for the Summer Springboard program in any way.

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