



**SUMMER
SPRINGBOARD**

Look Inward. Go Upward.

Fundamentals of Engineering @ MIT Infosheet

New student admissions for
Summer 2024 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.
- Required Computer specs:
 - Operating System: Windows 10 or newer
 - Hardware: PC laptop (not Mac/Apple)
 - USB Interface: Ensure your PC laptop has a regular USB interface. If it only has a USB-C interface, you will need to obtain a USB-C to regular USB adapter, which is readily available from numerous vendors.



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



2024 Dates

Boston

- Session 1: June 16 - June 28 (waitlist only)
- Session 2: June 30 - July 12 (waitlist only)

➤ Excursions

In the past, excursions have included Winthrop Center in Boston, the world's largest Passive House office center in the world, Boston Metal and the Engineering department at Northeastern University. Our students have also had exclusive visits to various Engineering labs at MIT.

Instructors

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 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.

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



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. Wednesday afternoons are dedicated to additional academic time (excursions, speakers).



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: See prices under 2024 dates

Commuter Students:

- Includes: lunch, academic course, excursions, programming from 9am to 6pm, Monday-Friday
- Excludes: lodging, breakfast, dinner, weekend excursions
 - Weekend excursions can be added on for \$125 per day
- Price: \$3,198

Supplements:

- Application fee: \$99 (mandatory, non-refundable)
- Fundamentals of Engineering @ MIT 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!](#)

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