



FUNDAMENTALS OF ENGINEERING AT MIT

ONLINE COURSE INFOSHEET

PROGRAM HIGHLIGHTS:

- This highly anticipated course will be held online with instructors teaching from the campus of MIT, offering students inside access to some of the most important engineering labs in the world!
- Learn about Fundamentals of Engineering through hands-on projects and simulations
- Introduction to MATLAB computer programming, the pioneering computational programming language in science and technology, that is used in most science and engineering university courses
- Learn from professionals in the field about the latest advancements in engineering and technology

ONLINE DATES

July 25 - August 4, 2022
6:00 - 9:00am PST
9:00am - 12:00pm EST

TUITION RATES

\$1,495.00

ACADEMIC PROGRAM OVERVIEW:

Students will have the opportunity to deep dive multiple types of engineering on this program. Starting with the basics of computer programming and moving to the introduction of engineering concepts and practices through various hands-on projects and simulations throughout differing engineering fields.

Utilizing an experiential approach, students can efficiently engage in these varying topics, the instructor will introduce the underlying theory and concepts to allow for students to creatively think on and design their own prototypes. Each course is limited to a maximum of 15 students.

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 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.

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