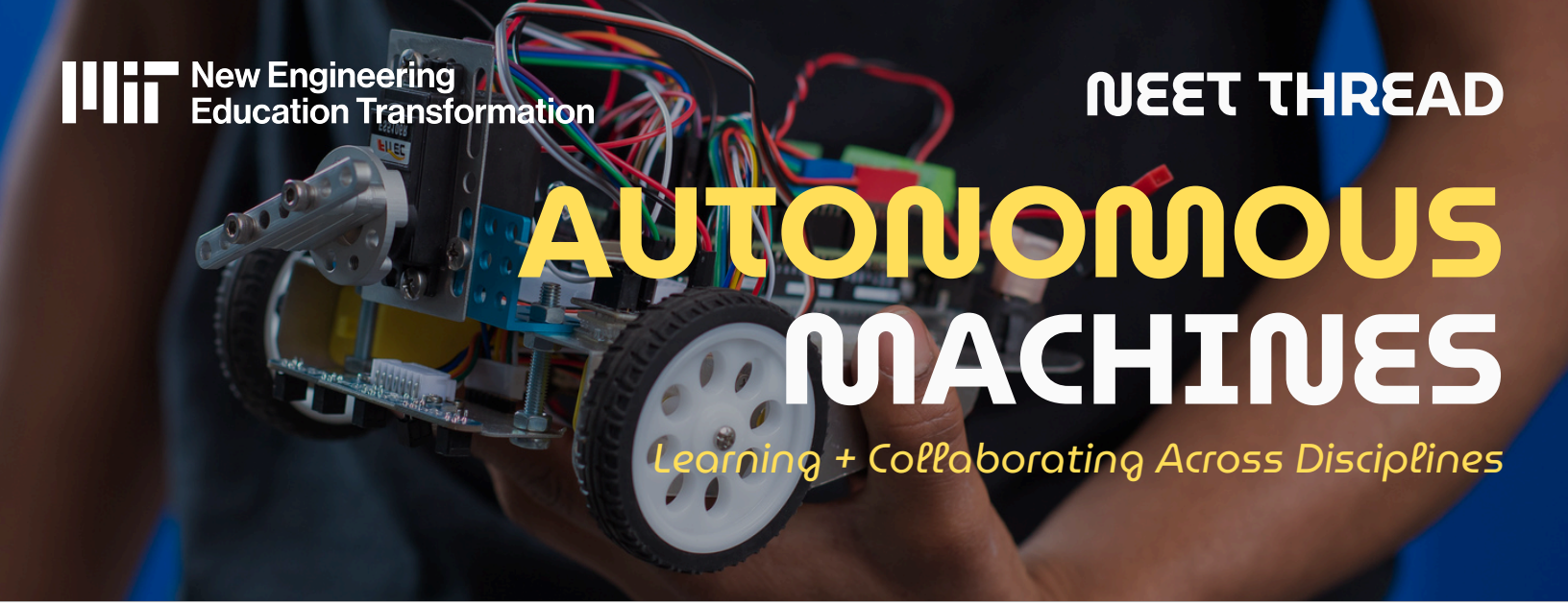


New Engineering Education Transformation

NEET THREAD

AUTONOMOUS MACHINES

Learning + Collaborating Across Disciplines

NEET Autonomous Machines

Do you want to learn how to design, fabricate, program, and control robots, drones, and other cool real-world autonomous machines?

In the New Engineering Education Transformation (NEET) Autonomous Machines (AM) thread, you will develop your individual and group skills and gain a hands-on, interdisciplinary, applied learning experience through a series of projects with escalating complexity, which include:

Elementary Robot Controllers

Design + Manufacturing

Advanced Robot Controllers

Robot Systems Integration

NEET is a three-year, experiential learning certificate program (sophomore through senior year) that you complete along with your major in the usual four years. All NEET scholars gain exclusive access to the NEET Scholars Collaboration Space (3-001) and other unique opportunities and benefits.

Dr. Gregory Long

longg@mit.edu

AM Founding Lead Instructor, Lecturer
NEET, MIT School of Engineering

LEARN MORE

neet.mit.edu
neet@mit.edu

AM Thread Requirements

Sophomore Year

Individual projects *that focus on sensor usage and integration, basic fabrication, and structured programming for robotic applications.*

Fall or IAP

- 16.632A | Introduction to Autonomous Machines I (6 units)

Spring (Choose ONE from the following):

- 16.632B | Introduction to Autonomous Machines II (6 units)
- 2.007 | Design & Manufacturing I (12 units)

Junior Year

Introduction to the Robot Operating System (ROS), and ***a group project*** *that focuses on autonomy navigation algorithms that utilize GPS, LIDAR, and vision sensing.*

Fall

- 16.633 | NEET Junior Seminar: Autonomous Machines (3 units)

Spring (Choose ONE project class from the following):

- 2.124[J]/6.4200[J]/16.405[J] | Robotics: Science and Systems (12 units)
- 2.12 | Introduction to Robotics (12 units)

Senior Year

An in-depth ***personal or small group robotics/autonomous machines project*** *that involves aspects of design, control, simulation, perception, algorithm development, implementation, and/or systems integration.*

Fall AND/OR Spring (depending on scope and breadth of the project):

- 16.634 | NEET Senior Seminar: Autonomous Machines (6 units) or 16.85* (12 units)

**16.85 offered every 3 semesters.*

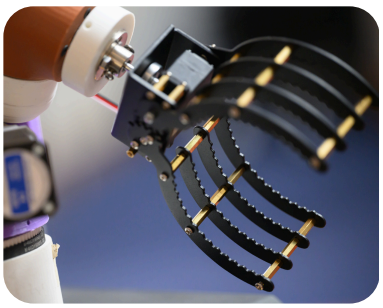
Foundational Subjects

- Intro to Programming: 6.100A and 6.100B, 2.086, or 6.1010
- Controls: 2.004, 6.3100, or 16.06

Professor Jonathan How

jhow@mit.edu

AM Founding Faculty Lead, Associate Director
NEET, MIT School of Engineering



Follow the action on Instagram at @mit_neet!