

# Introduction to the Programming Assignments

*Control of Mobile Robots: Programming & Simulation Week 1*



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# Overview

- The purpose of the programming assignments is to implement concepts from the course on a *simulated* analogue of a mobile robot.
- All assignments will be completed in a MATLAB-based mobile robot simulator.
- The weekly assignments are optional.
- Each assignment can be submitted for feedback.

# Bridging the Gap

- Why are the programming assignments worth your time?
  1. They are a unique opportunity to apply the equations in this course to an interesting problem: *safely navigating a mobile robot through a cluttered environment.*
  2. You will learn MATLAB, a powerful tool for engineers.
  3. Bonus: If you are building the QuickBot in this course, then everything can be tested on this robot!

# Programming Assignment for Week 1

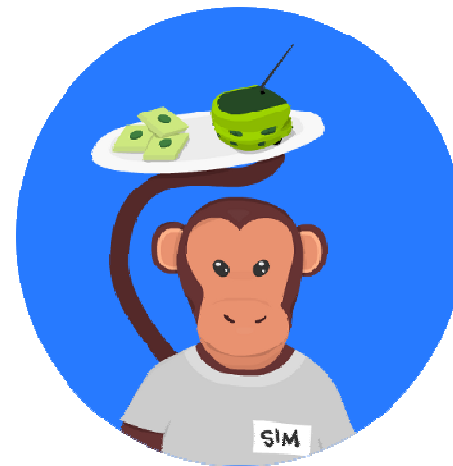
- The objective of this first assignment is to install and familiarize yourself with MATLAB, and run the simulator.
- Go to the “Programming Assignments” section on the course page for detailed instructions.

# MATLAB

- MATLAB is a numerical computing environment and a programming language.
- Thanks to support from MathWorks, a license for MATLAB and all required toolboxes will be available for the duration of the course (Jan. 20 – Mar. 31).
- The “Programming Assignments” section on the course page will provide links to resources for learning MATLAB concepts.


# Sim.l.am

- MATLAB-based simulator for mobile robots.
- Provides a faithful analogue of the robot in this course, *QuickBot*.
- Includes a detailed user manual for all assignments.



# Grading

<Student Version> : Sim.Lam: Programming Assignment Su...



Remember to use your submission login and password!

Login: student@coursera.org

Password: t7JMUUDhuR

Assignment parts:

<input checked="" type="checkbox"/>	Test Submission 1	▲ ▼	✓
<input checked="" type="checkbox"/>	Test Submission 2	▲ ▼	✗

Submit to Coursera for Grading

- Simple UI for submitting each assignment.
- Points earned in the assignments will not count towards your course grade.

# Help

- If you have any questions, issues, bugs, or concerns, please create a post in the “Discussion Forums” under the “Programming Assignments” section.
- Please include enough information for us or fellow students to help.