

## 91.451 Robotics II, Spring 2007 Syllabus

### Contact Information

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### Class Meetings

Lecture: Tuesdays, 11:30 – 12:45, Olsen 401  
Lab: Thursdays, 11:30 – 12:45, Olsen 306

### Office Hours

Fred: TBD  
Holly: Tuesdays 9-10, Wednesdays 10-12, and by appointment  
Andrew: Thursday 10:30-11:30

### Course Description

In this course, you will learn about autonomous mobile robots and artificial intelligence. There will be lectures on Tuesdays (held in Olsen 415) and labs on Thursdays (held in Olsen 306). The focus of the course will be AI Robotics. We will learn about computer vision, machine learning, planning and mapping, and multi-agent robotics.

The course will use the Blackfin Handy Boards, programmed in C/C++. There will be two projects:

- The first project of the course will be the design and implementation of a robot for the Trinity Robot Firefighting Competition. (The competition will be held at Trinity College in Hartford CT the weekend of April 14-15. We will cover registration and travel costs. Be sure to save the weekend.)
- The second project will be the creation of a new home robot using a Roomba as the platform.

### Project Sequence

This course together with Robotics I in the fall is a project sequence.

### Textbook

*Behavior-Based Robotics*, Ron Arkin, MIT Press, 1998 (same book from 91.450 last semester). While the Arkin book will be the primary text for the course, there will be additional photocopied readings distributed.

### Class Website

<http://www.cs.uml.edu/~holly/91.451>

**Exam Date**

Midterm: Tuesday, 27 March, in class

**Grading**

Homework and Labs	20%
Midterm Exam	15%
First Project	40%
Second Project	25%

**Lab**

At the start of the semester, labs will be held in Olsen 306. Later in the term, labs will be held in Olsen 302.

**Botball and Botfest**

Botball and Botfest will kick off January 26 – 27 with a tutorial on campus. The tournament and exhibition will be held on Saturday, March 24. Volunteers are needed at the tutorials, to mentor teams, and to help on March 24. Talk to me if you are interested.