EK 131/132 Introduction to Robotics Spring 2013 Instructor Calin Belta

This course is a hands-on introduction to robotics. It provides an overview of basic concepts in mobile robotics, including mechanics, electronics, classic algorithms for motion planning, control strategies, and programming architectures. During the labs, the students will be provided with robotic kits and wil use the material taught in the class to build and program a set of robots. The class ends with a series of projects, which will consist of the successful completion of simple exploration tasks.

Lecture1 Introduction
Lecture2 Motors and Sensors
Lecture3 Configuration Spaces and Motion Planning
Lecture4 Control
Lecture5 Ground robots (lab visit)
Lecture6 Aerial robots (lab visit)
Lecture7 m3pi programming tutorial
Lecture8 m3pi programming tutorial
Lecture9 m3pi programming tutorial
Lecture10 Project 1
Lecture11 Project 2
Lecture12 Project 3
Lecture13 Project 4