

*Introduction to Engineering*  
*Group Project – Robot Design*

**50 points**

The class will be divided into groups of at least five students, but no more than six. Each group will design, construct, and program a robot using LEGO© Mindstorms™ Robotics Kits. For the programming, you may use the default software or the Microsoft Robotics Developer Studio.

**Design**

The default design is the following:

- Move towards a small cup
- Detect the cup using a sensor
- Pick up the cup
- Move the cup to a different location, and release the cup.

You may decide on a different design, but it must be approved by me. You may not use your own parts from home.

**Project Components**

- Robot prototype and program
- Project documentation
- Typed report
- PowerPoint presentation and robot demonstration
- Inventory of robotics kits upon completion of the project

**Grading**

You will be evaluated on the following criteria:

- Robot design and inventory of the robotics kits: 10 points
- Documentation and timeline: 10 points
- Typed report: 10 points
- PowerPoint presentation and robot demonstration: 10 points
- Contribution to group and team work: 10 points