

Midwood High School at Brooklyn College
Robotics (STR) Syllabus – Fall 2008
Mr. Reilly

Course Objectives: In this course, students will learn:

1. The various functions and importance of robots in society
2. What robots are and how they use sensors to receive input
3. To program robots using the RoboLab software (icon based programming)
4. How to apply concepts in basic mechanics to construct robots
5. Basic electrical concepts and how sensors work
6. To effectively work in teams
7. Project management techniques
8. The various engineering disciplines and their roles in society
9. Methods of generating and evaluating design alternatives
10. To effectively present and document projects in papers

Grading Policy: Grades will be based on the following assessments:

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|-------------------------|------|
| • Projects/Competitions | 40 % |
| • Quizzes | 20 % |
| • Portfolio | 20 % |
| • Assignments | 20 % |

Projects and Competitions: The largest portion of your grade will be determined by projects and competitions throughout the semester. Most projects will be done in groups of three, with each group member being assigned a particular task: builder, programmer, or project manager. These projects are meant to simulate real life engineering experience. Grades on these projects will be calculated as the average of your individual grade, which is based on your effort on the project, and your group grade, which is based on your placement in the competition. There will be six projects this semester, each of which will count. Guidelines for grading individual efforts will be distributed separately.

Quizzes: Quizzes will be given on a regular basis and will cover the material learned in class. Some questions will be short answer (a word or a number), and some will be long answer (sentences). I am more concerned with your application of concepts than simply your ability to recall them. There will be three 100-point quizzes, and two 50-point quizzes. One quiz grade will be dropped in the third marking period.

Portfolio: You will be required to maintain a portfolio of your work throughout the semester. The portfolio will contain assignments, quizzes, journal entries, project descriptions, and self-assessment summaries. It is documentation of your learning experience in this class. Detailed guidelines explaining the writing and grading of the portfolio will be distributed separately.

Assignments: You will be given in-class and take home assignments. Assignments will be assigned regularly, and will always be collected, graded, and returned in a timely manner. Returned assignments will be stored in your portfolio binder. All your work should be neat (preferably typed), complete, and contain a heading with your full name, the date, the class section, and assignment number to receive full credit. Guidelines for grading homework will be explained on a separate handout. There will be about 30 assignments this term, and three grades will be dropped in the final marking period. If there is an issue keeping you from completing a homework assignment, I urge you to contact me about it as soon as possible.

Absences: Missed assignments and quizzes can only be made up if an absence is excused with a note from a parent, guardian, or doctor. This note must be brought in on the day you come back. Failure to show documentation of your absence will result in a zero on an assignment or quiz. If you are absent from class, you are responsible for obtaining any of the work/assignments you may have missed. Unexcused absences during projects will result in point deductions.

Academic Honor: I believe that you are all capable of completing the work in this course and succeeding academically. However, if any student decides to disrespect his/her own intelligence by plagiarizing an assignment or cheating on a quiz, a grade of '0' will be given for the work.

Lateness: You are expected to come to class and take your seat before the late bell rings. Lateness will affect your grades on projects, and will prevent you from receiving handouts or hearing announcements given at the beginning of the period. Also, it is disrespectful to the class.

Classroom Rules: The following rules provide a guideline for what is expected in your classroom behavior. It also defines the classroom culture I look to create.

- Respect everyone's chance to speak.
- Respect other people's property and space.
- Come to class on time and prepared to do work everyday.
- Put away hats, doo rags, and electronic devices before class begins.

Materials: All students are required to bring the following supplies with them every day:

- Pens/Pencils
- Calculator
- ½" (or more) binder (for your portfolio)

Email: mr.reilly@yahoo.com

Website: <http://www.midwoodscience.org/reilly>

Office Hours: You can meet with me to discuss anything periods 3, 4, or 6 in Room A317 or 380.