Course Description:
Students will work in teams to design, build, and program robots. At the end of this hands-on course, these robots will compete in a public tournament. The students will design and construct the robots from provided parts (Legos), will choose appropriate sensors and effectors, interface them to on-board computers, and program the robots to compete effectively in the course tournament. Students will be evaluated on their ability to communicate their team's design, through design presentations, demonstrations, and supporting documents.

Course Policies and Evaluation

1. **Class Meetings**: The class will meet five days per week (10:30-12:20 AM) for lectures, workshops, discussions, and demonstrations. *Students are expected to have read assigned materials before coming to class.*

2. **Open Lab Times**: There will also be open lab sessions available until about 3:30 every afternoon. *It is unlikely that you will be able to complete the construction, programming and testing of your robot without attending these open lab sessions on average a few hours per day.*

3. **Final Competition**: During the last week of class, a Lego Sumo competition will be held in the evening. *Students are required to have a completed robot that is ready to participate in this competition.*

4. **SunSPOT Application**: Each team will be required to design and implement a project using a SunSPOT in an application different from the Lego Sumo competition. *This project might be a different application of the robot built for the Lego Sumo competition, or it might be a completely different use of one or more SunSPOTs.*

5. **Application Notes**: During the semester, each group will need to write at least two different application notes or similar written notes. *One will be on some aspect of the programming or construction of the robot, and the other will be on the additional application. The instructors will give additional instruction on the details of this assignment. These will be graded, and may require revision to receive a passing grade.*

6. **Presentations**: During the semester, there will be required presentations. *All students are expected to participate in these group presentations in order to receive a passing grade.*
7. **Homework:** Problems sets will be assigned on an occasional basis. Written homework sets should be neat and organized. Unless specified as a group problem, each student will submit their own assignment, but you are encouraged to discuss the problems with each other.

8. **Late Homework:** Late homework will be accepted at the discretion of the instructor with some loss of points.

9. **Log Book:** A large fraction of this course will be completed with experimenting with different robot designs and programs. Each student is required to keep a log book where daily progress is recorded. The goal of this log book is a record of experiments tried (whether successful or unsuccessful) and the material that was learned. These log books will be checked on a roughly weekly basis during the course of the semester. *It is essential that you record your daily notes and progress in this log book.*

10. **Attendance:** Students are expected to attend all classes during the scheduled hours. Students are responsible for informing themselves of material and assignments covered during absences. *Students must advise the instructor in writing during the first week of class of any scheduled athletic, music, or other college activities that will require their absence during the semester.* Such written notice does not imply a waiver of course requirements.

11. **Academic Honesty:** As a community of scholars, the faculty and students of Gustavus Adolphus College have formulated an academic honesty policy and honor code system, which is printed in the Academic Bulletin and in the Gustavus Guide. As a student at Gustavus Adolphus College I agree to uphold the honor code. This means that I will abide by the academic honesty policy, and abide by decisions of the joint student/faculty Honor Board.

12. **Incompletes:** A grade of incomplete will only be given for work not completed due to circumstances beyond the control of the student. *(This is the college policy).*

13. **Evaluation:** This course is being taught as a pass/fail course. Assignment of a final grade includes factors such as successful completion of required assigned work, attendance, and the instructor's subjective evaluation of the student's participation, initiative, evidence of improvement, and the quality of independent work.