

CS570 Syllabus

Textbook

There is no textbook for this course, but there is a GitHub repository that has many links and some pdfs that may be helpful. <https://github.com/mbardoe/CS570-ClassNotes>

Contact

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Office

My office is in 208 of Lanphier. I am in Lanphier much of the day, and I try to be in Lanphier for every conference block.

Extra-help

I am on duty every Tuesday night, and generally one other random weeknight. Ask for good times to meet during study hours. I am also available A, B, and G blocks (except G block on Thursday).

Learning Management System

We will use both Canvas and probably GitHub Classroom. You should have received an invitation to the Canvas course already, and the GitHub classroom will come once we are sure that we all have accounts.

Class Goals

- Introduce students to git and GitHub as a tool to develop software
- Introduce students to the ideas of pose and trajectory as used in robotics
- Introduce students to the `wpilib` and `robotpy` libraries to help them program frc robots
- Increase students facility with python and object-oriented programming
- Introduce students to the process of unit testing software
- Introduce students to control theory about how robots achieve goals states
- Increase students facility on working in teams to develop software

Grading

Your grade in this class will be broken down into several categories.

- Homework - 20%
- Tests - 20% (There will be 2)
- Projects - 40% (There will be 2)
- Final Project - 20%

Homework will be small assignments that are meant to make sure that you are working with the content of the course and learning the terms and ideas that are essential in the course. Tests will be an opportunity to show that you have facility with the ideas and vocabulary that is necessary for us to understand and write robot code. Projects will be more complex tasks that will show your ability to break down larger problems and work through a design and revision process. The final project will be a place for you to give back to the team and leave or documentation, a challenge, or application that the team can use in the future to improve our programming skill.