Welcome to 320! The goal of this course is to give students practical experience with modern software engineering practice.

Working with a team, students will take part in all aspects of the software lifecycle (analysis and specification, design and implementation, testing and documentation). Good coding skills are necessary but not nearly sufficient for success; in addition, the ability to communicate, negotiate, and set expectations for others will be critical.

For this class, the process you follow to create a software solution is just as important as the code you produce. As this course satisfies the Integrative Experience requirement, we will be emphasizing communication, reflection, and learning-aware skills throughout the semester.

**Prerequisites:** COMPSCI 220 (or equivalent) with a grade of C or better.

**Instructor:** Matthew Hale Rattigan (LGRC A135)

**UCAs:** Avantika Borikar, Saksham Kumar

**Meetings:** Flint 105, Tue/Thu 2:30-3:34 (lecture), Wed 10:10-11 (discussion)

**Office Hours:** TBD

**Textbook:** *There is not textbook for this course.*

### Learning Outcomes

By the end of the semester students should be able to:

- Work effectively in a software development team using agile methodology.
- Analyze a proposed system and produce a set of requirements.
- Produce an efficient, modular design for a proposed software system.
- Understand the process of building software to specification on a schedule.
- Apply the discipline of software engineering to the process of developing high-quality software with a limited amount of time and resources.

### Working Together

The ideas and experiences that each one of you brings to our classroom are crucial to our success. Please know that regardless of your background, age, race, ethnicity, geographical origin, citizenship status, language, sex, gender or gender identity, sexual orientation, disability, family status, religion, political views, military experience, socioeconomic status, or education, you are welcome in this class!

In the second week of the semester, you will be assigned a 6-7 person team along with a student project manager who is enrolled in COMPSCI 429. You will work closely with this team for the duration of the semester. We will do our best to balance the teams in terms of skillsets, prior experience, etc.
Working with a team is a social activity that requires many skills to be successful. If you find working in groups to be difficult, that is okay! One of the goals of this course is to help you develop skills and strategies for working effectively with others. At all times, we expect you to treat your peers with civility and respect, as outlined [here](#).

We believe that everyone has the right to be addressed by the name and pronouns that they use for themselves. You can indicate your preferred/chosen first name and pronouns on SPIRE if you would like to be addressed differently from what is on the class roster.

**Weekly Schedule**

The course meets three times per week (two lectures, and one discussion). For the first 2-3 weeks of the semester, lecture meetings will be used to present topics related to the software development process. Once teams are announced and the project work has commenced, the lecture periods will be utilized for team meetings and progress/demo presentations.

The weekly discussion session will be used presenting additional lecture material, discussing readings, technical talks, and hands-on activities.

*In-person attendance at all course meetings is required.*

**Absences and Extensions**

If you are unable to attend a class session or team meeting due to illness or family emergency, please contact the instructor and your project manager to let them know as early as possible.

Throughout the semester, we will assign short homework assignments and in-class activities to be handed in. In general, all deadlines are firm, but we will make accommodation due to illness or family emergency. Please contact the instructor at least 24 hours in advance if you need an extension.

In both of the above cases, we may ask you to provide documentation.

**Evaluations**

Throughout the semester, you will gain experience giving and receiving feedback through peer and manager evaluations. Good feedback is crucial for continuous improvement in any organization. There will be three rounds of evaluations. For each round, you will evaluate your manager’s performance, your peers’ performance, and your own performance. We will spend time discussing the feedback process in class.

**Grading**

Your grade will be calculated from the following:

**Individual Grades**

- Attendance at team meetings: 15%
- Manager’s evaluation of participation and contribution: 15%
- Completion of peer and manager evaluations: 10%
- Progress presentations to the class: 10%
- Homework assignments, quizzes, and in-class activities: 15%

**Team Grades**

- Weekly progress presentations: 15%
Academic Honesty

You will be collaborating closely with your peers throughout the semester, as well as utilizing third-party tools for building your project. The bulk of your project code should be produced by your team directly; in situations where you have sourced a non-trivial component from a third party, you are required to reference and credit the source in your project documentation. We will follow and enforce the University’s Academic Honesty Policy and Procedures.

Course Infrastructure

Communication We have set up a Campuswire forum for all course-related communication. Please use the forum for any course related questions (you can post publicly, anonymously to your peers, or privately to the instructor). You can access the forum here: https://campuswire.com/p/G48B94B0A with the access code 0604.

Please do not email the course staff!

Code Repository Your project manager will setting up a Github repository to hold the code and documentation for your team project. We will be discussing the effective use of Git for source control and collaboration in class.

Assignments Homework assignments, quizzes, and in-class assignments will be handed in using Gradescope. You can sign up here: https://www.gradescope.com/courses/509268 with the access code BBDVNZ.

Accommodation Statement

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course.

If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

Title IX

UMass is committed to fostering a safe learning environment by responding promptly and effectively to complaints of all kinds of sexual misconduct. If you have been the victim of sexual violence, gender discrimination, or sexual harassment, the university can provide you with a variety of support resources and accommodations. If you experience or witness sexual misconduct and wish to report the incident, please contact the UMass Amherst Equal Opportunity (EO) Office (413-545-3464 | equalopportunity@admin.umass.edu) to request an intake meeting with EO staff. Members of the CICS community can also contact Erika Lynn Dawson Head, director of diversity and inclusive community development (erikahead@cics.umass.edu | 860-770-4770).

All of the above is subject to change.

Last modified: Tuesday, February 7, 2023, 12:34 PM