# Syllabus for COMP491, Fall Senior Seminar in Computer Science

Fall 2023

Dickinson College

Instructor: John MacCormick

Learning goals

Students will:

* improve their mastery in problem solving applicable to a wide variety of disciplines.
* become more prepared for graduate study in computing or to begin a professional career in computing.
* participate in a year-long project that enhances their technical computing skill set in a way that is applicable, adaptable, and relevant to contemporary computing infrastructure, including large-scale projects and open source projects.
* enhance their ability to work and collaborate in teams.
* expand their understanding of social, legal and ethical issues raised by computing.
* expand their perspectives on the value of computing, including: the role of computing in understanding the physical world, generating commercial value, advancing technology, and driving social change; and the transformational power of computing in service to the greater good.
* [Writing in the Discipline goal] enhance their ability to present technical information to an audience of computing professionals in both written and oral form.
* [Writing in the Discipline goal] develop their ability to write about and express an opinion on a social, legal or ethical issue in computing for a broad technical audience.
* [Writing in the Discipline goal] reflect on their experiences with the computer science major and the relationship of those experiences to their future goals and plans.

Inclusivity

Everyone in the course belongs equally to our classroom community. The instructor aims to create an atmosphere where everyone feels a sense of belonging and feels free to ask questions.

Teaching methods

The course has two major components:

* a capstone project (either contributions to open-source software or a research project), which will continue into the spring senior seminar, COMP492;
* readings and class discussions on (a) software engineering and (b) ethical, social, and legal issues in computing.

When and where

* Class meetings: Tuesday and Friday 3:00–4:15pm in Tome 231
* Office hours: see the instructor's [office hour webpage](http://users.dickinson.edu/~jmac/office-hours.html).

Books

The required textbook is *Cooperative Software Development* by Amy J. Ko (2023), which is available at <https://faculty.washington.edu/ajko/books/cooperative-software-development> (provided at no cost under the Creative Commons Attribution-NoDerivatives 4.0 license).

Assessment and grading

* Final grade will be calculated from the following assignments:

|  |  |
| --- | --- |
| Attendance | 5% |
| Homework assignments (HW1-6; about 4% each) | 20% |
| Team and individual 5-15 reports and live-logs (TR1-2, IR1-2; about 2.5% each) | 10% |
| Discussion notes, posted discussion questions, and discussion participation (NQP1-7; about 2.5% each; lowest is dropped) | 15% |
| Reflective blog post (RBP) | 10% |
| Tech spike presentation (P1) | 8% |
| Checkpoint presentation (P2) | 12% |
| Status report presentation (P3) | 20% |

* A brief description of each graded component is given here. The course materials will provide more detailed instructions and rubrics. Due dates are given on the course schedule provided separately. Assignments are due at the start of class on the due date, except for NQP assignments, which are due by 9 AM on the due date.
* Attendance: The course centers around the capstone project and discussion sessions. These activities are meaningful only if students are present to interact with other students and the instructor. Therefore, attendance is required at all classes and is a graded component of the course.
* HW1-6: These homework assignments prepare individuals and teams for the capstone project.
* TR1-2: These are team progress reports on the capstone project. The report is a “5-15” report as described in the course materials. Slack live logs will also be assessed as part of the grade for team reports.
* IR1-2: These are similar to the team reports, but are done by each individual rather than by each team. Individual contributions to the project, including Slack live logs, will be assessed.
* NQP1-7: Each of these assignments corresponds to an in-class discussion of assigned reading. “NQP” stands for Notes, Question, Participation. To prepare for each discussion, students must (i) prepare **handwritten** notes, typically 0.5-1 pages; (ii) post a suggested discussion question to Moodle; (iii) participate in the class discussion. The lowest grade from NQP1-7 will be dropped. **During discussions, participants may refer only to handwritten notes** except for specific activities described by the instructor. At most times, **no printed materials or electronic devices will be used.**
* RBP: This is a substantial reflective blog post on a social, legal, or ethical issue related to computing.
* P1: Each team will give a presentation about their tech spike in class on **Friday, November 3** or **Tuesday, November 7**.
* P2: Each team will give a checkpoint presentation about their capstone project in class on **Tuesday, November 28** or **Friday, December 1**.
* P3: Each team gives a status report presentation about their capstone project during the final exam slot, **Saturday, December 16, 9:00am-12:00pm**.
* Final scores will be converted to grades according to the following thresholds (or possibly more generous thresholds): 93%=A; 90%=A-; 87%=B+; 83%=B; ...; 60%=D-.

Amount of work

College policy recommends approximately 3 hours of independent work for every hour of class time. Our class meets for 2.5 hours per week. Therefore, you should expect to spend 7-9 hours per week (outside of class time) on this course. In a typical week, preparation for discussions should take no more than 1-2 hours. Therefore, you should spend about 5-8 hours per week on your senior seminar project.

Plagiarism, copying, and collaborating

The College's standard policy on plagiarism applies and you should be familiar with it, as described in Dickinson’s [Community Standards](https://www.dickinson.edu/info/20273/dean_of_students/867/community_standards). Any use of external sources or assistance, whether from a statuc source, a human or a generative AI program, should be acknowledged and cited appropriately.

Accommodations

The instructor will follow college policy on [Accommodating Students with Disabilities](http://users.dickinson.edu/~jmac/accommodations.html).

Late Work Policy

Each student is permitted a total of four no-penalty days of lateness for submitted work over the entire semester; every subsequent day of lateness incurs up to a 25% penalty for the late assignment. Late days can be used only in whole day units. Accounting for late days is mostly via an honor system: students should keep count of their late day usage. To use one or more late days on a given assignment, there is no need to notify the instructor or obtain permission in advance. When submitting a late assignment, state clearly at the start of your submission how many days you are using, and the total used so far in the semester. Late days cannot be used for assignments that have a real-time component, such as presentations and discussions.

Recording and posting of class content

The instructor may record some or all class meetings. If a class is recorded, the content will be made available only to members of the class. Do not share or repost class recordings or other content; doing so would be a breach of Dickinson’s [Community Standards](https://www.dickinson.edu/info/20273/dean_of_students/867/community_standards). Classes may also be recorded for accommodation purposes.