Course Policy

Instructors

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Course Description

This course introduces the principles of software engineering. Students work in teams to propose, design and begin to implement a capstone project.

Credits

2-2-3

Learning Objectives

Upon completing this course, students should be able to:

1. Construct and communicate a comprehensive project plan, including analysis, design, implementation and maintenance activities using Software Life Cycle and Project Management practices. Supports Student Outcome 3 and IT-6
2. Collaborate in a team environment. Supports Student Outcome 5
3. Understand the social and ethical issues and responsibilities of the Software Engineering Code of Ethics. Supports Student Outcome 4.

Student Outcomes

- **3.** Communicate effectively in a variety of professional contexts (oral).
- **4.** Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles (individual).
- **5.** Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- **IT-6.** Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, of computing based systems.

Textbooks

Required Textbooks:

- Classical and Object-Oriented Software Engineering, 8th ed. Schach, McGraw-Hill, 2011.

Prerequisites

- IC312 Data Structures

Extra Instruction

Extra instruction (EI) is strongly encouraged and should be scheduled by email with the instructor. EI is not a substitute lecture; students should come prepared with specific questions or problems.

Collaboration

The guidance in the Honor Concept of the Brigade of Midshipmen and the Computer Science Department Honor Policy must be followed at all times. See www.usna.edu/CS/Resources/honor.php. In particular, the project in this course falls under the Team Programming Projects of the Computer Science Department Honor Policy. All collaboration and outside sources should always be cited. The same rules apply for giving and receiving assistance. If you are unsure whether a certain kind of assistance or collaboration is permitted, you should assume it is not, work individually, and seek clarification from your instructor

Course Project

The course includes an incremental, course-long, team-oriented software development project. Team members are expected to contribute their fair share of the effort expended by the team towards the software design and development of their project. Each team member will undergo anonymous peer reviews that evaluate the contributions made by the team member and which will have direct impact on team member grades. On very rare occasions, a team may have a member that fails to fulfill his/her responsibilities towards the team project. Under such circumstances, the following **Regulations to Eject Nonfunctioning Team Members** are specified:

1. **Informal Team Discussion.** If the majority of a team determines that a member of the team is not fulfilling his/her responsibilities, they will hold a team-only meeting with a majority of the team members present, to include the non-functioning team member. At

this meeting, the team must clearly convey the individual's performance shortcomings and specify what must be done to correct the situation to include a correction timeline. At least one Informal Team Discussion must be held prior to advancing to the Fair Warning Memo discussed below.

2. **Fair Warning Memo.** After an Informal Team Discussion correction timeline has elapsed, if the majority of a team determines that an individual is still not fulfilling his/her responsibilities, they will send the member a Formal Warning Memo, with a copy to all team members, as well as their customer(s) and course instructor(s). The memo must summarize the previous Informal Team Discussion(s) to include dates and specifics, give an update on the individual's performance, must be dated, and must indicate that the individual will be ejected from the team if the situation is not corrected within two weeks.

3. **Formal Ejection Memo.** After a period of two weeks, if the individual has not corrected the situation, the team will send the individual a Formal Ejection Memo detailing what the individual has failed to do since receiving the Fair Warning Memo, with a copy to all team members, as well as their customer(s) and course instructor(s). If the course coordinator approves the ejection, the individual will be responsible for completing his/her own project in its entirety or be assigned to a different team at the course coordinator's discretion.

4. **Relapse.** After a Fair Warning Memo is issued, if the individual temporarily corrects the lack of responsibility but then relapses into being a nonfunctioning team member, no additional warning memos are necessary. The team may serve the individual with a Formal Ejection Memo, as described above.

Classroom Conduct

The section leader will record attendance and bring the class to attention at the beginning and end of each class. If the instructor is late more than 10 minutes, the section leader will keep the class in place and report to the Computer Science department office. If the instructor is absent, the section leader will direct the class. Drinks are permitted, but they must be in closable containers. Food, alcohol, smoking, smokeless tobacco products, and electronic cigarettes are all prohibited. Cell phones must be silent during class.

Late Policy

Penalties for late submission of graded work may vary among courses or from semester to semester, but they will be the same for all sections of a given course. For this course:

1. **Milestones.** Any team not ready to hand in their paper milestone deliverables, or to deliver their presentation when called upon, will have 10 points deducted from their presentation grade and will go to the end of the presentation cycle for that period. Presentations not ready for delivery during class on the due date will earn a grade of zero, but will still have to be completed and turned in to receive a passing grade for the course.

2. **Labs, Homework, Other Assignments.** Items turned in after the posted submission deadline will receive a grade of **zero** unless the student has coordinated with the instructor ahead of time or the student is absent from class due to an illness or other

unforeseen circumstance. If a student is going to be absent from class for a Movement Order or other pre-planned event, it is the student's responsibility to coordinate for the timely submission of all assignments or contact the instructor for an extension.

Grading

	6wk	12wk	16wk	Final
HW & Quizzes	5%	5%	5%	5%
Labs/Progress Reports	5%	5%	5%	5%
Team Milestones (peer eval weighted)	30%	30%	30%	30%
Exams	60%	60%	60%	60%