COS420 –Software Process  
Spring 2025  
Prerequisite: COS216 Data Structures and Algorithms, COS477 Software Engineering

Instructor: Steven Yackel Email: yacste@bethel.edu  
T 6:00 – 9:00 PM Office Hours: By appointment only

Course Overview

Developing code is often only half the job for a software engineer. An engineer must also learn to handle incoming requests from customers, product managers, and architects. In Software Process, students will learn to balance the various real-world tasks that a software engineer encounters, such as ambiguity, conflicting requirements, task completion time estimation, and working with other engineers and disciplines on a team. Students will need to be self-driven to learn as a part of their software team as they work to complete an in-depth software project over the course of the semester.  
  
Why this Course is in our Curriculum

It is important for all computer science professionals to have experience at types of skills beyond just coding. Today’s computer science jobs require a diverse set of tasks to be completed, and this course will help train the ability to handle multiple real-world situations.  
  
Class Format

Class time will largely be devoted to time working with your software team and your manager (the professor) on planning and building your software app. There will be small lectures during some class periods on non-coding topics such as task estimation, team dynamics, and performance reviews.  
  
Assignments and Exams

There are no formal assignments or exams in this class. Your software team will be developing a project over the course of the semester. This will constitute nearly all the work for this class.

Reputation

Many courses have a portion of the grade allocated to participation, but participation doesn’t model effectively enough what a software engineer career will entail. Elements such as timeliness of code, interaction in meetings and groups, going above and beyond what is expected, and showing passion will all raise reputation in a company. Those concepts will be rewarded in this class; examples of what it that means practically are participation in team meetings, going above and beyond your work for your team, and quality of your code. Everyone will begin with the same baseline reputation, but it will change positively or negatively throughout the semester as these various metrics are evaluated.

Reputation values throughout the semester do not directly correspond to a grade percentage. When the class is complete, reputation values will be converted into a grade from an average of all the reputation values in the class, with special consideration given to the relative values of members of your team. See the Grade Breakdown for more details.

Reviews

Each student will periodically write performance reviews for themselves and the other members of their team. Self-reviews are a student-written evaluation of their own work in the class so far. This includes their code quality, ability to communicate as a member of a team, task tracking, etc. Students are expected to both bring light to their successes and critical of their own shortcomings, with ideas of how they are going improve over time.

Team reviews are a student-written evaluation of others member of their team. These will include perception of how other team members are meshing with the team, portion and quality of the work submitted, contributions to meetings, etc. These reviews will be given anonymously to the subject of the review to praise the successes while also exposing failures so improvements can be made. Repeated negative feedback from team members (such as failing to complete coding tasks) will result in lower reputation. The grades for their team members will not be affected.

Institutional Policies

Violation of honesty standards can result in denial of credit (U or F) in a course, as well as dismissal from the university. Penalties are given at the discretion of the faculty member, and offenders will be referred to the associate provost of the College of Arts and Sciences. (See Bethel University’s full policy on Academic Honesty in the catalog: (<http://catalog.bethel.edu/arts-sciences/general-information/academic-honesty/>).

Accessibility

Bethel University is committed to accessibility for students with disabilities and the Office of Accessibility Resources & Services (OARS) is a resource to ensure students experience access. Reasonable accommodations are approved after an interactive process with the student and OARS. The instructor will provide accommodations, but the student is required to initiate the process.

Students with a documented disability may contact OARS to learn more about how to register for accommodations. Reasonable accommodations are approved after an interactive process with the student and OARS.

Students registered with OARS are responsible for logging in to their AIM Accessibility Accommodation portal (via MyBethel) each term to request their Faculty Notification Letter of Accommodations. Accommodations cannot be applied prior to the faculty’s receipt of the letter.

OARS recommends the student and faculty discuss how accommodations may apply in the specific course. Accommodations cannot modify essential requirements or fundamentally alter the nature of the course. Consultation with OARS may be necessary to clarify reasonable accommodations based on the course. If there are any questions or concerns, connect with OARS at accessibility-serivces@bethel.edu or 651.638.6833.

Grade Breakdown

The average reputation of all students will be converted into a B- (80%), with higher and lower reputations receiving proportional grades. Project Role is how well your role of the project was completed (engineer, project manager, or scrum master). Team Project is based on how well your team completed their project and presentation. Team Scrum Process is based on how well your team planned out your sprints, stories, tasks, and prioritizations. Team Project and Team Scrum Process scores will be the same for all members of a team.

Reputation 25%  
Project Role 25%  
Team Project 25%  
Team Scrum Process 25%

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| ≥93 – 100 % A ≥90 – <93 % A- ≥87 – <90 % B+ ≥83 – <87 % B | ≥80 – <83 % B-  ≥77 – <80 % C+  ≥73 – <77 % C | ≥70 – <73 % C-  ≥63 – <70 % D+  ≥60 – <63 % D |