SYLLABUS
Computer Science Department
COS 430 & COS 530 Software Engineering
Spring 2025

Course Information

Class meeting time: **MW 12:30 – 1:45 pm**
Modality and Location: **Web/Online**
The syllabus is posted in Brightspace

Instructor Information

Name: **Dr. Sarah North**
Email: sarah.north@maine.edu
Office Phone: 678-520-6102
Office Hours: *On-line via Brightspace*
Preferred method of communication: Email *via Brightspace*

Course Description

Study methods applied to large-scale software development, including requirements analysis and specification, design, validation and verification, and project management, with emphasis on design principles. Students use methods on a large programming project.

Prerequisite: Prerequisites: COS 285 or COS 360.

Course Materials

Required Textbook & Resources
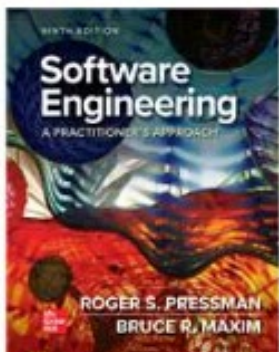
Software Engineering: A Practitioner's Approach (9th Edition)
By Roger S. Pressman and Bruce Maxim
McGraw-Hill Higher International.
ISBN-10: 1259872971; ISBN-13: 978-1259872976

Student Companion Website

Technology Requirements

1. **Microsoft (MS) Office**
2. The Best Free Alternatives to Microsoft Visio
   https://www.maketecheasier.com/5-best-free-alternatives-to-microsoft-visio

Course Learning Outcomes

After successful completion of this course, a student should be able to:

1. Analyze a problem, and identify and define the computing requirements appropriate to its solution,
2. To function effectively on teams to accomplish a common goal,
3. To use current techniques, skills, and tools necessary for computing practice,
4. To apply design and software development principles in the construction of software systems of varying complexity, and
5. To understand different software development methodologies including Agile Development and the Rational Unified Process.

Table of Contents

Course Requirements and Assignments

Assignments are due throughout the term and must be submitted through *Brightspace* by 11:59 p.m. on the designated due date for each assignment. Each assignment is weighted as noted in the assessment section below.

Turnaround Time on Assignments/Assessments	All online assignments and assessments will be graded and posted within a week after the due dates.
Response Time to Emails	I will respond to all emails and voicemails within 24 hours on weekdays and 24 hours on weekends. Please e-mail via *Brightspace*
Tracking Learning Progress	Students have continuous opportunities to track their learning progress via the Grade Tool provided on the D2L home page.

Attendance

Regular attendance and fully engaged participation is expected of all students. You should complete all assigned readings before each class session. I will post occasional reading quizzes to Brightspace. These quizzes will be due before the beginning of class.

Assignments

Assignments should be completed individually. Homework assignments will be due on the day by 11:59 PM. For example, the first homework due refers to Brightspace which means you should submit your work before 11:59 PM. All assignment reports (Microsoft Word or PDF files) are submitted and graded through Brightspace.

Project

We do not have a final exam, but we have an important team project. Each group of 3-4 students determines your software development project, such as an information management system, web development, etc. In the final stage, each group is required to submit a project report of at least 5 pages, along with any source code and a presentation lasting between 15-20 minutes (Midterm presentation and Final Presentation).

Midterm Exam

The midterm exam will be taken online through Brightspace and must be completed within the specified time.

Evaluation and Grading Policies

Assessment Grades will be calculated as follows:

Attendance	5%
Assignments	40%
SE Project (Group or Individual)	45%
Midterm Exam	10%
Total	**100**

Grading Scale:

Grade	Percentage	Point System
A	93 -100	
A-	90 – 92.99	
B+	87 - 89.99	
B	83 – 86.99	
B-	80 -82.99	
C+	77 – 79.99	
C	73 – 76.99	
C-	70 – 72.99	
D	60 - 69.99	
F	<60	

Course-Specific Policies

Assignments

All assignment reports (Microsoft Word or PDF file) and program source codes if applicable (Java executable file) will be submitted and graded through Brightspace.

Team Project

For the project, I encouraged you to work in teams of two or three. You can work together face to face or remotely using Zoom and screen sharing. Your roles and division of labor should be indicated in the report. Although it is a team project, I hope that you can actively participate in it and achieve real gains. Many students feel they learn more effectively by working with a partner.

The best teams for learning are several students at similar levels. Do not make a team between someone with prior programming experience and someone with no experience. Teams should turn in only one report with both student names on it.

Late Assignments Policy Attendance
A late penalty of 5% will be applied to all the assignments submitted after the due date. Late assignments will only be accepted up to two (2) days after the due date.

Plagiarism
Plagiarism is turning in work that is not your own. Searching the internet for answers or using answers created by others is plagiarism and may result in failing the course as well as appropriate disciplinary action. It is your responsibility not to leave your work where others might copy it.

Getting Help
I want everyone to succeed. Do not put off getting help when you need it.
- Use the discussion board in Brightspace.
- Join student hours (or by appointment).
- Use the tutoring available through the Learning Commons which is available both on campus and by Zoom. Learn more and schedule an appointment at: usm.maine.edu/learning commons.

Academic Services & Policies

Below you'll find a brief list highlighting some of the most crucial student services and supports.

- **Request disability accommodations** | (207) 780-4706 | dsc-usm@maine.edu

- **Report Interpersonal violence** | (207) 780-5767 | usm.titleix@maine.edu

- **Report on-campus emergencies and safety concerns** | (207) 780-5211 or your local police agency.

- **Get academic help** | mycampus.maine.edu/group/usm/learning-commons

- **Get technology help** | usm.maine.edu/computing/helpdesk

- **Meet with an academic advisor |** usm.maine.edu/advising

For USM's most complete and current information on services available to students, as well as academic policies, use the QR Code to go to the [Student Services and Policies Hub webpage](#)[1].

[1] https://mycampus.maine.edu/group/usm/student-services-and-policies-hub

COS 430/COS 530 – Software Engineering
Tentative Course Schedule: Subject to Change
Dr. Sarah North

WEEKS **DUE DATES** EVERY TWO WEEKS	COURSE MODULES & TASKS
1 MODULE_1 *MODULE TASKS DUE* SUNDAY, FEB 2	WELCOME- SOFTWARE ENGINEERING COURSE - OVERVIEW **MODULE 1** Moduel_1: • Chapter_1 & 2: Introduction to Software Engineering & Modeling **SE Assignment_1, Project Discussion Due - Refer to** *Brightspace*
2 MODULE_2 *MODULE TASKS DUE* SUNDAY, FEB 16	Module 2 • Chapter_3: Agile Development/Understanding of Requirements **SE Assignment_2, Project Report Due - Refer to** *Brightspace*
3 MODULE_3 *MODULE TASKS DUE* SUNDAY, MARCH 2	MODULE 3 • Chapter_5: Object-Oriented Analysis **SE Assignment_3, Project Discussion Due - Refer to** *Brightspace*
4 MODULE_4 *MODULE TASKS DUE* SUNDAY, MARCH 9	MODULE 4 • Chapter_6: Object-Oriented Design **SE Project Presentation Due - Refer to** *Brightspace* **Midterm Exam –** Mod_1 – Mod_4 - *Refer to*
5 MODULE_5 *MODULE TASKS DUE* SUNDAY, APRIL 6	Module 5 • Chapter_8: Design Concepts/Unified Modeling Language (UML) **SE Assignment_4, Project Discussion Due - Refer to** *Brightspace*
6 MODULE_6 *MODULE TASKS DUE* SUNDAY, APRIL 20	Module 6 • Chapter_9: Architecture Design/Software Testing **SE Assignment_5, Project Report Due - Refer to** *Brightspace*
7 MODULE_7 *MODULE TASKS DUE* SUNDAY, APRIL 27	MODULE 7 • CHAPTER_10: COMPONENT-LEVEL DESIGN **SE PROJECT PRESENTATION DUE - REFER TO** *BRIGHTSPACE*
8 MODULE_8 *MODULE TASKS DUE* SUNDAY, MAY 3	MODULE 8 **SE Project Presentation Due - Refer to** *Brightspace* COURSE WRAP UP