

# Software Engineering II

(CSCI 4230)

Meets Synchronously Online Mondays and Wednesdays: 11:00 – 11:50 AM

Meets in Labs Tuesdays from 5:00 – 6:40 PM

## Course Syllabus

### **1. Instructor / TA**

Dr. Jonathan A. Saddler,

Teaching Assistant Professor of Computer Science

Department of Computer Science and Engineering, East Carolina University

Email: saddlerj20@ecu.edu and jsaddlerecu@gmail.com

Main Office Hours (see below for additional hours) :

Mondays, Thursdays: 4:00 – 5:00PM

Fridays: 3:51 – 5:00 PM.

Locations for office hours will be announced in-class.

Our T. A. for this course will be James Phillips,

Email: philipsj16@students.ecu.edu

### **2. Course Catalog Description**

Conceptual and practical knowledge in relation to large-scale software development using established software engineering principles. Requires completion of major project using tools and methodologies provided.

### **3. Office Hours**

If you are in need of assistance with course material, office hours for this course will be held:

**Mondays and Thursdays from 4:00 – 5PM,**

**and Fridays from 3:51 – 5:00 PM.**

(I will lead these sessions and give out the link for the online session)

**In addition: Tuesdays and Thursdays from 3:30 – 4:15PM.**

( Our course T. A., James Philips will lead these sessions)

### **4. Course Web Page:**

<https://ecu.instructure.com/courses/61720>

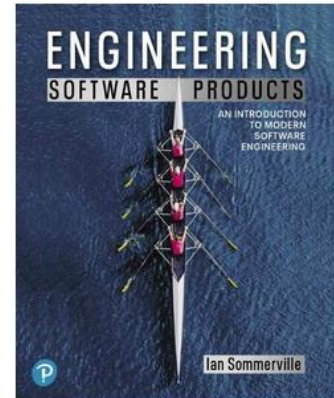
## 5. Required Textbooks: None

### 5.1 Referenced Textbooks:

Sommerville, Ian

*Engineering Software Products: An Introduction to Modern Software Engineering*

ISBN 13: 9780135210642



## 6. Course Learning Objectives

This course provides practical training in software development using software engineering tools and principles. Students will practice using software development processes, methodologies, and commonly-used tools covering the complete lifecycle of software development by building a fairly-complex software system. Students are required to complete a significant team project during the course of the semester.

Upon completion of this course each student will be able to:

- Develop enterprise software systems using state-of-the-art development techniques and tools
- Evaluate and choose software processes for the development of software systems
- Plan and manage realistic software development projects
- Analyze, design, and implement software systems using object-oriented methods
- Design a test plan, develop test cases, and perform tests for software systems
- Create documentation for software systems

The following **applications/technologies** may be covered in our learning material, and may be used heavily in your completion of this course

- For Version Control / Configuration Management: Git and GitLab
- For Project and Task Management: Atlassian Jira and Confluence
- For UML Modeling: StarUML, Visual Paradigm, Visio
- For Development: JetBrains IntelliJ/PyCharm, Microsoft Visual Studio, Eclipse IDE for Java Developers, or other IDEs
- For Unit Testing: JUnit, NUnit, or other unit testing frameworks

## 7. Topics

Topics covered in this course include:

- Software development processes and life cycles
- Planning and managing the project flow and project teams
- Version control / configuration management
- Requirements engineering
- Object-oriented software analysis and design
- Software implementation
- Software testing

## 8. Note on Attendance and In-Class Material

(more to come in first few lectures of semester)

You can miss at most **two** labs and at most **three** regular class sessions for little to no effect on your grade.

The penalty for crossing either threshold is **3 final-grade points** per session missed above either the two thresholds. This is a very heavy weight assessed to attendance that has ideas carried over from prior offerings of this same course. This subtraction of 3 points is deducted from the Other category to start, though it can affect others.

The first time this course will meet will be Wednesday, January 20th, and this policy will be in effect beginning after the following laboratory session on Tuesday, January 27th. Please take this requirement seriously, as attendance is a poor reason to lose final-grade points, but it will be enforced.

You are responsible for assignments and announcements given in class and announced through email. All assignments are due at their due time for this course (expressed in hours and minutes on Canvas). Course materials not submitted by the due time will receive zero credit for that assignment period's submission. Accommodations must be made days in advance of the due time of the assignment.

## 9. Final Examination

There is no final examination battery of questions for this class; however, there is a final, team-project presentation. The final, team-project presentations will be scheduled during the final exam period, and each student must attend to earn credit toward their personal grade in the course.

## 10. Grading

Each group will be sized to approximately **six (6) students** per group. More details about the project are available on our Canvas website. The group project is weighted 90% of the course grade. The breakdown of your course grade is:

<u>Task</u>	<u>Percent</u>
Source Code Implementation	20%
Project Management	10%
Configuration Management	10%
Requirements Elicitation, Analysis and Specification	10%
Architecture and Design	10%
Testing	10%
Project Presentations	10%
Peer Feedback	10%
<b>Project Weight Total</b>	<b>90%</b>
Other	10%
<b>Course Grade Total</b>	<b>100%</b>

The “Other” 10% of your course grade is earned via attendance at course lectures.

## 11. Grading Scale

Course grades will be assigned based on the following grading scale: The scores listed in this table to the right are the low cutoff points needed to earn the score on the left.

A	94%
A-	90%
B+	87%
B	83%
B-	80%
C+	77%
C	73%
C-	70%
D+	67%
D	63%
D-	60%

## **12. Copyright on Course Materials**

This semester involves a heavy teamwork and external collaboration component. Course materials, including programming assignments and lecture notes, can only be publicly shared or used for commercial purposes if given permission. This permission must involve me directly if it involves assignments I've written for you. This is covered by The East Carolina University Copyright regulation available at: <http://www.ecu.edu/prr/10/40/02>, which states *Quote*:

2.9. "Student Work" means a paper, computer program, thesis, dissertation, artistic and musical work, and other creative work made by University students that are produced outside any University employment, and are not Sponsored or Externally Contracted Work. Notes of classroom and laboratory lectures and exercises taken by Students shall not be deemed Student Works.

7.1.3. Notes of classroom and laboratory lectures, syllabi, exercises and other course materials taken by Students shall not be deemed Student Works, may only be used for personal educational purposes, and shall not be used for commercialization by the Student generating such notes or by any third party without the express written permission of the author of such Works. Violation of University Policy may be grounds for disciplinary action pursuant with the ECU Student Conduct Process.

*End Quote.*

## **Weather Emergencies**

In the event of a weather emergency, information about ECU can be obtained through the following sources:

ECU emergency notices <http://www.ecu.edu/alert>

ECU emergency information hotline (252)-328-0062

## **Students with Disabilities**

East Carolina University seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must be registered with the Department for Disability Support Services located in Slay 138 ((252) 737-1016 (Voice/TTY)).

For more information, please see <http://www.ecu.edu/cs-studentlife/dss/>.