

CSCI 3030: Software Engineering I

Fall 2020 (First Block)

Instructor	Dr. Mark Hills
Scheduled Class Time	Tuesday, Thursday: 12:30pm - 2:00pm Rivers 226
Instructor Office	Science & Technology Building, Room C-110
Online Office Hours	Tuesday 2:30pm to 4:00pm Wednesday 10:00am to 12:00pm Thursday 2:30pm to 4:00pm Feel free to make an appointment with me if you need to meet outside of these hours.
Instructor Phone	252-328-9692
Instructor Email	hillsma@ecu.edu , responses within 24 hours during the week, potentially longer on weekends or over holidays
Course Web Page	Canvas: https://ecu.instructure.com/

Course Description and Objectives

This course provides practical and theoretical knowledge of software engineering. Students will learn the processes, methodologies, and tools used during the complete life cycle of professional software projects. Students are required to complete a team project over the course of the semester.

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

- Understand the nature, objectives, and methods of software engineering practice
- Evaluate and choose process models for the development of software systems
- Use appropriate project scheduling and management techniques to create project management plans and documents
- Use appropriate requirements elicitation, analysis, and modeling techniques to establish and document software requirements
- Design software systems using object-oriented techniques and visual modeling tools
- Use appropriate software testing techniques to create test cases, perform tests, and create test documentation
- Use version control systems to manage software configurations and collaborate effectively on software development

The following applications may be used in this course:

- UML Requirements and Design Modeling: NoMagic MagicDraw, StarUML
- Project and Task Management: Jira, Confluence
- Version Control/Configuration Management: Git and GitHub or GitLab
- Development Environment: JetBrains IntelliJ or other language-specific IDEs
- Unit Testing: JUnit or other language-specific unit testing frameworks

Topics

Topics covered in this course include:

- The nature of software and software engineering practice
- Software process models
- Software requirements elicitation, analysis, and documentation
- Software architecture and design, focusing on object-oriented design techniques
- Modeling with the Unified Modeling language (UML)
- Software testing strategies and documentation
- Project management concepts, including team management, risk management, and project estimation
- Configuration management
- Software maintenance and evolution

Classroom Meetings

This class uses a hybrid-instruction model. We will meet in class on Tuesday and Thursday from 12:30pm to 2:00pm. In addition, approximately 44% of the class will be conducted online in Canvas through supplemental video lectures, discussion boards, online quizzes, and small-group activities. All online work will be asynchronous in nature. To be successful in this course, students will need reliable access to a computer with internet access sufficient for viewing videos. Webcams are an option for office hour interactions but are not required. Please review the ECU Computer Recommendation: <https://itcs.ecu.edu/student-computer-requirements/>.

Required Course Materials

Our main text for the course will be *Engineering Software Products: An Introduction to Modern Software Engineering*, by Ian Sommerville, Pearson, 2020. Please see Canvas for links to both the electronic and physical versions of the textbook. This book is required.

You are expected to purchase an ACM student membership, which will give you access to the O'Reilly learning platform (OLP). Resources on the OLP will be referenced during this course, and it is assumed you have access to the OLP. This will also be very useful for your group project. Instructions for joining ACM and accessing the OLP are available on Canvas.

We will also be reading a number of papers and other online materials during the course. Links to these will be provided on Canvas, with all material available electronically.

For this course, you will need a university-approved Face Covering/Mask, Hand Sanitizer, and Disinfectant wipes. Please see <https://returnofpiratenation.ecu.edu/protecting-our-pirates/> for more details.

COVID-19 Protections, Considerations and Policies

All students are required to comply with the [University Regulation on Face Coverings](#), including the wearing of face coverings in classrooms, lecture halls, and any other instructional areas and campus locations. Students with disabilities and medical conditions, as documented with the Department for Disability Support Services, may seek alternate accommodations. For additional information please consult the [Office of Students Rights and Responsibilities Website](#).

ECU wants to provide the safest classroom environment possible this semester. Therefore, we will be observing the following class policies related to your health and safety per [Pirate Nation Guidelines](#):

- All students are required to comply with [University Regulation on Face Coverings](#). No student will be allowed into the classroom without a face covering or mask worn properly over both the mouth and nose. You must wear a face covering properly the entire time you are in class.
- If you do not have access to a face covering, you may obtain a mask from Dowdy Student Store, Pirate Pantry, or another provider of masks.
- Maintain appropriate social distancing in hallways or common spaces prior to or after class.
- Follow all posted signage related to entry, exit and pedestrian flow within classroom buildings.
- Clean your desk surface with disinfectant when you arrive and before you leave class.
- Be prepared to sanitize high-touch surfaces, such as chairs and desks. For additional information please consult the [ECU's Cleaning and Disinfecting Hand-out](#).
- Maintain a minimum of 6 feet between you, other students and the instructor when entering, leaving and during class.
- Sit in your assigned seat.
- Conduct a daily health screening using the CDC's [COVID-19 symptoms](#) list.
- Do NOT attend class if you answer yes to any item on the list or if you are experiencing symptoms of any illness.

COVID-19 Attendance Policy

- The instructor will take attendance and utilize a seating chart in order to facilitate contact tracing, should this become necessary.
- Students should make every effort to participate in class activities, such as exams or key assignment due dates.
- Missing class does not automatically result in extensions on assignments or exam due dates.
- There is a clear correlation between attendance/participation and your grades.
- It is the student's responsibility to seek out the instructor and other classmates to obtain the information (e.g., lecture notes, relevant announcements, etc.) if they missed class.
- Students should maintain regular communication with instructors regarding their health status and communicate any changes in their ability to complete coursework and academic responsibilities immediately.

- If you become ill, see the guidelines in the [Return of Pirate Nations for Students](#). No unnecessary visits to health facilities or documentation will be required as per [ACHA 2020](#).
- You may at any time consult with your advisor or the instructor about whether to request an Incomplete ([ECU Faculty Manual IV.VIII.E Grade of Incomplete](#)) or a Withdrawal ([ECU's Withdrawals Policies](#)).

COVID-19 DSS Information

East Carolina University seeks to comply fully with the Americans with Disabilities Act (ADA). Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must be registered with the Department for Disability Support Services located in Slay 138, 252-737-1016. [Accommodation Information & Processes](#).

Additional DSS student resources can be found at: <https://accessibility.ecu.edu/students/>

COVID-19 Office Hours

Office hours will be conducted online. Students should refer to Canvas for posted office hours and for instructions to schedule an appointment with the instructor.

Missed Instructional Time in the Event of a Disruption:

Making up missed instructional time in this course will follow [ECU's Policy for Making Up Missed Instructional Time Due to Suspension of Instruction](#).

Grading

Students will be evaluated based on the combination of class activities. The final grade will be assessed with the following criteria:

Assessment		Grading		
Midterm exam (20%) and final exam (20%)	40%	A: ≥ 94;	A-: ≥ 90	
Hands-On Activities (including in-class activities), Discussions, Reading Quizzes, and Homework Assignments	20%	B+: ≥ 87;	B: ≥ 83;	B-: ≥ 80
		C+: ≥ 77;	C: ≥ 73;	C-: ≥ 70
		D+: ≥ 67;	D: ≥ 63;	D-: ≥ 60
Group Project	40%	F: < 60		
Total	100%			

Exams

The midterm exam for the course will be available during our regular class period on September 3, 2020 on Canvas. The final exam for the course will be available during our regular class period on September 29, 2020 on Canvas. More details about the exams will be available closer to the exam dates. Both are timed exams. Note: you will not need a proctor for the exams in this course. All exams will be administered through Canvas.

Group Project

Each group will be made up of 3 or 4 students. All details about the project, including the breakdown of credit across different project assignments, are available on Canvas.

Starfish

This course uses the Starfish system to provide you with information on your performance within the course. For more information, please see <http://www.ecu.edu/cs-acad/advising/upload/Starfish-Student-Getting-Started.pdf>.

Student Conduct

Smoking is not permitted in classrooms. Please turn off mobile phones in class. Laptops and tablets can be used for taking notes, but should not be used for other work (or recreational browsing, playing games, etc).

Students are expected to abide by the university's Student Honor Code. The homework that you do is a critical part of your education. Each student is expected to do his or her own individual work, and each group is expected to do their own group work. That does not mean you are not allowed to discuss your ideas with other students or groups. Working in groups can be beneficial, and I encourage you to talk through ideas with other students. But outright copying is considered plagiarism and is unacceptable. Students who copy other students' work, or who allow their work to be copied, or who copy their work from other sources, such as the Internet, will receive either no credit or negative credit for the assignment, and may be reported to the university for an academic integrity violation.

Other potential academic integrity violations are cheating, falsification, multiple submissions of the same work in different classes, and attempts at any of these violations. Please see http://www.ecu.edu/cs-studentlife/policyhub/academic_integrity.cfm for more details.

Academic integrity violations can result in a grade penalty up to and including an F for the course.

Incompletes

No incompletes will be issued in this course except for extraordinary circumstances, which generally will be situations where almost all work is complete, this work has been done at an acceptable level of quality, and it is realistic that you can pass the course once the remaining work is completed.

Continuity of Instruction

In the event of a campus emergency that disrupts academic activities, course requirements, deadlines, and grading percentages are subject to change. Information about changes in the course will be communicated as soon as possible by email, and on Canvas. Students are encouraged to continue the readings and other assignments as outlined in this syllabus or subsequent syllabi.

Copyright on Course Materials

Course materials, including programming assignments and lecture notes, can only be publicly shared or used for commercial purposes if given permission. This is covered by ECU copyright regulations, available at <http://www.ecu.edu/prr/10/40/02>, which state the following:

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.

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

Writing Intensive (WI)

CSCI 3030 is a writing intensive course in the Writing Across the Curriculum Program at East Carolina University. This course will focus on the development of writing skills. Upon completion of the course students will:

1. Use writing to investigate complex, relevant topics and address significant questions through engagement with and effective use of credible sources.
2. Produce writing that reflects an awareness of context, purpose, and audience, particularly within the written genres (Including genres that integrate writing with visuals, audio or other multimodal components) of their major disciplines and/or career fields.
3. Demonstrate that they understand writing as a process that can be made more effective through drafting revision.
4. Proofread and edit their own writing, avoiding grammatical and mechanical errors.
5. Assess and explain the major choices that they make in their writing.

This course contributes to the twelve-hour WI requirement for students at ECU. Additional information is available at the following site: <http://writing.ecu.edu>.

University Writing Portfolio

Students in all writing intensive courses are required to submit at least one completed written project to their University Writing Portfolio. In this course, students will submit assignments using the Portfolium tool in Canvas. The university uses these writing samples to assess the writing program and to make improvements where necessary. To report problems with Portfolium, contact ITCS: <https://go.ecu.edu/Portfolium>.

By default, assignments that you submit to your University Writing Portfolio become part of your personal Portfolium website (<https://ecu.portfolium.com>), which you may use or not as you please. Be aware that you are in control of the privacy settings of your Portfolium site and should review the settings to ensure your privacy settings are set to your preference. Making items on your personal Portfolium site public or private does not impact your grade in your writing intensive courses. Your Portfolium account remains yours after you leave ECU.

Caveats

Occasionally, it may be necessary to revise this syllabus due to extenuating circumstances. I reserve the right to revise this syllabus if the need arises. If I do so, I will announce this on Blackboard.