Course Syllabus – CEN 3031
Software Engineering

Contact Information
Instructor: Dr. Sanethia Thomas

Email Address: sanethiat@ufl.edu
- Please allow 48 business hours for response
Office Hours: https://calendly.com/drsanethiathomas/meeting
- Held 30 mins after every class MWF or by appointment with 24 hours advance.
*When you book an appointment make sure you provide the topic of discussion.

Teaching Assistants/ Peer Mentors: Each TA/PM will set their office hours, please respect their time.

Destinee Gant	dgant@ufl.edu
Grey Johnson	grey.johnson@ufl.edu
Dalia La Pommeray	d.lapommeray@ufl.edu
Paulina Liwinag	paulina.liwanag@ufl.edu
Tyler Metzger	tylermetzger@ufl.edu
Fernando Rivera	f.rivera@ufl.edu
Paola Solari	paola.solari@ufl.edu
Alex Webber	alexwebber@ufl.edu
Jack Zheng	jackzheng@ufl.edu

Classroom Slack: https://join.slack.com/t/cen3031spring21/shared_invite/zt-kttcu8nl-nmVsmTrnBZ90dZrfpIuJRA
-Slack is a place to build community with your peers. Please keep all communication class related, positive and non-offensive. The teaching assistants and peer mentors manage slack.
-All questions, concerns, and official communication intended for and directed to Dr. Thomas should be sent via email.

Canvas Announcements: Announcement notifications should be activated in your settings so you are aware of class announcements in a timely manner.

Course Information
This course will introduce students to current software engineering theories and practices being used in industry. The course will cover the standard software development process and the Agile "Scrum" methodology. Students will have the opportunity to work on a large scale project in which they can use any tech platform of their choice. Students will be responsible for developing and delivering a software product that meets customer's needs. Students will learn how to manage a project using project management tools. Students will also learn how to use repository tools (GitHub) and workflow practices to develop and maintain a shared code base. Students will increase their interpersonal skills in the areas of oral/written communication, conflict resolution, public speaking, and collaboration with their fellow team members, peers, and clients.

The course is hybrid and will be delivered though Hyflex technology. It is organized around online synchronous/face to face lectures and asynchronous lectures. All labs will be online and synchronous.

*We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- *You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.*
- *This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.*
- *Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.*
- *Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.*
- *If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.*
  - *Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.*

Course Objectives

By the end of the semester students will:

- Understand what software engineering is and why it is important;
- Understand that the development of different types of software system may require different software engineering techniques;
- Understand ethical and professional issues that are important for software engineers;
- Have extensive experience using the Agile "Scrum" Software Development Process
- Have experience working on a team to complete a large-scale software product
- Have experience communicating in a team and with clients

Course Materials

Required:
- *Software Engineering, 10th Edition* by Ian Sommerville - ISBN: 0137035152

Recommended:
- *Essential Scrum* by Mike Cohen and Ron Jeffries – ISBN: 9780137043293
- Various online tutorials (w3schools.com, guides.github.com, etc.)

Course Pre-Requisites

- COP 3502 – Programming Fundamentals I
- COP 3503 – Programming Fundamentals II
- COP 3550 - Data Structures and Algorithms

Mobile Computing Requirement

The College of Engineering requires students to have a mobile computing device (laptop) with 802.11 WiFi capability and webcam. Preferred methods for public and private communication regarding the course and a method for resolving technical issues (e.g. helpdesk.ufl.edu, 352-392-4357).

Course Schedule

The following is a **TENTATIVE** overview of the course schedule **(subject to change):**

Week	Dates	Chapter	Lab	Weekly Assignments (Due the following Tuesday)	Quiz
Week 1	1/11-1/15	1: Introduction (Ethics)	No Lab	Skills Survey	Practice Quiz
Week 2	1/18-1/22	2: Software Processes	Teams/GitHub	Ariane 5 Case Study	Quiz 1
Week 3	1/25-1/29	22/23: Project Management & Project Planning	Software Lifecycle Tools	Project Proposal; Project Planning Tool	Quiz 2
Week 4	2/1-2/5	3: Agile	APIs and Backend	User Stories; StoryMap	Quiz 3
Week 5	2/8-2/12	4: Requirements Engineering	Database Systems	Product Backlog: Planning Poker	Quiz 4
Week 6	2/15-2/19	25: Configuration Management	CI & Circle CI	Circle CI	Quiz 5
Week 7	2/22-2/26	Sprint 1 Presentations	No Lab	Chapter Analysis 1	No Quiz
Week 8	3/1-3/5	5/6: System Modeling & Architectural Design	Frontend & Styling	Wireframes; System Context Model	Quiz 6
Week 9	3/8-3/12	7: Design & Implementation	Connecting the Full-Stack	Software Test Plan	Quiz 7
Week 10	3/15-3/19	8: Software Testing	Testing	Design Vision Sprint	Quiz 8
Week 11	3/22-3/26	Sprint 2 Presentations	No Lab	Chapter Analysis 2	No Quiz
Week 12	3/29-4/2	Usability	Deploying	User Testing	Quiz 9
Week 13	4/5-4/9	9: Software Evolution	Standups	Project Handoff Guidelines	Quiz 10
Week 14	4/12-4/16	Bonus topics	Standups	Chapter Analysis 3	No Quiz
Week 15	4/19-4/21	Presentations	No Lab	Website Showcase Final Documentation	

Grading

Information on current UF grading policies for assigning grade points: catalog.ufl.edu/UGRD/academic-regulations/grades-grading- policies/.

The grade breakdown is as follows:

Grade Category	Percentage	Letter	Range (%)
Participation/Assignments	20%	A	94 – 100
		A-	90 – 93
Quizzes (10 drop 1)	20%	B+	87 – 89
		B	84 – 86
Chapter Analysis (3)	15%	B-	80 – 83
		C+	77 – 79
Final Project	35%	C	74 – 76
		C-	70 – 73
Peer Evaluation	10%	D+	67 – 69
Total	*100%*	D	64 – 66
		D-	60 – 63

NOTE: A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: an average of C- is equivalent to a GPA of 1.67 and therefore does not satisfy this graduation requirement. For more information on grades and grading policies, please consult the catalog.

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (sccr.dso.ufl.edu/process/student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

**Academic Dishonesty will be dealt with strictly. Sharing / copying, "borrowing" of code structure, discussing code structure, looking at code from another student or providing such code, and plagiarism, in addition to other dishonest behaviors, are all considered academic dishonesty. Absolutely no information regarding assignment solutions may be shared by students except at a conceptual level. If students implement algorithms from other sources, they must cite those sources.

Students may not copy code from the Internet or other sources under any circumstances. Any student found to have violated these rules, whether a provider or receiver or unauthorized help, will be given a zero and referred to the Honor Court. When in doubt, ask.

Code Submissions

Functionality is key to success in software development and computer science, so it is **extremely important** that the guidelines are followed. Failure to follow these instructions will result in penalties.

1) Code must compile / run in debug and release mode. Debug information should never be released in the final version of a software project. **<u>Projects that do not compile AND run will be marked zero</u>**.

2) Include only those files specified by the documents in your archive. Projects should have no directory structure except as explicitly mentioned in the documentation (i.e., relevant files and folders should be submitted in the root of the zip file.) It should be possible to open the archive, copy your files directly into the project, compile, and then run the project without further steps. **<u>If the project has naming or organization error(s), its grade will be zero.</u>**

Expectations for the Class

Students are expected adhere to the following guidelines in this course:

Students are strongly recommended to listen to all lectures. Requirements for class participation and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Grade reviews must be requested within one week of a grade being posted. After one week, no grade will be revisited. In the event of a grade review, the entire assignment will be reviewed.

Peer Evaluations. Each team member will score their team members and themselves. They are to provide a rating and justification of the rating. A team member who has an average peer evaluation score of 70-79 will receive a 15% penalty for the associated assignments. A team member who has an average peer evaluation score of less than 70 will receive a penalty determined by the professor of the course considering the evaluated contribution and justification provided by their team members.

All assignments are due by the time listed on Canvas. Projects and homework with a cascading deduction: one (1) business day late for <u>10% penalty</u>; two (2) business days for <u>30% penalty</u>; or three (3) business days for <u>60% penalty</u>. Assignments will not be accepted after 3 business days. Quizzes and tests may not be submitted late for credit except with instructor approval for extenuating circumstances (see below).

Exam and quiz make-ups will not be given except in extenuating circumstances. The drop quiz policy will be enforced. For make-up consideration, students will be required to submit written documentation from a reputable source as evidence. For any planned event, the student is expected to contact the instructor no less than <u>two weeks in advance</u> for consideration. *Please note that there is no guarantee that requests will be accommodated.* Social, networking, and club events may be taken into consideration strictly at the discretion of the instructor.

Requirements for class participation and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Quizzes may be reviewed during office hours but will not be distributed. Making good assessments takes time and testing. Unfortunately, some disreputable organizations and companies attempt to compromise exams to give some students an edge for a fee. To combat this, we will always allow students to review quizzes and exams during office hours but will not release them en masse.

Students should arrange for project help and grade questions during office hours. Students should make plans to meet with the Peer Mentors and Teacher Assistants during scheduled office hours or try to arrange an appointment with the TA. <u>Do not send email to</u>, <u>send private messages to</u>, or "<u>@</u>" instructors or TAs about grades.

All correspondence should be engaged via email. For matters directed to the professor, email the professor directly. Please allow 48 business hours for a response.

Student Assistance
The following services are available to students requiring assistance:

<u>Accommodations for Students with Disabilities</u> – Students Requesting accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

<u>UF Counseling Services</u> – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- Career Resource Center, Reitz Union, 392-1601, Career development assistance and counseling
- University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling
- SHCC mental Health, Student Health Care Center, 392-1171, personal counseling
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.

Software Use Policy
All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Evaluations
Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at gatorevals.aa.ufl.edu/public-results/ .

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or **via e-mail at** helpdesk@ufl.edu

Career Connections Center: Career assistance and counseling services *career.ufl.edu/*

Library Support: cms.uflib.ufl.edu/ ask various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: General study skills and tutoring. teachingcenter.ufl.edu/

Writing Studio: writing.ufl.edu/writing-studio/http://writing.ufl.edu/writing-studio/

Student Complaints On-Campus: sccr.dso.ufl.edu/policies/student-honor- code-student-conduct-code/

On-Line Students Complaints: distance.ufl.edu/student-complaint-process/ /

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit umatter.ufl.edu/ to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit counseling.ufl.edu/ or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit shcc.ufl.edu/.

University Police Department: Visit police.ufl.edu/ or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road,
Gainesville,   ufhealth.org/emergency-room-trauma-center.