COSC 4336 Software Development, Fall 2021

M/W/F 9:05 AM – 10:00 AM @ COB 255

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Office Hours: M/W/F 10:00AM-11:00AM @COB 315.12

General Course Information

Required Texts	*Systems Analysis and Design,* by Harry J. Rosenblatt (11th edition). ISBN-10: 1305494601 ISBN-13: 9781305494602
Suggested Materials	*Software Engineering: A Practitioner's Approach*, by Roger Pressman (7th edition). ISBN-10: 0073375977 ISBN-13: 978-0073375977 *Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development,* by Craig Larman(3rd edition). ISBN-13: 978-0131489066 ISBN-10: 0131489062 *Object-Oriented and Classical Software Engineering* by Stephen R Schach (8th Edition). ISBN-13: 978-0073376189 ISBN-10: 0073376183
Other Recommendations	Some online magazines: *Application Development Trends* *Application Developer Magazine* *Information Week*
Pre-requisites	COSC 2336
Course Description	It presents a step-by-step methodology - that integrates Planning, Requirements Modeling, UML Tools, Interface and Data Design, CASE tools, Implementation, Test-Driven Development, Quality Assurance, Configuration Management, and Agile Principles throughout the life cycle of software development. Students will be assigned to a group project and will work together through the full development cycle, from understanding the requirements to delivering a functioning product, and will make a series of presentations and reports of the work.
Learning Outcomes	1. Describe software development methods and life cycle models 2. Analyze software project requirements 3. Translate the analysis model into the design model 4. Describe agile software development 5. Describe & implement design concepts 6. Introduce state-of-the-art tools for large-scale software development 7. Develop students' ability to evaluate graphical user interfaces 8. Compare testing strategies for unit and integration testing 9. Implement the major software development techniques in practical projects

Grading Policy

Weighting Scheme	Exam I - 20% Exam II - 20% Quiz - 10% Project - 50%	90.0 - 100% A 80.0 - 89.99% B 70.0 - 79.99% C 60.0 - 69.99% D Below 60% F

Projects

- There will be one semester long project, to be completed in teams.
- In addition to the programming project, each team will give two presentations demonstrating the project progress.
- All code and files required for the projects must be submitted via Canvas.
- Peer evaluation will be conducted to track each team member's performance.
- Group meeting logs will be collected weekly to keep track of each team's project progress.
- Team members who do not contribute appropriately to an assignment will receive a significantly lower grade for that assignment than the rest of that team, possibly "zero", at the discretion of the instructor.
- If there is a lack of appropriate contribution on any two or more group assignments, the non-participating student(s) may be recommended to withdraw from the course.

Quizzes

- Each course module includes at least one formative short multiple choice quiz. At the end of each module, students take a summative multiple choice quiz that assesses their knowledge of the concepts covered in the module.
- Pop quizzes may be given for extra credit, to be determined.

Course Policies

- Assignments should be turned in no later than the deadline. Turn in what is completed by the deadline for partial credit. **No late submissions will be accepted**.
- You are expected to do your own work. You may assist each other with general concepts, but direct assistance with a particular assignment or any attempts to gain an unfair academic advantage will not be tolerated. **Any indication of cheating and/or plagiarism on an exam/assignment/project will be an automatic 0 (zero) for the exam/assignment/project for all students involved. Solutions copied from the internet, instructor's manual, etc. will also be given zero credit.** If you have questions about the line between assistance and cheating, discuss it with the instructor. For examples of Scholastic Dishonesty, please visit Section 8-802 of the Manual of Policy and Procedures.

Attendance and Participation

- Attendance and participation will be considered in a portion of the student's grade.
- Each student is expected to participate by making regular forum posts on the discussion board under Canvas, either asking a question or responding to an existing topic.
- Regular course attendance is mandatory. If attendance is low, the instructor reserves the right to administer pop quizzes for credit, to be determined.

Information for Classrooms and Laboratories

- Students are expected to wear face masks covering their nose and mouth in public settings (including classrooms and laboratories). The UT Tyler community of Patriots views adoption of these practices consistent with its Honor Code and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.
- Students who are feeling ill or experiencing symptoms such as sneezing, coughing, digestive issues (e.g. nausea, diarrhea), or a higher than normal temperature should stay at home and are encouraged to use the UT Tyler COVID-19 Information and Procedures website to review protocols, check symptoms, and report possible exposure. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email saroffice@uttyler.edu.

***This syllabus is subject to change at any time at the discretion of the instructor.**

Tentative Course Schedule

Week	Dates	Lecture Topics	Assignments
01	8/23-27	Introduction to Software Development	Pre-Course Survey
02	8/30-9/3	Feasibility Study 1-minute pitch on 9/3	9/3: 1-page Project Proposal due (individual assignment) 9/3: Project Preference Survey due (individual assignment)
03	9/8-10	No class on 9/6 Project team formation; Software Risk and Management	
04	9/13-17	Requirements Overview Use Case Modeling	9/17: Report: Project Phase I: Feasibility and Plan due (group assignment) 9/17: Survey 1 due (individual assignment)
05	9/20-24	Static Modeling; Data Modeling Dynamic Modeling Development Strategies	
06	9/27-10/1	UI/UX design Database design System Architecture	
07	10/4-8	Project Work Day on 10/4 (Monday) Mid-semester Presentations on 10/6-8	10/8: Report: Project Phase II due (group assignment) 10/8: Survey 2 due (individual assignment)
08	10/11-15	System Architecture (cont.) Review Exam I on 10/15 (Friday)	
09	10/18-22	Implementation Agile Development Coding and Testing	
10	10/25-29	System Support and Security Delivery and Maintenance	
11	11/1-5	System Performance Management Security Backup & Recovery	11/5: Report: Project Phase III due (group assignment) 11/5: Survey 3 due (individual assignment)
12	11/8-12	Advanced topics	
13	11/15-19	A Summary of COSC4336 Review Exam II on 11/19 (Friday)	
14	11/22-26	Fall Break	
15	11/29-12/3	Final Project Presentation	12/3: Report: Project Delivery due (group assignment) 12/3: Survey 4 due (individual assignment)

***Note that the schedule is subject to change as the course progresses.**