



1	Course Code	CS-5213						
2	Course Name	Software Engineering Processes						
3	Version	1						
4	Name(s) of Academic Staff	Instructor	Mansoor Abdulhak	Email	m.hak@ou.edu			
		Teaching Assistant		Email				
		Teaching Assistant		Email				
5	Semester	Spring						
6	Year	2024						
7	Level	MS						
8	Course	C S 3113 or C S 3823 or C S 5005						
9	Contact Hours	<b>Delivery Methods</b>		<b>Hour per week</b>	<b>Implementation</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>
		In-Person (Student Center Learning) Activities	Lecture	0 units	(0 hour(s) per week)			
			Tutorial	0 units	(0 hour(s) per week)			
			Laboratory	0 units	(0 hour(s) per week)			
			Supervision	0 units	(0 hour(s) per week)			
			Online Learning	3 units	(3 hour(s) per week)			Online
			Out Class	6 units	(6 hour(s) per week)			
		Student Hours	1 units	(1 hour(s) per week)	TR	11:00 am - 12:00 pm	<a href="#">Devan Energy Hall 234 or Virtually</a>	
Final Exam	0 units	(2 hour(s) per Sem)						
10	Course Synopsis	This course is a team project course focused on practical application of common, modern techniques to all aspects of software project development. Students will learn about effective processes for software requirements specification, planning, design, documentation, development, review, defect tracking, testing, product delivery, and product evaluation. There is some emphasis on resource tracking and software quality. Students will work in teams to develop, deliver, and evaluate software products.						
11	Student Outcomes	By the end of semester, students should be able to:						
		SO 1	Demonstrate advanced knowledge and skills in applying modern techniques to all aspects of software project development.					
		SO 2	Enhance problem-solving and critical thinking abilities to tackle intricate challenges encountered in software project development.					
		SO 3	Collaborate effectively in cross-functional teams to plan, deliver, and evaluate software products.					
		Not Applicable	Not Applicable					
		Not Applicable	Not Applicable					
12	Assessment Methods	<b>Methods</b>	<b>Weighting</b>	<b>SO 1</b>	<b>SO 2</b>	<b>SO 3</b>	<b>Applicabl</b>	<b>Letter Grades</b>
		Presentations	0%					A ≥ 90
		Sprints (PeerReview) *4	0%					B 80-89
		Homework	0%					C 70-79
		Project	20%					D 60-69
		Assignments	80%					F < 60
		Final Exam (Poster)	0%					
13	Learning References	<b>Total</b>	<b>100%</b>					
		1 Required	<a href="#">David Kung. (2024). Software Engineering, 2nd Edition. McGraw Hill.</a>					
		2 Supplementary	<a href="#">Sommerville, I (2019), Engineering Software Products: An Introduction to Modern Software Engineering, 1st edition, Pearson Education</a>					
		3 Supplementary	<a href="#">Sommerville, I. (2015). Software Engineering. Addison-Wesley.</a>					
		4 Supplementary	<a href="#">Pressman, R. S., &amp; Maxim, B. R. (2019). Software Engineering: A Practitioner's Approach.</a>					

**Notes:** Instructor reserve the right to modify or update the content on this platform at any time without prior notice. Users are encouraged to check for updates regularly. Your continued use of the platform after changes are made constitutes acceptance of those changes.



Week	Topic	Chapters-Reading	Weekly Activity	SWEBOK v4.0	Assessment Method	Total Marks	
1	Introduction	2.1 Challenges of System Development 23 Software Project Management 23.1 Project Organization 23.2 Effort Estimation Method	1: Discussion on Canvas (Introduction) 2: Group Forming (Contact others) 3: Form a group of SEVEN students 4: SET YOURS GROUPS IN CANVAS 5: Go to 3.2 Student List 6: Select the weeks you will be in charge as a leader 5: Do the Chapters-Reading	Software Engineering Professional Practice (KA)	Participation		
2	Project Management	23.3 Project Planning and Scheduling 23.4 Risk Management 23.5 Process Improvement 23.6 Applying Agile Principles Scrum	1: Do the Chapters-Reading 2: Complete (Ticket 1) 3: Do the PeerReview (Evaluation Form)	Software Engineering Professional Practice (KA)	Ticket 1 Software Development Plan (SDP)	10	
3	Software Quality Assurance & Configuration Management	19.2 Software Quality Attributes 19.4 Software Verification and Validation Techniques 19.5 Verification and Validation in the Life Cycle 19.6 Software Quality Functions 22.1 The Baselines of Software Life Cycle 22.4 Software Configuration Management Functions	1: Do the Chapters-Reading 2: Complete (Ticket 2) 3: Do the PeerReview (Evaluation Form)	Software Quality (KA) Software Engineering Professional Practice (KA)	Ticket 2 Software Quality Assurance Plan (SQAP)	10	
4	Software Requirements Specification	4.3 Types of Requirements 4.4 Challenges of Requirements Elicitation 4.5 Steps for Requirements Elicitation 4.6 Applying Agile Principles 4.7 Requirements Management and Tools	1: Do the Chapters-Reading 2: Complete (Ticket 3) 3: Do the PeerReview (Evaluation Form)	Software Requirements (KA) Software Engineering Professional Practice (KA)	Ticket 3 SRS Standard	10	
5	Use Case	7.1 What is an Actor 7.2 What is a Use Case 7.3 Business Process, Operation and Action 7.4 Steps for Driving Use Cases from Requirements 7.5 Applying Agile Principles 7.6 Tool support for Use Case Modeling	1: Do the Chapters-Reading 2: Complete (Ticket 4) 3: Do the PeerReview (Evaluation Form)	Software Requirements (KA) Software Engineering Professional Practice (KA)	Ticket 4 Use Case	10	
6	Implementation	18.1 Coding Standard 18.2 Organizing the Implementation Artifacts 18.3 Generating Code from Design 18.5 Parin Programming 18.6 Test-Driven Development 18.7 Applying Agile Principles	1: Do the Chapters-Reading 2: Complete (Ticket 5) 3: Do the PeerReview (Evaluation Form)		Ticket 5 Software Testing Plan (STP)	10	
7	Software Testing	20.1 What is Software Testing 20.2 Why Software Testing 20.5 Test Coverage 20.6 A Generic Software Testing Process 20.7 Object Oriented Software Testing 20.10 Software Testing In The Life Cycle	1: Do the Chapters-Reading 2: Complete (Ticket 6) 3: Do the PeerReview (Evaluation Form)	Software Quality (KA) Software Engineering Professional Practice (KA)	Ticket 6 Test Case	10	
8	Software Architecture	6.3 Software Design Principles 6.5 Architectural Styles 6.6 Architectural Design Process 6.7 Architectural Style and Package Diagram 6.9 Applying Agile Principles	1: Do the Chapters-Reading 2: Complete (Ticket 7) 3: Do the PeerReview (Evaluation Form)	Software Design (KA) Software Engineering Professional Practice (KA)	Ticket 7 Architectural Design SDD Standard	10	
9	Modeling and Design	9.2 UML Sequence Diagram 9.3 Steps for Object Interaction Modeling 11.3 Steps for Deriving a Design Class Diagram 11.4 Organize Classes with Package Diagram 12.3 Graphical User Interface Widget 12.4 User Interface Design Process	1: Do the Chapters-Reading 2: Complete (Ticket 8) 3: Do the PeerReview (Evaluation Form)	Software Design (KA) Software Engineering Professional Practice (KA)			
10	Spring Break	Spring Break	Spring Break	Spring Break	Spring Break	Spring Break	
11	Software Security	24.2 Security Requirement 24.3 Secure Software Design Principles 24.4 Secure Software Design Pattern 24.5 Seven Best Practices of Software Security 24.6 Software Security in the Life Cycle	1: Do the Chapters-Reading 2: Prepare for Sprint Execution		Ticket 8 Setup Environment	10	
12	Sprint 1	Research or Industry Project	Sprint Execution		Ticket 9 Sprint 1 Execution		
13	Sprint 2	Research or Industry Project	Sprint Execution		Ticket 9 Sprint 2 Execution		
14	Sprint 3	Research or Industry Project	Sprint Execution		Ticket 9 Sprint 3 Execution		
15	Sprint 4	Research or Industry Project	Sprint Execution		Ticket 9 Sprint 4 Execution		
16	PeerReview/ Demo						20
Notes: *Nothing for now						<b>Total Marks</b>	<b>100</b>



1	Instructor	1	About Instructor	<a href="#">Mansoor Abdulhak</a>
		2	Teaching Philosophy	My teaching methods include a variety of up-to-date techniques including active participation via an inverted classroom and experiential learning through project-based instruction and assessment. Through these methods, I seek to make courses imitate the work environment as much as possible in order to best prepare students for their careers.
2	Course	1	Home Page	This class will use Canvas software for our home page. The URL for the home page is <a href="http://canvas.ou.edu">http://canvas.ou.edu</a> . Login with your 4+4 using your standard OU password. If you have difficulty logging in, call 325-HELP. This software provides a number of useful features, including a list of assignments and announcements, an electronic mailing list, and grade book. The Canvas course site will be used for all updates. You should check the site regularly.
		2	Grade Checking	Canvas is equipped with a grade book that preserves the raw data utilized for computing your course grade. It is crucial that you routinely verify the accuracy of your recorded grades. In the event of any identified discrepancies or disagreement, promptly notify me via email (follow the policy of <b>Communication</b> ), and I shall promptly address and rectify the matter. Keep in mind Notifications must be submitted within the same week as the grade release; otherwise, changes will not be processed.
		3	Deadlines	Unless explicitly stated otherwise specified in writing, please ensure all assignments are submitted by the designated date in the Ticket instructions. In the event of a delay, a 10% deduction will be applied for each day beyond the specified deadline. This policy is in place to maintain fairness and consistency. It's worth noting that, as software engineering professionals, it's our responsibility to ensure timely submission, avoiding any delays that may result in fines for our workplace.
		4	AI Tools	In recognizing the lasting impact of AI tools, I encourage their use to improve your skills on using them. However, given that AI tools are not fully matured, it is the responsibility of the student to evaluate the content generated and learn how to effectively work with AI tools to achieve optimal results. This approach reflects our commitment to adapting and utilizing emerging technologies responsibly in the learning environment. It is essential to note that any direct copy-pasting without reading, understanding, analyzing, and actively working to enhance your skills will be considered academic misconduct.
		5	Exams	<a href="#">Follow the University Final Exam Policies</a>
		6	Ownership of Course Materials	All original content used in this course is owned by Mansoor Abdulhak. This includes but is not limited to exams, lectures, quizzes, handouts, protocols, electronic documents, and syllabi. Original or transcribed content may not be copied, recorded, retransmitted, posted online, or sold without her and/or her expressed, written consent.
3	Class	1	Communication	<p>1.The primary method of communication will be through Discussion threads in Canvas. All general questions related to the learning outcomes, Tickets or reference are encouraged to be discussed openly within.</p> <p>2.Urgent announcements will be communicated through Canvas. It is your responsibility to regularly check Canvas for updates.</p> <p>3.For formal communication, please use email to contact me. To facilitate this communication PLEASE, Ensure that you include the semester, the course code ID, the group ID and your Sooner ID (e.g. Spring24-CS3032-GroupA-123456789) before the subject in your email. Without this information, your message may not be noticed or entertained.</p>
		2	Attendance (Track 1)	<p>As part of our commitment to student success, I offer two attendance tracks to accommodate diverse circumstances. The first track follows a traditional attendance policy. The second track, known as the double exam policy, is designed to support students who may face challenges in regular attendance. This alternative option allows students to demonstrate their understanding through exams, providing flexibility for those who may have commitments that prevent consistent attendance. Our aim is to ensure that all students have an opportunity to succeed, regardless of their individual circumstances. It's important to note that the cut-off for selecting your attendance track will be in week one, and switching tracks won't be allowed unless exceptional circumstances arise.</p> <p>this course follows a synchronous format, requiring your attendance at all scheduled class sessions and labs in person. Exceptions are made for illness, unforeseen caretaking duties, or if you feel uncomfortable being in group settings at the moment.</p> <p>In addition to the aforementioned policy, you have the option to opt for the Double Exam (Track 2) policy.</p>
		Class Attendance	Double Exam (Track 2)	<p>Attendance to classes and participation in group activities are not mandatory and won't be calculated. However, your final grade will be determined by a combination of an individual assignments scores and twice the exam score. This calculation will contribute to your overall assessment for the course, with the maximum achievable grade capped at a 'C'. As you will only be evaluated based on the ASO 4 &amp; ISO 6 outcomes</p>

		3	Classroom Conduct	Disruptions of class will not be permitted. In the case of disruptive behavior, You will be asked to leave the classroom and may charge you with a violation of the Student Code of Responsibilities and Conduct.
		4	Grade	Your grade will be determined through 1: The assessment method detailed in the 1. Course Syllabus 2: Peer evaluations of teamwork • your contributions to the team homework • your enabling others to make contributions • may significantly impact your letter grade
		5	Online Class	<a href="#">See the Online Learning at OU</a>
4	University	1	Land Acknowledgement	The University of Oklahoma recognizes the historical connection our university has with its indigenous community.
		2	Academic Integrity	<a href="#">See Academic Integrity Policy</a>
		3	Religious Observance	<a href="#">See Faculty Handbook 3.15.2</a>
		4	Accommodation of Disabilities	<a href="#">To discuss potential accommodations, please contact the ADRC at 730 College Avenue, (ph.) 405.325.3852, or adrc@ou.edu.</a>
		5	Title IX	<a href="#">See Resources and Reporting Requirement</a>
		6	Adjustments for Pregnancy/Childbirth Related Issues	<a href="#">Contact me or the Accessibility and Disability Resource Center at 405/325-3852 as soon as possible. Also, see the Institutional Equity Office FAQ on Pregnant and Parenting Students' Rights for answers to commonly asked questions.</a>
		7	Final Exam Preparation Period	<a href="#">See Faculty Handbook 4.10</a>
		8	Weather Safety Information	<a href="#">See Information</a>
		9	Emergency Protocol	<a href="#">See Procedures</a>
		10	Severe Weather	1. <b>Look</b> for severe weather refuge location maps located inside most OU buildings near the entrances 2. <b>Seek</b> refuge inside a building. Do not leave one building to seek shelter in another building that you deem safer. If outside, get into the nearest building. 3. <b>Go</b> to the building's severe weather refuge location. If you do not know where that is, go to the lowest level possible and seek refuge in an innermost room. Avoid outside doors and windows. 4. <b>Get in, Get Down, Cover Up</b> 5. <b>Wait</b> for official notice to resume normal activities. <a href="#">Weather Safety Information</a>
		11	Armed Subject/Campus Intruder	1. <b>Avoid:</b> If you believe you can get out of the area WITHOUT encountering the armed individual, move quickly towards the nearest building exit, move away from the building, and call 911. 2. <b>Deny:</b> If you cannot flee, move to an area that can be locked or barricaded, turn off lights, silence devices, spread out, and formulate a plan of attack if the shooter enters the room. 3. <b>Defend:</b> As a last resort fight to defend yourself. <a href="#">visit OU's Active Shooter page</a>
		12	Fire Alarm/General Emergency	1. <b>LEAVE</b> the building. Do not use the elevators. 2. <b>KNOW</b> at least two building exits 3. <b>ASSIST</b> those that may need help 4. <b>PROCEED</b> to the emergency assembly area 5. ONCE safely outside, <b>NOTIFY</b> first responders of anyone that may still be inside building due to mobility issues. 6. <b>WAIT</b> for official notice before attempting to re-enter the building. <a href="#">OU Fire Safety on Campus</a>
		13	Mental Health Support Services	If you are experiencing any mental health issues that are impacting your academic performance, counseling is available at the University Counseling Center (UCC). The Center is located on the second floor of the Goddard Health Center, at 620 Elm Rm. 201, Norman, OK 73019. To schedule an appointment call (405) 325-2911. For more information, please visit University Counseling Center <a href="#">University Counseling Center</a>