Course Title: Software Engineering
Course Prefix: COMP **Course No.: 3223** **Section No.: P01**

Department of | **Computer Science** | **College of** | **Engineering**

Instructor Name: **Dr. Sherri S. Frizell**
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Office Hours: MW: 1:00-4:00; F: 1:00-2:00. TR: by appointment only
Virtual Office Hours: N/A

Course Location: **S.R. Collins, room 225**
Class Meeting Days & Times: **M, W, F: 11:00 – 11:50PM**
Catalog Description: COMP 3223. Software Engineering. (3-0) Credit 3 semester hours. Formal software development, including the software life cycle, modular and top-down design, validation and verification, and maintainable systems.

Prerequisites: COMP 2013
Co-requisites: N/A

Required Text: Ian Sommerville. (2015). *Software Engineering*, (10th edition), Pearson, ISBN 10: 0133943038 ISBN-13: 978-0133943030

Recommended Text/Readings: R. S. Pressman & B. R. Maxim. (2015). *Software Engineering: A Practitioner's Approach*, (8th Edition), McGraw Hill. ISBN: 0078022126
Craig Larman. (2004). *Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development* (3rd Edition), ISBN-10: 0131489062

Access to Learning Resources:
PVAMU Library:
phone: (936) 261-1500;
web: http://www.tamu.edu/pvamu/library/
University Bookstore:
phone: (936) 261-1990;
web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d

Course Goals or Overview:

Course provides students with a theoretical and practical understanding of the development of large-scale software systems using proven and the latest techniques. Students will obtain hands-on experience in software analysis, design, testing, and project management as well as associated documentation through a team project.

Course Outcomes/Objectives
At the end of this course, the student will

1 Demonstrate an understanding of professional, ethical, legal, security and social issues and responsibilities
2 Demonstrate an ability to organize, plan and properly format a written technical report based on problem requirements, design, implementation, testing, discussion and recommendation of the solution
3 Demonstrate an understanding of the need for and an ability to engage in continuing professional development

4	Demonstrate an ability to analyze the local and global impact of computing on individuals, organizations, and society

Course Requirements & Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – written tests designed to measure knowledge of presented course material
Quizzes – announced & unannounced to measure understanding of reading assignments.
Assignments – written and oral assignments (both individual & group) designed to supplement and reinforce course material
Team Project - Each team designs a software application by following an iterative software development process. Each team is required to submit a software requirement specification document, a high-level design document, a testing plan, and a final project report. All documents are graded for technical content, completeness, accuracy, organization, grammar, and coherence.

Grading Matrix

Instrument	Value (percentages)
Assignments/Quizzes	20%
Semester Project	25%
Midterm Exam	35%
Final Exam	20%
Total:	**100%**

Grade Determination:
A = 90% or better
B = 80 – 89 %
C = 70 – 79 %
D = 60 – 69 %
F = Less than 60%

Course Procedures

Submission of Assignments:
Generally, late assignments will not be accepted except when adequate documentation of an emergency is provided. Absence from classes is not an excuse for not submitting assignments. Copied assignments will receive a grade of zero. Course related handouts and announcements may be given out in class, sent via email or posted in eCourse. You should check your PVAMU email and the course website in eCourse regularly for updates and information.

Formatting Documents:
Microsoft Word is the standard word processing tool used at PVAMU. If you're using other word processors, be sure to use the "save as" tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.

Exam Policy
Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook).

Professional Organizations and Journals

IEEE Computer Society: http://www.computer.org
ACM: http://www.acm.org

References

None

16 WEEK CALENDAR (Tentative)*

Week One: Topic — Introduction to Software Engineering
Chapter (s): Chapter 1
Assignment (s):

Week Two: Topic — Software Processes
Chapter (s): Chapter 2
Assignment (s): Assignment 1

Week Three: Topic — Agile Software Development
Chapter (s): Chapter 3
Assignment (s):

Week Four: Topic — Requirements Engineering
Chapter (s): Chapter 4
Assignment (s): Assignment 2

Week Five: Topic — System Modeling
Chapter (s): Chapter 5
Assignment (s):

Week Six: Topic — Design and Implementation
Chapter (s): Chapter 7
Assignment (s): Assignment 3

Week Seven: Topic — Architectural Design
Chapter (s): Chapter 6
Assignment (s): Assignment 4

Week Eight: Topic — Architectural Design
Chapter (s): Chapter 6
Assignment (s): Assignment 5

Mid-Term Exam

Week Nine: Topic — Software Testing
Chapter (s): Chapter 8
Assignment (s):

Week Ten: Topic — Project Management
Chapter (s): Chapter 22
Assignment (s): Assignment 6

Week Eleven: Topic — Project Planning
Chapter (s): Chapter 23
Assignment (s): Assignment 7

Week Twelve: Topic — Quality Management
Chapter (s): Chapter 24
Assignment (s):

Week Thirteen: Topic — Project Presentations
Chapter (s):
Assignment (s):

Week Fourteen: Topic — Project Presentations
Chapter (s):
Assignment (s):

Week Fifteen Topic — Review
Chapter (s):
Assignment (s):

Final Exam

**Instructor reserves the right to modify schedule as deemed necessary.*

College of Engineering Textbook Policy

Students MUST acquire the required textbook that is listed on the course syllabus for this course. The textbook must be acquired by the 10th class day. Students are not allowed to share textbooks with students who are currently registered in the same class. Failure to acquire (or show proof of purchase) the required textbook by the 10th class day will result in the student being administratively dropped from the course. The University will assess financial obligations for the course to the student as with any other dropped class according to the fee schedule as well as your financial aid may be affected.

If you are not financially able to purchase a required textbook for an engineering course prior to the 10th class day, you may apply to the College of Engineering Textbook Fund for a textbook voucher. The voucher can only be used at the Campus Bookstore. This voucher is a loan and must be paid back to the College of Engineering prior to the start of pre-registration for the coming semester. If the loan is not repaid, a hold will be placed on your account. Additional information and application materials can be obtained from the Assistant Dean's Office (SR Collins Rm 349) and obtained online at the College of Engineering website under student resources.

University Rules and Procedures

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):
You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. Fabrication: use of invented information or falsified research.

4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.