COMP 5331 SOFTWARE MANAGEMENT (4 credit hours)

Elmira College

SPRING 2025

Required Text:
Barry Boehm (Foreword), Donald J. Reifer, ***Software Management***, 2006, 7th Edition, Wiley-IEEE Computer Society Pr;
Supplemental readings will be included to illustrate or expand on textbook readings.

Pre-requisites: None

Course Description

Explores the application of software engineering principles, project management practices, and process improvement strategies throughout the software development life cycle. Topics include software life cycle models, Agile and traditional methods, requirements management, project estimation, and organizational success strategies. Focuses on practical approaches to staffing, motivating developers, and managing software projects efficiently in complex environments, with an emphasis on real-world scenarios and successful software development outcomes.

Course Objectives and Goals

- Understand and apply key software management principles, including life cycle models, process improvements, and project management practices.
- Develop skills in software project estimation, risk management, and addressing common pitfalls in planning.
- Be proficient in managing software development teams, fostering communication, and motivating team members.
- Master the integration of requirements engineering and project management to ensure software development success.

Evaluation of Performance

Your grade will be based upon your performance on exams, assignments, and participation.

3 Assignments	15%
3 Lab and Reports	30%
5 Tests	15%
Midterm Exam	20%
Final Project	20%
Total	100%

Grades will be assigned as follows:

A	93% and above	B-	80 - 82%	D+	67 - 69%
A-	90 - 92%	C+	77 - 79%	D	63 - 66%
B+	87 - 89%	C	73 - 76%	D-	60 - 62%
B	83 - 86%	C-	70 - 72%	F	59% or below

Withdrawal Policy: Please see Elmira College Bulletin for information on this policy.

Academic Honesty: Please read the section on Academic Honesty in the **Code of Conduct**. Briefly, academic dishonesty includes: cheating, fabrication, facilitating academic dishonesty, and plagiarism. Ask if you have any questions on whether something constitutes as academic dishonesty. All work must be original and new. Past assignments from current or other courses will not be accepted. Academic dishonesty will not be tolerated. It will result in zero on the assignment, and a report will be filed with the school. Continued practice will result in failure of the class. Institutional penalties may also apply with repeated acts of academic honesty.

Student Responsibility:

- It is your responsibility to keep track of assignments and due dates.
- You should ask questions concerning assignments and lectures, if you need any clarifications.
- If you are struggling in class, have concerns, and/or unsure about expectations, please stop by during office hours or make an appointment for another time.

Tentative Schedule of Topics

Topic	Materials	Tasks & Evaluations
Seven Deadly Sins of Software Management	Chapter 1	
Principles of Software Engineering Project Management	Chapter 2	
The "3 P's" of Software Management	Chapter 3	Test#1
Why Big Software Projects Fail: The 12 Key Questions	Chapter 4	Lab and Report 1
Critical Success Factors in Software Projects	Chapter 5	
Software Life Cycle Models	Chapter 6	Assignment 1
A Spiral Model of Software Development and Enhancement	Chapter 7	Test#2
Bridging Agile and Traditional Methods	Chapter 8	
Coping with New Software Development Paradigms	Chapter 9	Lab and Report 2
Successful Process Implementation	Chapter 10	Test#3
Quantifying the Benefits of Software Process Improvement	Chapter 11	
Process Improvement for Small Organizations	Chapter 12	Midterm Exam
The Clash of Two Cultures: Project Versus Process Management	Chapter 13	
The Mythical Man-Month	Chapter 14	
Traditional Software Management Approaches	Chapter 15	Test#4
Project Management Practices for Software Development Success	Chapter 16	Assignment 2
The Nine Deadly Sins of Project Planning	Chapter 17	

21 Project Management Success Tips	Chapter 18	
Requirements Management and Engineering as Success Factors	Chapter 19	
Software Project Estimation Overview	Chapter 20	Lab and Report 3
Software Engineering Economics	Chapter 21	Test#5
Web Development: Estimating Quick-to-Market Software	Chapter 22	
Staffing and Organization in Systems Engineering	Chapter 23	Assignment 3
Core Competence in Software Development	Chapter 24	
Motivating and Retaining Software Developers	Chapter 25	Final Project