Fall 2023

CS 683: Software Project Management

William Phillips

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Syllabus

Instructor

Instructor:	William Phillips
Office and Hours:	Fridays 4-5 location TBD
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Location	KUPF 203
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Course Description

This course focuses on Scheduling, Software Metrics, Software Quality Assurance (SQA), Software Configuration Management (SCM) and Standards. You and your team will be managing a team who will be working on an application to monitor wastewater levels for a municipality in order to detect problems that can lead to flooding or contamination.

Textbooks

Required: Boyde, Joshua. A Down-To-Earth Guide To SDLC Project Management: Getting your system / software development life cycle project successfully across the line using PMBOK adaptively. Available online. Bruegge, et.al. Object Oriented Software Engineering	Other Texts will be referenced in lectures but excerpts will be provided on slides or pdfs. pdf posted

Grading Scheme

Exams	30%
Homework	30%
Project Deliverables	40%

Student Outcomes

This course gives the student the necessary background to allow her/him to manage software projects; this includes economic, managerial and organizational aspects. The essence of software engineering is not only to introduce a valuable software product, but to do so economically and competitively. Like any engineering discipline, software engineering depends critically on managerial, economic and organizational considerations. Students will learn software management technique, various software costing techniques including Boehm's Constructive Cost Model (COCOMO) and Return on Investment (ROI), team organization and management, and various methods of software development including Cleanroom and Agile.

Topics

Non-Cheating Policy

Cheating on a programming assignment results in zero credit for all students involved. Cheating on an exam will result in an "F" in the course.
You may discuss problems with each other, in fact, you are encouraged to do so.
Violations of the honor code will be dealt with seriously and reported immediately to the Dean of Students.

Late Policy

To receive credit assignments must be handed in on time. No credit will be given for any programming assignment that is not turned in on the day (and time) it is due.

Prerequisites

Graduate Standing or permission (obtained from the administration) if you are undergraduate.

Week Ending	Lecture Topic	Project Deliverable	Text Chapter
Sept 8	Introduction Software Project and Software Configuration Management Functional Baseline	Information Sheets	1
Sept 15	Types of (software projects)/ Project Description/ Reviews/ Object Oriented Analysis.	Software Development Plan assigned (by Sept 18)	2/3
Sept 22	Software Requirements/Allocated Baseline Planning/ Software Metrics	Term paper/Presentation assigned	4
Sept 29	Initiating and Executing	Monthly Report	5
Oct 6	Design Baseline /Monitoring and Control 1	SDP due with effort estimates	6
Oct 13	Monitoring and Control/ Midterm Review	Test Cases due	7/8
Oct 20	Midterm		
Oct 27	Product Baseline /Monitoring and Control 4/5 Risk Management	Combined Preliminary and Detailed Design Review / Monthly Report Due	9/10
Nov 3	DevOps/ Operational Baseline		11
Nov10	Model Evolution Tools	Integration Test Review	12
Nov 17	Git and Github	Term Paper due	13
Nov 22	Essence	Monthly Report Due/Presentations	14
Dec 1	Capability Maturity Model	Presentations	15
Dec 8	Final Review	Final Report	

Grading Breakdown

• Monthly Reports	15%
• Software Development Plan	15%
• Review of Deliverables	20%
• Term Paper/Presentation	20%
• Midterm	10%
• Final	20%

- The first two lectures will cover what a software project is: what it is we are managing (the software configuration) and how to measure its attributes (software quality assurance, testing and metrics.
- Deliverables: Monthly reports and presentations are team efforts. All members of the team get the same grade for the team assignments.
- I will be referring to/using other texts to cover topics above. There are a few books that a software engineer should be familiar with. The Kindle version of the text is available on Amazon for under $5 or you can get the paper version for not that much more. Material from other texts I will make available, or power point slides will be provided.
- Your team will need to read and review UML use case, class, sequence and possibly, state diagrams created by the CS490 team you are managing.
- All lectures will be broadcast live, recorded and posted to canvas. I intend to be on campus for the majority of lectures.
- I will have the blank fields in the syllabus filled in by the start of class.