CSC 584 - Software Project Planning and Management
<Spring 2020>

Instructor	*Jack Han*	**E-Mail**	jhan@csudh.edu
Classroom	LCH A224	**Class Time**	Wednesday 7:00pm-9:45pm
Office	NSM A-133	**Office Hours**	
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CATALOG DESCRIPTION:

The main topics of this course address the successful management of a software development project. This includes planning, scheduling, tracking, cost and size estimating, risk management, quality engineering, and process improvement. The course is centered on the concept of a software engineering process and includes discussion of life cycle models for software development.

PRE-REQUISITE: CSC581: Advanced Software Engineering

TEXTBOOK:

Ronald J. Reifer (2006) *Software Management*, 7th Edition, Wiley-Interscience. ISBN-13: 978-0471-77562-1

Andrew Stellman and Jennifer Greene (2005), Applied Software Project Management, O'Reilly Media, ISBN-13: 978-0596-00948-9

Sondra Ashmore and Kristin Runyan (2015), Introduction to Agile Methods, Pearson Education, Inc., ISBN-13: 978-0-321-92956-3

COURSE GOALS:

This course aims to expose students the general background information on software project planning and management, discuss the six basic functions of software management, and introduce some advanced software management topics. Students are expected to best practice in software management and project planning and to develop professional executive skills enabling students to be a valuable part of a software development and management, and learn state-of-art agile project management in software development.

COURSE OUTCOMES:

Upon completion of this course, students will be able to:

1. familiarize with the background information needed to practice software engineering project management, including the current concerns and challenges of software management, modern software life cycles and related extreme methodologies, and software process improvement;
2. master the six basic functions of software management as applied to software projects: planning, estimating, organizing, staffing, directing, and controlling;
3. understand some advanced software management topics such as risk management concepts and their application on large and complex projects, metrics and measurement, acquisition management, etc.; and
4. be able to apply agile methods in software project management.

REQUIREMENTS:

There will be **FOUR** intensive writing assignments and **FOUR** presentations as well as **ONE** research project. The writing assignments will be the summarizations on the prescribed reading articles. The presentation will be based on your writing assignments and must be powerpointed. The research project topic should be determined by the student and approved by the instructor. The research project report should be submitted by the end of the semester.

GRADING BREAKDOWN:

Reading Presentations:	30%,	7.5% each
Midterm Test:	20%	
Final Test:	30%	
Research Project:	20%	
Report:		15%
Presentation:		5%

GRADING SCALE:

[94,100] = A	[90-94) = A-	
[85-90) = B+	[80-85) = B	[75-80) = B-
[70-75) = C+	[65-70) = C	below 65 = F

COURSE OUTLINE (Tentatively and subject to change)

Week	Topic	Note
1	Software Planning and Management	Applied Software Project Management By A. Stellman and J. Greene
2		**Instructor Presentation:** Software Project Planning, **January 22** **Instructor Presentation:** Software Project Management, **January 29**
3	Project Management	1. Principles of Software Engineering Project Management – p. 9-14 2. The "3 P's" of Software Management – p. 15-20 3. Traditional Software Management Approaches – p.119-128 4. Software Management's Seven Deadly Sins – p. 5-8 5. Why Big Software Project Fails: The 12 Key Questions – p.21-26 6. In-House Software Development: What Project Management Practices Lead to Success? – p.129-136 7. Critical Success Factor in Software Projects – p27-32 8. 21 Project Management Success Tips – p.145-152
4		**Presentation, February 12**
5	Planning and Estimating	1. The Secrets of Planning Success – p.167-174 2. The Nine Deadly Sins of Project Planning – p.137-140 3. Requirements Engineering as a Success Factor in Software Projects – p.157-165 4. The Slacker's Guide to Project Tracking – p.175-184 5. Software Project Estimation: An Overview – p.189-202 6. Software Engineering Economics – p.203-226 7. Web Development: Estimating Quick-to-Market Software – p.227-234 8. Software Size Estimation of Object-Oriented Systems – p.235-248
6		**Presentation, February 26**
7	**Midterm Test**	**March 4**

8 **9**	Staff and Organization management	1. Staffing and Organization in the Engineering of Systems – p.251-258 2. Survival Patterns in Fast-Moving Software Organization – p.273-278 3. Coaching the Rookie Manager – p.285-288 4. Training Developers in Critical Skills – p.289-294 5. The Softer Side of Project Management – p.299-302 6. The Human Side of Management – p.305-310 7. Motivating and Keeping Software Developers – p.311-314 8. Successful Software Management: 14 Lessons Learned – p.315-318 **Presentation, March 18**
10 **11**	Project Control, Risk Management, and Metrics Measurement	1. Controlling Software Projects – p.327-336 2. Software Acquisition Management – p.437-450 3. Understanding the Risk Management – p.361-364 4. Software Risk Management: Principles and Practices – p.365-374 5. Metrics and Management: A Primer – p.397-402 6. Back to The Basics: Measurement and Metrics – p.403-406 7. Software Defect Reduction Top 10 List – p.419-422 8. Managing Software Quality with Defects – p.349-352 **Presentation, April 8**
12 **13**		Agile Management **April 15, April 22**
14 **15**	Research Project	References Project Presentation **April 29, May 6**
16	**Final Test**	**May 13**

GENERAL POLICIES:

ACADEMIC HONOR CODE

Programming assignments must be done individually. Failure to do so will result in a violation of the CSUDH Academic Honor Code. The following cases will be considered as violations: identical code, and extremely similar code. Violations will be reported to the Office of Vice President of Academic Affairs.

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, error, 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.

ADA STATEMENT

Students with disabilities, who believe they may need an academic adjustment in this class, are encouraged to contact me as soon as possible to better ensure receipt of timely adjustments.

DEFINITION OF CHEATING AND PLAGIARISM

CSUDH is dedicated to a high standard of academic integrity among its faculty and students. In becoming part of the California State University academic community, students are

responsible for honesty and independent effort. *Disciplinary action will be taken against any student who alone or with others engages in any act of academic fraud or deceit*. (Read University Regulations in University Catalog)