

Department of Computer Science
California State University, Dominguez Hills
Summer Term 2020

Course No. : CBY 584
Course Title : *Software Project Planning and Management*
Prerequisite :
Units : 3 units (4 hours lecture)
Meetings : 1:00pm – 5:00pm S (lecture)

Instructor/Office/Phone/Fax/E-mail/Office Hours:

Dr. Bhrigu Celly
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30 mins before and after class
Office : EAC 607

Objectives:

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.

TEXTBOOK: Ronald J. Reifer (2006) *Software Management*, 7th Edition, Wiley-Interscience. ISBN-13: 978-0471-77562-1, ISBN-10:0471-77562-2
Software Engineering (10th Edition) 10th Edition by Ian Sommerville

Course Goals:

This course aims to expose students the general background information on software 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 to develop professional executive skills enabling students to be a valuable part of a software development and management.

Requirements:

There will be discussion/analysis assignment due end of every week. There will be implementation project. The research project topic should be determined by the student and approved by the instructor. The research project report should be presented and submitted by the end of the semester. The project will have several document deliveries and small presentations wither every week or bi-weekly. Attendance is mandatory.

Course Outline:

Day	TOPICS
Week 1-2	<p>Software Planning and Management / Overview Handout - The approach and the obligations of the professional engineer. Software as an engineering artifact. Analogies between software and other branches of engineering</p>
Week 2-3	<p>Project Management/ Software Lifecycles/ Deployment Planning / Cost Estimation/ Management Tools Handout- Cost–benefit evaluation Techniques, Managing the allocation of resources within program, Strategic program management Handout-Description of the phases of a range of software life cycles. Rapid application development. Personal software metrics. Extreme programming. Software process improvement. Handout-Planning and cost estimation. Progress monitoring. Team structure and team management. Project management in industry.</p>
Week 4-5	<p>Planning and Estimating / GIT / SVM / Change Management Handout-Understanding behavior, Organization behavior, Selecting the right person for the job, Instruction in the best methods , Motivation, Decision making, Organizational structures Handout-Baselines. Change control procedures. Version control. Software tools to support configuration management:</p>
Week 5-6	<p>Staff and Organization management Handout-Planning and cost estimation. Progress monitoring. Team structure and team management. Project management in industry.</p>
Week 7	<p>Risk Management Handout- Introduction Risk, Categories of risk , A framework for dealing with risk, Risk identification , Risk assessment , Risk planning , Risk management ,Evaluating risks to the schedule , Applying the PERT technique, Monte Carlo simulation, Critical chain concepts</p>
Week 8-9	<p>Project Control / QA /QA Tools Handout-Validation, verification and testing. Quality plans. Walkthroughs, code inspections and other types of review. Role of the quality assurance group. Standards (international, national and local).</p>
Week 10-11	<p>Metrics Measurement / Requirement Engineering Handout-The IEEE standard for requirements specifications. Validation of requirements by e.g., prototyping. Deficiencies in the traditional approach to requirements. Use of UML in requirements gathering. Advances in requirements engineering.</p>

Course Grade Component Percent

	Grade Percent
Reading, Project Documentation, Assignments, Presentations	20
Project	30
Weekly Submissions on Project	50

<i>Final Average</i>	<i>Grade</i>
<i>92 and above</i>	<i>A</i>
<i>90-91.9</i>	<i>A-</i>
<i>87-89.9</i>	<i>B+</i>
<i>84-86.9</i>	<i>B</i>
<i>80-83.9</i>	<i>B-</i>
<i>77-79.9</i>	<i>C+</i>
<i>74-76.9</i>	<i>C</i>
<i>70-73.9</i>	<i>C-</i>
<i>67-69.9</i>	<i>D+</i>
<i>64-66.9</i>	<i>D</i>
<i>60-63.9</i>	<i>D-</i>
<i>Below 59.9</i>	<i>F</i>