

EC518: Software Project Management

2008-2009 Catalogue Description

Planning and control of a software project. Software project economics. Cost factors and cost estimation models; cost/benefit tradeoffs, risk analysis; project metrics for quality, schedule, budget, and progress. Role of the project manager and organization of the development team. Case studies used to illustrate successes and failures in the management of actual projects. Small-team projects involving the development of software project plans.

Class/Lab Schedule:

LEC: 4 hrs/wk

Status in the Curriculum: Elective

Textbooks and other required materials:

Verzuh, "The Fast Forward MBA in Project Management," Third Edition, Wiley, 2008.
Microsoft Project software

Reference:

Fairley, "Managing and Leading Software Projects," Wiley, 2009.
Articles from software engineering journals.
IEEE Recommended Practice for Software Project Management Plans.

Coordinator:

John Brackett, Professor, ECE Department

Prerequisites:

The prerequisite for EC518 is a Boston University senior-level software course, or permission of the instructor based upon courses at other universities or work experience.

Goals:

To provide students with:

- Understanding of how to define, plan, implement, test and support a software product or a computer-based system in which software provides key functionality.
- Experience in developing an industrial-quality software project plan in team of 3 students.
- Experience in preparing and delivering a plan presentation to stakeholders such as customer representatives and company management.

Course Outcomes:

As an outcome of completing this course, students should be able to:

1. Understand how to define, execute and control a software project of 5-10 staff members over a 12-18 month period.
2. Estimate a software project using alternative estimating techniques.
3. Perform a risk assessment of a software project and develop a risk mitigation plan.

4. Conduct a software plan review, including estimating rationale and alternative development strategies, with the instructor and other student teams.
5. Produce an industrial-quality software project plan document based upon the IEEE Recommended Practice for Software Project Management Plans.
6. Develop a presentation describing the project plan for an audience of senior managers from the organization that will perform the project and of customer representatives.

Course Outcomes mapped to Program Outcomes:

Program Outcomes:	a	b	c	d	e	f	g	h	i	j	k
Course Outcomes:	2,3	2	1-6	4-6	1-6	1,3	5-6	1	1-3	3	1-4
Emphasis:	3	2	4	5	3	3	5	2	2	2	4

1=not at all; 5=a great deal;

Topics in Project Assignments:

1. Defining the technical work, developing a Work Breakdown Structure, task definitions.
2. Estimating the technical work and the project schedule, critical path analysis, factors affecting accuracy of effort and schedule estimates.
3. Developing a written project plan in accordance with the IEEE Recommended Practice for Software Project Management Plans.
4. Project monitoring and control, quality metrics, evaluating technical status.
5. Software and system acceptance criteria and testing.
6. Presentation of the team-developed project plan to a management-level audience.

Contribution of Course to Meeting the Professional Component:

Engineering topics: 100%
 Math & Basic Science: 0%
 General Education: 0%

Prepared by: John Brackett, Professor

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