

Planning and Management of Software Projects 2008-09

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Course Syllabus Alerts 17.3.2010 - this is not the 2009-2010 course page. Please check out the correct page.
 Description

The course provides an overview of the roles, responsibilities, and management methods of the technology project manager. The course assumes no prior knowledge in management techniques and is intended to teach students how to develop approaches and styles of management for software projects. The course assumes a basic understanding of analysis techniques. Course Objectives

- To provide students with a clear understanding of the unique risks, issues, and critical success factors associated with technology projects
- To introduce students to the role and function of project management
- To explain the stages and process of the project life cycle
- To understand the various techniques for planning and managing a technology project
- To examine basic methodologies for software design, development, testing and implementation
- To examine various techniques for managing a software development team
- To understand the need and techniques for managing users and user expectations
- To learn project planning techniques through the use of Microsoft Project Grading
- Midterm 30%
- Final 30%
- Homework & Course Project 30%
- Attendance/Class Participation 10% Optional Textbooks
- Rapid Development, McConnell, Steve, Microsoft Press, 1996, ISBN 1-55615-900-5.
- Information Technology Project Management, Schwalbe, Kathy, 2nd ed., Course Technology, 2002, ISBN 0-619-03528-5 (this text includes a 120 day evaluation copy of MS-Project 2000).
- A Guide to the Project Management Body of Knowledge (PMBOK® Guide) - Third Edition, Project Management Institute, Project Management Institute, 2004, ISBN 9781930699458
- Note that during the term I will also assign readings from online resources. You will be given the appropriate URLs during class and these will be listed on the class web site. Software
- Recommended (because it is opensource)
- OpenProj <http://openproj.org/openproj>
- Gantt Project <http://www.ganttproject.biz/>
- MS Project <http://office.microsoft.com/project>
- Other similar tools
- http://en.wikipedia.org/wiki/List_of_project_management_software

Class	Topic	Optional Reading/Homework	Class 113.3.2009	Course Overview [PDF]
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- Course Introduction
- Project Management (PM) Fundamentals
- The PM field and job market
- People, Process, Product, Technology
- 36 Classic Mistakes

Class 220.3.2009	Overview of Project Management [PDF]
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- PMI Processes
- Software project phasesOrganizational structures
- Project charter
- Statement of Work (SOW)

Readings (prior to this session):

- McConnell: chapters 1-4
- Schwalbe: chapters 1-2, 11 & "Project Procurement Management"; (336-345)
- PMBOK: chapter 1 Class 327.3.2009 Planning Phase [PDF]

- Development lifecycle models
- Matching lifecycles to projects
- Project plans
- Work Breakdown Structures (WBS)

Readings:

- McConnell: 7 “Lifecycle Planning”
- Schwalbe: 3 “Project Integration Management” (62-67), 4, “Project Scope Management”

Homework 1 Due:

- Project Charter for your project

Class 43.4.2009 Estimation and Budgeting [PDF]

- Estimation
- Budgeting
- Project selection
- NPV, ROI, Payback models
- McConnell: 8 “Estimation”
- Schwalbe: 6, “Project Cost Management” (157-175)

Class 517.4.2009 Scheduling [PDF]

- Project network diagram fundamentals
- PERT techniques
- Gantt charts
- Critical chain scheduling
- Mid-term preview

Readings:

- McConnell: 9, “Scheduling”
- Schwalbe: 5, “Project Time Management”

Homework 2 Due:

- Initial Work Breakdown Structure (WBS) for your project

Class 6

24.4.2009

Hands-on Gantt Project [pdf]

- Using Gantt Project
- example of gantt project [zip]
- Q/A about contents of Class 1-5

Please come with GanttProject installed on you laptops
715.5.2009 Risk and Change Management [pdf]

8.5.2009

Mid-Term Exam

Class

- Mid-term review
- Risk management
- Change control

Readings:

- McConnell: 5 “Risk Management”, 14 “Feature-Set Control”
- Schwalbe: 10, “Project Risk Management”, Appendix A “Guide to Using Microsoft Project 2000” (447-477)

Class 822.5.2009 Development management [pdf]

- Team models
- Requirements process
- Configuration management
- Software metrics
- Programming languages & tools

- Managing conflict and motivating Readings:
- McConnell: 11 “Motivation”, 13 “Team Structure”
- Schwalbe, 8, “Project Human Resource Management”

Homework 3 due:

- Top 10 Risk List for your project (1 page)

Class 9

29.5.2009 Project Control [pdf]

- Status reporting
- Project metrics
- Earned value analysis [xls]

Reading:

- McConnell: 17-19

- Schwalbe, 6 “Project Cost Management” (175-184), 9 “Project Communication Management”, 15 “Controlling”

Class 105.6.2009 System test process [pdf]

- Test specifications
- Black box and white box testing
- Test scripts
- Unit and integration testing
- Acceptance test specifications
- Test tools

Readings:

- Schwalbe: 7 “Project Quality Management” Homework 4 DRAFT (OPTIONAL) due:
- Develop and submit an initial copy of the project plan (limited to tasks & milestones) for your project

Class 11

12.6.2009 Final Phases & Project Success [pdf]

- Project Recovery
 - Cutover/Migration
 - Post Project Reviews
 - Closing
 - Management support
 - Expectations
 - Success metrics
 - Final exam review
- Readings:
- McConnell: 16 “Project Recovery”
 - Schwalbe: 16 “Closing”
- 19.6.2009 Final Exam

Homework 4 Due:

- Develop and submit a copy of the final project plan (include durations, resources, links, successors & predecessors) for your project

Class Projects and Policies:

- Homework Policy: Unless otherwise noted, homework is due in the class following the assignment. Homework should be printed and legible.

- Team Project Policy: maximum 3 people per team Acknowledgements

- This course is largely based on Prof. John Musser class notes on “Principles of Software Project Management”

- Original information is available at <http://www.projectreference.com/>

- Reuse and republish permission was granted.