



Software Project Planning and Management



Dr. Mark C. Paulk
SE 4381, Software Project Planning and Management

Jonsson School of Engineering and Computer Science

SE 4381.501, Spring 2018
in conjunction with SE 6388.0W1
Software Project Planning and Management

Instructor: Dr. Mark C. Paulk

Office: ECSS 3.610

Phone: (972) 883-4839

Email: Mark.Paulk@utdallas.edu

- if you send me email, include the class in the body or subject

Office hours

- Tue/Thur 1:30-2:30
- by appointment

Course Prerequisites:

- CE/CS/SE 3354 (Software Engineering)

Course Description

Planning and managing of software development projects.

Software process models, ISO 9000, SEI's Capability Maturity Model, continuous process improvement.

Planning, scheduling, tracking, cost estimation, risk management, configuration management.

Learning Outcomes

Ability to understand project management and its relationship to software engineering.

Ability to identify the phases of project management.

Ability to understand project scheduling techniques.

Ability to identify risks and ways to mitigate.

Ability to identify certifications and standards for software engineering project management.

What I Think You Need to Know

**Importance of talking
to the customer**

**Why the choice of life
cycle is important**

**People factors in team
building**

How to estimate (well)

**How to measure
software (correctly)**

**How to track progress
via EVM or burndown
charts**

**Understand
requirements volatility,
estimating uncertainty,
tracking implications**

**Software process
improvement (CMMI)**

Textbook

Required

- **E. Larson and C. Gray, Project Management: The Managerial Process, Sixth Edition, 2013.**
 - You may use the fifth edition (including the international paperback edition.)

Recommended

- **Project Management Body of Knowledge (PMBOK 5th edition), 2013**

Additional readings (and the presentations) will be posted on eLearning.

Also recommended

- M.B. Chrissis, M.D. Konrad, and S. Shrum, CMMI for Development: Guidelines for Process Integration and Product Improvement, Third Edition, 2011.
- M. Cohn, Agile Estimating and Planning, 2005.
- E.M. Goldratt, Critical Chain, 1997.
- W.S. Humphrey and W.R. Thomas, Reflections on Management: How to Manage Your Software Projects, Your Teams, Your Boss, and Yourself, 2010.
- D.J. Reifer, Software War Stories: Case Studies in Software Management, 2013.

Management Topics

- | | |
|---|--|
| 1. Modern project management | 10. Leadership |
| 2. Organization strategy and project selection | 11. Teams |
| 3. Organization: structure and culture | 12. Outsourcing |
| 4. Defining the project | 13. Monitoring progress |
| 5. Estimating times and costs | 14. Project closure |
| 6. Developing a project plan | 15. International projects |
| 7. Managing risk | 16. Oversight (Process) |
| 8. Scheduling resources and cost | 17. Agile PM |
| 9. Reducing project duration | PMBOK |
| | Critical chain project management |

Schedule

Class meets Mon/Wed 5:30-6:45 in JSOM 2.106

- you are expected to attend class

Mon, Jan 8

Classes begin

Mon, Jan 15

MLK Day (no classes)

Mon, Feb 26

Exam #1

March 12-18

Spring Break (no classes)

Wed, April 25

Last day of class

May 1-7

Finals

Lecture sequence: see eLearning Presentations folder

Grading

Quizzes: 10%

Assignments: 30% (individual and team)

Exam #1: 30%

Exam #2: 30%

Quizzes

Typically 8-15 true/false, fill-in-the-blank type questions

Randomly scheduled and not announced in advance

Drop lowest quiz grade

Homework

Typically about a week until due

All individual work

Multiple submissions allowed

No late assignments

- **students adding the course may turn in late assignments during the Add period**

Drop lowest homework grade

Formatting Submissions

In the file name, include:

- **class**
- **assignment identifier**
- **your name (or team's name)**
 - e.g., se4381a01jdoe or se4381p01team1

In the file (or hardcopy) submitted, include the class, assignment, and name information at the top (preferably as a single file).

- preferred document formats are Word and PowerPoint
- acceptable formats include RTF, JPG, and PDF

Minus 5 points per violation. Potentially 30 points off for formatting mistakes!

Projects

Teams will be assigned by the teacher.

Some time may be allocated in class, but you are expected to find time to collaborate outside of class.

All team members will receive the same grade on each assignment.

- **Exception: project assignment to rate the contribution of your teammates to the project – an INDIVIDUAL assignment**

Exams

Problems similar to the homework assignments

Matching, multiple-choice, true/false, and fill-in-the-blank questions

- perhaps a few discussion questions – concise answers expected that are to the point

Make-up exams may be scheduled before or after the regular exam

- may not be the same as the regular exam – discussion questions plus problems

Exam Groundrules

No cell phones, laptops, or calculators

Closed book

One-page set of notes may be used

- front and back
- handwritten or typed
- regular size (8½ x 11) paper

Bring a writing implement

- pencil and eraser preferred

Test Center in McDermott Library, MC 1.304

- any time during the exam day
- bring your Comet ID

97-100	A+
93-97	A
90-93	A-
87-90	B+
83-87	B
80-83	B-
77-80	C+
73-77	C
70-73	C-
67-70	D+
63-67	D
60-63	D-
under 60	F

Grading Curve

I may choose to curve the grades at the end of the term.

Asking for a higher grade because you need it to graduate, keep your scholarship, etc., will have no influence on curving or your grade.

Classroom Behavior

You are expected to turn in assignments on time (preferably on eLearning).

You are expected to silence mobile phones and not talk during class except as part of class discussions.

You are expected to work with your team actively and professionally.

You are expected to cite the work of others when appropriate using an acceptable citation style.

- You are expected to do your own work!**

Attendance Policy

You are expected to attend class.

By CS Department policy, if you miss three (3) consecutive classes, your grade drops one letter grade.

By CS Department policy, if you miss four (4) consecutive classes, you fail the class.

A sign-in sheet will be passed around each class that you are to initial.

Code of Conduct

UTD has a policy on student conduct

- **<http://policy.utdallas.edu/utdsp5003>**

that addresses

- plagiarism
- fabrication
- collusion
- etc.

For your individual assignments, you are expected to do your own work.

- academic integrity issues will be referred to Judicial Affairs
- automated tools such as TurnItIn and Moss

The work of others must be appropriately cited.

eLearning and Coursebook

eLearning: <http://elearning.utdallas.edu>

- folders containing Presentations, Homework, References
- links to Syllabus, etc.
- “My Grades” menu option
- “UT Dallas Email” menu option

Coursebook: <http://coursebook.utdallas.edu>

- class information under “my classes”

Using eLearning to Check Grades

- Login to **elearning.utdallas.edu** using your NetID and password
- Click on the relevant course under Course List
- On the left-hand pane, click on My Grades / All

My Grades is also available under the small pull-down menu in the upper right-hand side of the page.

You should now be able to see your grades for the course.

At the bottom of the main eLearning page, there are Student Links, including Getting Started with eLearning and Video Tutorials for Students.

Learning Resources

eLearning

- **elearning.utdallas.edu**
- **see “eLearning Demo for Students”**

The Student Success Center (MC 1.302)

- **Writing Center (MC 1.206)**
- **Math Lab (MC 3.606)**
- **Supplemental Instruction**
- **Tutoring**
- **Success Coaching**
- **and so forth...**

Student AccessAbility

- **<http://www.utdallas.edu/studentaccess/>**

Professional Societies

You may want to take advantage of student memberships to try out various professional societies... frequently there are local chapters.

- **Institute of Electrical and Electronics Engineers (IEEE) Computer Society**
- **Association for Computing Machinery (ACM)**
- **Project Management Institute (PMI)**
- **Society of Women Engineers**

You can access journals and conference proceedings from professional societies via the McDermott Library (for free).

SE 6388 Description

Techniques and disciplines for successful management of software projects

Project planning and contracts

Advanced cost estimation models

Risk management process and activities

Advanced scheduling techniques

Definition, management, and optimization of software engineering processes

Statistical process control

Software configuration management

Capability Maturity Model Integration (CMMI).

SE 6388 Learning Outcomes

Develop Project Plan

Define Software Process

Manage Project Risk

Estimate Project Cost and Schedule

Use Network Scheduling Techniques

Organize and Staff Project Team

Assess Project/Organization Maturity Level

Other Differences

No A+ grade for grad students

Different assignments and exams

Please sit together in the classroom

Questions and Answers

