TEPM 6301
Project Management for Technical Professionals

Course Overview

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Classroom: Technology Building T2
Email: aloukina@sark.com
Class URL: http://www.tech.uh.edu/Programs/Project_Management/
Office Hours: 6:30 to 7:00 PM prior to class, via email, or by appointment

<table>
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<tr>
<th>UH Catalog Description:</th>
<th>6301: Project Management for Technology Professionals</th>
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<tr>
<td>Cr. 3. (3-0). Prerequisite: Technical undergraduate degree or consent of graduate faculty advisor. Overview of project management for technology-intensive workplaces. The basic tools of project management, including breakdown structure, scheduling, contracting, earned value analysis, and risk management, are described, as well as the elements that are critical to a technical project’s success.</td>
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Teaching Objectives

- Provide a reasonable introduction into the current state of project management
- Develop a working vocabulary in the subject area
- Develop skills in formulating, planning, and tracking a project using MS Project
- Develop an understanding of the roles, responsibilities, and management methods of the information technology project manager
- Develop a working understanding of project success and failure factors
- Introduce the basic concepts of the PMI project management model
- Establish the necessary theoretical background as a prerequisite for the PMP Prep course
- Provide needed theoretical background required to pass the PMP certification exam (in conjunction with TEPM 6397)

Course Description and Scope

This course is designed to be a graduate level foundation overview course in the general subject area of project management. Class members will consist of various UH graduate program majors and external professionals pursuing the UH Project management Certificate (see web site for more definition regarding Certificate program). The central theme of this course is to improve student understanding in the general area of managing high technology projects using contemporary methods and tools. The student is assumed to be literate in the use of MS Windows and have a general understanding of PC software technology. The course material will utilize text and computer software to provide an overview of the project management processes, as well as a review of the roles, responsibilities, and management methods of the high technology project manager. There is essentially no assumed prior knowledge in specific project management techniques; however a general knowledge of organizational processes is helpful in understanding how the project role fits into that structure. Material from this class is designed to be real world, practical, and of operational value in management of all project types.

The first half of this course focuses on basic material that positions the topic of high technology project management into its environment. In this section an examination of major sources of project failure will be provided to aid in understanding where the management process typically
breaks down. This introductory material is designed to level set the class and prepare the group for the more advanced topics that will be introduced in the second half.

The second half of this course moves away from a basic time and cost focus into other supporting roles in the project management process. Process areas such as: human relations, risk, quality, procurement, communication, and general control aspects of the project life cycle are reviewed. Beyond the raw mechanics of project management there is also a growing sensitivity to the human aspects of project performance as well. Projects are natural breeding grounds for interpersonal conflict and ineffective human behavior which must be effectively dealt with for successful goal accomplishment. Various tools and techniques to handle these complex process interactions within the project structure are discussed.

Intermingled within the basic project management topics will be sessions in the use of Microsoft Project, which is now the predominant software in use for project planning and control. These sessions will teach the student how to use the package for basic project functions.

The final three sessions of the course will introduce selected contemporary topics that have emerged on the scene over the past few years. Examples of these are the Project Management Office (PMO), Portfolio Management (PPM), Governance, and PMI’s PMBOK (Project Management Body of Knowledge). This latter topic is viewed as the professional bible defining this topic area and is the total focus of the follow-on Advanced course (TEPM 6397).

This collection of material represents the basic vocabulary for Project Management Professional (PMP) certification, but is not intended to tutor the student for certification. TEPM 6397 has that as its singular goal. Collectively, these two courses constitute the core for that activity should one wish to pursue professional certification.

Finally, in order to simulate management of a mini-project each regular student is assigned an individual “knowledge” project of their choosing. This serves two purposes. First, it allows the opportunity for more focus on a specific topic selected by the student and secondly this activity has many of the features of a project—i.e., fixed start, fixed stop, defined output goal, documentation, etc. Further details for this activity follow below.

**Video Library**

An MS Project web-based video library has been developed to assist you in becoming proficient in that tool. Equivalent lectures will be given in class, but these lessons will allow you to hear and see the same material as you need it. Details on the lesson library will be given under separate notes.

**Course Project**

This aspect of the course is described in a separate document, but in general it represents an individual exploration of some “knowledge” aspect of project management. This activity represents 15% of the course grade. Final delivery of the paper is due on November 28, 2006. However, there are interim phase steps required. See the project description for further details.
Grading

Grades will be determined from random quizzes, mid-term and final exams, knowledge paper, plus homework assignments.

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<tr>
<th>Component</th>
<th>Percentage</th>
<th>Grade Range</th>
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<tbody>
<tr>
<td>Homework Assignments</td>
<td>30%</td>
<td>A+............95% +</td>
</tr>
<tr>
<td>Final exam</td>
<td>30%</td>
<td>A.............85-95%</td>
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<tr>
<td>Mid-term</td>
<td>15%</td>
<td>B.............75-85%</td>
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<tr>
<td>Knowledge project</td>
<td>15%</td>
<td>C.............65-75%</td>
</tr>
<tr>
<td>Random Quizzes</td>
<td>10%</td>
<td>F.............Less than 65%</td>
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100%

Textbooks


{Both texts should be available through the UH Book Store. Also, they can be ordered through Amazon, Barnes & Noble, or Course Technology [www.course.com] on-line sites, or other commercial text web sites}


Optional MS Project Textbook (note: equivalent notes will be provided in class and various web sites can also be used as references, so purchase this only if you feel the need for having a book for security.)


{order through Amazon or other commercial text web sites}

**Note: During the semester there will also be assigned readings from other sources (mostly online resources). You will be given the appropriate URLs during class and these will also be stored on the class WebCT site.
**Instructor Background**

I have been an explorer and avid enthusiast in the world of Project Management for 8 years. Currently I hold the post of Managing Consultant for Software Architects. My consulting assignments have included projects for companies like Hewlett Packard, Shell, and Conoco, just to name a few. I am also an Associate Director for PMI-ISSIG. I have an undergraduate degree in MIS and a Master in Project Management from Western Carolina University. Throughout my career I have developed a deep appreciation and thorough understanding of both project management theory and the hands-on management of real projects across multiple industries.

The key to successful projects is to apply the academic principles of best practices and project management theory to the reality of projects today and persevere regardless of circumstance. By its definition, each project is unique. There is no career more exciting than handling projects because the variety of unique issues and challenges you encounter will never leave you bored.

**Class Policies**

Assume that this class is your project management assignment—e.g., the goal is on time completion of the planned goal. Your personal goal should be to execute the weekly steps according to the plan with all documentation in place. That alone will teach you what a project manager is supposed to do.

My personal goal is be sure that everyone passes the class, but you should expect to be challenged and then get a generous grade at the end. This class is not some abstract theory. You can see the topic all around (typically being mismanaged by the way). The teaching objective is to make you aware of the subject and help you learn how to properly approach the management of a future project.

**Attendance Policy**

You are allowed to miss one class regardless of the circumstances. Please reserve this option only for when you absolutely cannot attend. It is your responsibility to keep up with homework assignments and hand in everything on time. Written assignments and exercises will be much, much harder to do on your own because we will almost always be doing a mini version of homework assignment as a group exercise in class. If you miss 2 classes, you lose ½ of your final grade. If you miss 3 classes, you lose one whole grade. If you miss 4 classes, you lose 1 and ½ of your final grade. If you miss 5 classes, you lose two whole grades. Quizzes administered in your absence cannot be made up later in the course. You lose points for these quizzes, regardless of the circumstances of your absence.

**Makeup Policy**

There is no making up an examination or a quiz. Makeup examinations are not fair to other students. If an absolute exception must be made and you are allowed to make up an examination, the test is guaranteed to be much, much harder than the original, so you will be doing yourself a favor by taking it the first time around.
There will be random quizzes on the assigned reading materials (5 quizzes). Random quizzes can be on any reading or Microsoft Project assignments. There is no making up these quizzes, no exceptions.

**Homework Policy**

Homework written assignments are due at the beginning of each class. Please submit to WebCT, unless specified otherwise. All assignments are due at the beginning of class, which means 7:00pm on Tuesday, whether or not you are absent from the class.

Assignments submitted to WebCT after 7:00pm on Tuesday are marked late and get one grade reduction. You have until Saturday of the same week to send in late assignments. Starting Sunday of the same week, late submissions are not accepted and you lose all points for the assignment. You are allowed to miss one assignment without it affecting your grade. However, I recommend that you hand in all assignments because you might need the extra points at the end of the course.

**Course Miscellaneous**

The planned topic schedule provided needs to stay somewhat flexible in terms of exact material covered and speed of topic delivery. The goal here is to do a good job on the core material, not just cover the published syllabus. Schedules may need to be adjusted accordingly as the course evolves (just like a real project must do). Every attempt will be made to make this a positive professional experience for you and not raw drudgery.

Email, Web/CT, and the class web site are our common modes for intra-communication. All students should provide the instructor with an email address and check their emails a couple of hours prior to class (a motivator for this – it might be to announce that class is cancelled). Some last minute handout materials are also distributed this way. Students should use this as the first priority for normal communication.

The following list of topics will be discussed during the term.

**Foundations of project management**
- Characteristics of a project
- Historical trends
- The Project life cycle
- PMI's view of projects
- People, process, product and technology factors

**Project initiation**
- Evolving the vision into a skeleton plan
- Developing a project charter
- Estimating the project cost
- Selling the proposed project to key stakeholders
- Creation and use of Work Breakdown Structures (WBS)
- Building an initial project plan

**Introduction to MS Project**
- Overview of the network model
Precedence networks
Calculating first-cut project duration
Defining project resources
Allocating resources to tasks
Establishing a project baseline
Second-cut review of project plan (leveling resources)
Overview of MSP reporting techniques
Tracking actual project progress
Examining status using Earned Value concepts
Revising the project plan (baselining)
Schedule crashing
Using MSP for team communication
Management reporting
Stakeholder reporting
Theory of Constraints

**Estimating and budgeting**
Task estimation techniques (Delphi, analogous, parametric, expert)
Project budgeting
Tangible and intangible benefits
NPV, Payback, and ROI calculations
Using the WBS to define scope
Project cost management

**Scheduling models and concepts**
PERT/CPM theory and mechanics
Gantt charts
Critical chain theory
Managing the critical path
Psychology of scheduling

**Human issues in project management**
Staffing the project
Motivating team members
Project communications
Task management
Leadership styles
Role of authority
Establishing a team culture
Resolving conflict

**Organizational Factors**
Team structure
Organizational culture
Organization versus team structure
Organizational models

**Project operational issues**
Change control
Tracking status
Reporting status
Performance appraisal of team members
Project Board relationships
Stakeholder relationships
Communications with user community
How to report project status
Role of milestones in status reporting
Internal task management process
Contingency planning

Introduction to the PMI PMBOK process and knowledge areas
(TEPM 6397 will dwell much deeper into this area)