

The Fisher Graduate School of International Business Monterey Institute of International Studies

Course Title and Number: Project Management, IM655.

Class Meeting Dates and Times: 4 Saturdays; September 06, October 11, November 08, and December 06, 2008. We will meet from 9:00 AM to 5:00 PM with regular short breaks and one hour lunch breaks. Course duration is 30 hours.

Instructor: William (Bill) Brooks, wmbrooks@pacbell.net

Feel free to contact me if there are any problems or questions. The email approach is the fastest way to get a response from me.

Credit: 2 units

Classroom Location: MG100

Course Conduct:

You are encouraged to ask questions and contribute ideas at any time. The course will be conducted in seminar format.

Course Materials:

The course handout material is yours to keep. Additional materials may be distributed. There is no required textbook. However, there are some recommended textbooks for those wishing to prepare for the Project Management Institute (PMI) Project Management Professional (PMP) examination. The PMI-PMP examination is based on the material in Project Management: A Systems Approach to Planning, Scheduling, and Controlling by Harold Kerzner, published by John Wiley & Sons. The most recent version is the 9th edition (2006). It is available from several booksellers including online Amazon and Barnes & Noble, and additional study guide materials are available from Project Management Institute, <http://www.pmi.org>.

There is a list of standard project management acronyms in the seminar materials. We will strive to not overuse these acronyms.

The seminar materials are bundled with example files from Microsoft Excel, Microsoft Project, and other Project Management related software tools.

There are several footnotes throughout the seminar materials that provide details concerning Internet World Wide Web (www) sites of interest to Project Managers. Most of these sites also provide free trial versions of the software tools described in the handout materials. The use of any of these tools is not required for this class.

There is a list of references at the end of the seminar materials to provide you additional sources of information about Project Management. All of the listed references are recommended. There is a list of software tools at the end of the seminar materials for PC and Mac computers. There are a few LINUX based tools also available.

Although several software tools are used throughout this course for the purpose of conducting example exercises, you should not construe these examples as an endorsement of these tools or their companies.

Grading Policy:

Unless otherwise specifically requested, a letter grade will be given. The results of two written examinations and homework assignments will determine the grade. Each examination will be worth 40% of the final grade and the homework assignments will cumulatively be worth the remaining 20% of the grade. Both examinations will be open book. The mid-term examination will be a take-home examination handed out during the second class meeting and due at the start of the third class meeting. The final examination will be held during class, and will be open-book during the fourth class meeting. You may use any resource available to you in the classroom except fellow classmates and the instructor.

Complete attendance is highly recommended since there will be materials and techniques presented in class that will be needed to successfully answer the examination questions. Make up exams and lectures are not available.

Course Description:

Practical project management skills are essential in the development of products and services to customers. This course emphasizes the practical project management of multidisciplinary project teams throughout the project life cycle. The focus of this course is new product development from the sellers' perspective, teaching the skills required for managing the project from the market inputs phase through product release phase. This course presents several techniques and tools for handling the compressed time-to-market goals of companies in the hyper-competitive business environment. Over 50 practical project acceleration techniques are presented. Management techniques for rapid response to changing project and product requirements are presented. Techniques for quantitatively defining project business success requirements, developing product implementation requirements, developing a comprehensive project plan, evaluating the project plan, assessing project risks, and building true project teams are presented. Each of the techniques is accompanied with practical examples from typical companies. A technique for evaluating the trajectory of the business environment and how to create a Strategic Capabilities Roadmap of projects is presented. The phasing of projects into programs or lines of business is presented with practical techniques for defining the optimal Time to Profit of a project and the scope of the product requirements. These techniques are applicable to hardware and software product development projects.

Multidisciplinary project teams development is of critical importance to rapid product development. Advanced team development skills are presented that enable Project Managers to lead and manage high-technology projects that involve very technologically diverse specialists. Special emphasis is made concerning techniques for the creation of true teams of people who may not understand each other's technology, and how to successfully manage projects that involve technology that the Project Manager is not familiar with. Project team development processes and evaluation criteria are presented. In addition, a comprehensive review of leadership skills and the contrasts to management skills is presented. Leadership skills development processes and criteria are presented. The team development process is integrated with the project life cycle process.

Several software tools that accelerate the techniques presented in the course are demonstrated in class. Project optimization techniques using linear programming algorithms are

presented. Practical product features selection, project scope optimization, multi-project planning, and project profit maximization examples are included. The project planning examples include Design to Schedule and Design to Cost planning techniques that include resources-constrained optimization. Examples of combinatorial optimization techniques for selecting product features within project due date, staffing constraints, and project business goals are presented. All of the examples are accompanied with step by step set up instructions in the course handout book. All of the optimization techniques presented in the course can be implemented using commonly available tools.

The course is presented in seminar style format and is supported by a 500-page handout notebook containing all of the course materials and annotated references. The duration of the course is 30 hours. Extensive footnote references provide direction to additional sources of information. World Wide Web (WWW) sources of advanced project risk management, software project development cost estimation, schedule optimization, and multi-criteria decision support tools are also provided. In addition, WWW links to several Project Management-related organizations are provided. The course is designed to enable immediate use of the techniques and tools in a real project management environment.

Course Outline:

Introduction

1.1. Definitions of Projects, Programs, Management, and Leadership

1.2. Success Criteria and Project Management Goals

Project Decisions and Problem Solving

2.1. Decision making, Problem Solving , and Planning

2.1.1. Recognition-primed Decision making Strategy

2.1.1.1 .Applied Cognitive Tasks Analysis

2.1.2. Rational Choice Strategy

2.1.2.1 .Analytic Hierarchy Process

2.2. Examples and Tools

Product Requirements & Project Requirements

3.1. Integrated Requirements Analysis

3.1.1. Requirements, Specifications, and Constraints flowdown

3.1.2. Prioritization and Success Utility Analysis

3.2. Optimized Project Success Hierarchy and Planning

3.3. The Grammar of Projects

3.4. Product-Project Requirements Flow

3.4.1. Customer to Product Requirements Flow

3.5. Product Definition and Optimization

3.5.1. Functions, Objects, States, and Interfaces

3.6. Examples and Tools

Project Planning

4.1. The ROI of Planning

4.2. Taxonomy of Plans

4.3. Project Planning Process

4.3.1. Requirements, Resources, Tasks, Time

- 4.4. Design to Schedule, Design to Cost Plan Optimization
 - 4.4.1. Critical Path Optimization and Tools
 - 4.4.2. Resources Optimization and Tools
- 4.5. Project Plan Scope Optimization
 - 4.5.1. Profit and Time To Market Optimization
 - 4.5.2. Profit and Time To Profit Optimization
 - 4.5.3. Project Portfolio Planning
 - 4.5.4. Examples and Tools
- 4.6. Examples and Tools
- Project Teambuilding & Leadership
 - 5.1. Teams vs. Workgroups Definitions
 - 5.1.1. Criteria for a True Team
 - 5.2. Leadership and Followership Definitions
 - 5.3. Teams and Leadership in the Project Lifecycle
 - 5.4. Managing Up, Managing Contractors, and Managing Intellectual Capital
 - 5.5. Differences Between Management and Leadership
 - 5.6. Influence Tactics vs. Power Management
 - 5.7. Project Leadership Strategy
 - 5.8. Information and Clarity
 - 5.9. Examples and Tools
- 6. Project Risks Management
 - 6.1. Quality of Project Plan
 - 6.1.1. How do we know this is a good plan?
 - 6.1.2. Plan metrics
 - 6.2. Risk Thresholds
 - 6.3. Risk Factor and Quantification of Risks
 - 6.3.1. Technical, Schedule, Cost, Contractual, and Organizational Risks
 - 6.4. Risk Management Strategy
 - 6.5. Examples and Tools
- 7. Project Status and Controls
 - 7.1. Project Status Measurements
 - 7.2. Project Forecasting Techniques
 - 7.3. Corrective Actions Planning
 - 7.4. Examples and Tools
- 8. Project Lifecycles
 - 8.1. Project to Program Interfaces
 - 8.2. Project Acceleration
 - 8.3. Competitor Projects and Technology Innovation Rates
 - 8.3.1. Optimum Projects and Programs
 - 8.3.2. Intellectual Capital Development
- 9. References and Tools
 - Publications, Organizations, and software tools.

Additional Information and Comments:

It is assumed that you have or have access to a computer and the Internet. This course is too short to provide all that you need to know, so I will point you to sources of additional information,

particularly for specific business environments.

The use of Microsoft Project is not required, nor will it help you become a Project Manager. Project Management is not about Microsoft Project skills.

If you have trouble understanding something, say so. I want you to learn as much as possible. I will tell several stories that provide real-world and humorous examples of Project Management. Have fun, Project Management is really a problem-solving process in disguise...it's all about "how do we connect what we do to what we want as an outcome?"

International Project Management, IM 655 Pre-Class Meeting Assignments

Prior to the first class meeting, please complete the following tasks:

1. Perform an Internet search on Google, Yahoo, MSN, etc. for the phrase “analytic hierarchy process” or “AHP”. Be prepared to answer the following questions;
 - a. What is the “Analytic Hierarchy Process”?
 - b. What hierarchy are they talking about?
 - c. What has been it used for?
 - i. What businesses use it?
 - ii. What projects have used it?
 - d. What do the users of the “analytic hierarchy process” have in common?
 - e. Why did they use the “analytic hierarchy process”?
2. Perform an Internet search on Google, Yahoo, MSN, etc. for the words “plan” and “planning”. Be prepared to answer the following questions;
 - a. What is a plan?
 - b. What is planning?
 - c. How would you know that you have a “good” plan?
 - d. What does “good” mean?
 - e. How would you know that a plan is “done”?
 - f. How would you know that a project is complete?
3. Imagine that you are asked to develop a project plan for Monterey Clean Water, Inc. that has developed a new technology that can convert polluted water into clean water suitable for drinking, i.e. potable water. The Monterey Clean Water, Inc. technology is mature, low cost to use, scalable to any size, consumes low electrical power, easy to use, environmentally friendly, and can be used anywhere in the world. Monterey Clean Water, Inc. wants you to develop a project plan to install this new technology at locations worldwide that have insufficient clean water.
 - a. Create a list of success criteria for this project (just “brainstorm” the criteria or factors for success.) Identify requirements and constraints for business success.
 - b. Organize your requirements and constraints into a hierarchy (a.k.a. requirements tree) that is at least 3 layers down from the project goal.
 - c. Visit the Infoharvest Inc. website, <http://www.infoharvest.com> and navigate to the “Downloads and Support” page. Sign up for a free download of Criterium DecisionPlus 3.0.4 Student version. Install the Student version. Capture your Monterey Clean Water, Inc. hierarchy in Criterium DecisionPlus “Brainstorming” view. Do a screen dump (capture the screen image), and print it onto a paper. Bring that paper with you to the first class meeting with your name on it to turn in as your first homework assignment. (Don’t email it to me.). If you don’t have the computer resources to do this, then draw the hierarchy by hand on a piece of paper and that will be acceptable. The objective here is to start learning about thinking hierarchically. The hierarchy will eventually become the

Work Breakdown Structure (WBS) that is the cornerstone of project planning, and what is entered into a project management tool, e.g. Microsoft Project. The course will show you how to derive the WBS.

It would also be worthwhile to visit <http://www.expertchoice.com> to download their free trial version of AHP called “Expert Choice), or visit <http://www.tier3-inc.com/> to download their free trial version of AHP called “RightChoice”, or visit <http://www.logicaldecisions.com/> to download their free trial version of AHP called “Logical Decisions”. All of these trial versions are accompanied by AHP examples that will help you learn more about how AHP works and how to use it.

This following is NOT required, but is recommended reading.

The Monterey Clean Water Inc. project is a hypothetical project for a hypothetical corporation, i.e. Monterey Clean Water Inc. does not exist, but the project goal is timely and has real-life relevance; read the August 2008 issue of *Scientific American*, “Facing Freshwater Crisis” by Peter Rogers. What are the requirements discussed? What actions are advocated? How do the actions advocated result in the desired outcome?

It would be useful if you also read the book Diffusion of Innovations by Everett M. Rogers, Free Press (2003) about how different cultures respond to innovations, and how innovations may or may not diffuse, e.g. pp. 107-109 “Pure Drinking Water in Egyptian Villages”. Since the goal of most “projects” is to do something innovative in response to a problem, need, or threat, then understanding diffusion of innovation would be useful. The first steps of a project are to perform User Needs Analysis and Customer Needs Analysis.....what problem, need, or threat is the project responding to? what do they want as the outcome?.....what will they accept and value?.....We can use this as a starting point for a project management planning example.

When the course reaches Section 5 “Project Planning” you will have learned about how to develop and optimize a project plan using this hierarchical approach. There will be a discussion during Section 5 concerning a project template for planning virtually any new product development project that can be used in future real-life projects.