

## OM 337.5: Project Management Spring 2014

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Unique No.: 04395  
Schedule: MW 9:30 – 11:00am  
Classroom: UTC 1.110

### COURSE DESCRIPTION

It is common for businesses, non-profit operations and government entities to organize groups of related activities as *projects*. Even though many organizations operate in *project environments*, in which all or most of their activities are organized as projects, each project is usually unique in terms of task structure, risk characteristics and objectives. As a consequence, the management of projects presents a different set of challenges than the management of a repetitive processes designed to produce a series of similar products or outputs. The process analytics and concepts that you learned in OM335 for repetitive (i.e., standardized) products and processes (e.g., cycle times, throughput times, etc.) must be adapted to be useful in project environments.

The sequence of topics covered the course is organized along the *project life-cycle*. We start by studying the different forms of organizations used in project environments, followed by project planning, management of risk and resources, and management of project execution followed by earned value analysis. Along the way we will learn to apply powerful methodologies such as *Linear Programming* to optimize projects, and we will have the opportunity to use the capabilities of MS Project to plan projects.

Large-scale projects are characterized by a significant commitment of organizational and economic resources and in many cases are characterized by a significantly higher degree of uncertainty than standard operating environments. Thus, it is imperative for managers to anticipate the different types of problems that they are likely to confront with each type of project, to understand the managerial levers at their disposal, and to develop a conceptual model relating project outcomes to their actions.

## COURSE MATERIALS:

### Textbook:

Klastorin, T. *“Project Management: Tools and Trade-offs,”* available at the Co-op.

### Supplementary Reading:

Goldratt, EM., *“Critical Chain,”* available from the Co-op.

### Course Packet:

This packet contains the three cases we will use in the course to supplement the textbook and it is available from the McCombs duplicating center.

## COURSE EVALUATION:

The final grade will be based on the following items:

Homework Assignments	30%
Midterm Exam	30%
Final Exam	30%
Class Participation	10%

- **Homework Assignments.** We will have nine homework assignments; you can anticipate a homework assignment approximately every week. They will be designated either as team or individual assignment depending on the specific topic at hand and what is best pedagogically.
- **Class Participation.** Class participation will be evaluated on the basis of quality and quantity. Since the nature of the sessions will vary from lectures to case discussions and simulation debriefs the opportunity to participate (quantity) will vary. However, the quality of participation will be evaluated on the basis of the student preparation of the topic and propensity to ask interesting and useful questions.

## COURSE OUTLINE:

- Jan. 13 (M)     **Course Introduction.**
- Project Metrics
  - Defining Project Success
- Jan. 15 (W)     **Understanding Project Differences**
- Readings:       • Chapter 1 of TK
- Taubman, P. "[Costly Lesson on How Not to Build a Navy Ship](#)," *The New York Times*, April 25, 2008.
- DISCUSSION QUESTIONS:
1. How can we define project success/failure?
  2. What are the relevant metrics? Are these metrics project specific?
  3. What Project Management lessons can we learn from the project described in the article?
- Jan. 22 (W)     **Project Organization**
- Readings:       Chapter 3 of TK
- Jan. 27 (M)     **Project Organization**
- Case: Mod. IV Product Development Team
- DISCUSSION QUESTIONS:
1. How would you assess the Mod IV?
  2. How has Mod IV ended up where it is now?
  3. What would you expect to happen at a team meeting to resolve the modules issue?
- Jan. 29 (W)  
Feb. 3 (M)  
Feb. 5 (W)     **Precedence Networks and the Critical Path Method**
- Readings:       Chapter 4 of TK
- Homework #1 (Due on Feb. 5)
- Feb. 10 (M)  
Feb. 12 (W)    **Optimization of Project Schedules: Time vs. Cost Tradeoff**
- Readings:       Chapter 5 of TK
- Homework #2 (Due on Feb. 12)

Feb. 17 (M)	<b>Project Planning with Uncertain Activity Durations: PERT</b>
Feb. 19 (W)	
Feb. 24 (M)	
Readings:	
	Chapter 6 of TK
	Homework #3 (Due on Feb. 19)
Feb. 26 (W)	<b>Midterm Exam</b>
Mar. 3 (M)	<b>Project Simulation</b>
Readings:	Chapter 6 of TK
Mar. 5 (W)	<b>Critical Chain Debriefing</b>
	Homework #4 (Critical Chain Book Report)
Mar. 10, 12	<b>Spring Break</b>
Mar. 17 (M)	<b>Critical Chain Approach to Project Management</b>
Mar. 19 (W)	
Mar. 24 (M)	
Mar 26 (W)	
	Homework #5 (Due on Mar. 19)
	Homework #6 (Due on Mar. 26)
Mar. 31 (M)	<b>Managing Project Resources</b>
Apr. (2) (W)	
Readings:	
	Chapter 8 of TK
Apr. 7 (M)	<b>Project Monitoring and Control: The Earned Value Analysis Methodology</b>
Apr. 9 (W)	
Readings:	
	Chapter 9 of TK
	Homework #7 (Due on Apr. 9)
Apr. 14 (M)	Case: Ariba Implementation at MED-X
	DISCUSSION QUESTIONS:
	1. Which of the two components are underperforming according to the plan?
	2. Are the components of the project within budget?
	3. What can you conclude by looking at the combined EVA data for the project?
	4. Why did Terry Baker think that the project was going according to the

- plan the entire time?
5. How much longer will the project take?
  6. What should Martin have done earlier in the project timeline to prevent delays?
  7. What should Martin do when managing future projects to prevent similar problems from developing?

Homework # 8 (Case Analysis Paper)

Apr. 16 (W)

Apr. 21 (M)

**Project Risk Management**

Readings: Chapter 7 of TK

Apr. 23 (W)

**Managing Multiple Projects**

Readings:

1. Chapter 9 of TK
2. Getting the Most Out of Your Product Development Process (Course Packet)

Apr. 28 (M)

**Aggregate Project Planning**

Readings: Creating Project Plans to Focus Product Development (Course Packet)

Apr.30 (W)

**Managing Product Development Projects**

Readings: A More Rational Approach to Product Development (Course Packet)  
Case: We've Got Rhythm! Medtronic Corp.'s Cardiac Pacemaker Business

DISCUSSION QUESTIONS:

1. Review Medtronic's business history and examine the events in the 70's and 80's that led Medtronic to lose their market leadership. What are the root causes?
2. Examine the new process to manage product development projects. What are the key improvements that you think have contributed the most to the turnaround of the company?
3. What are the costs and benefits of implementing the "product line architecture" and "train schedule" in Medtronic's business? Can these concepts be applied in a different setting? What settings

Homework #9 (Case Analysis Paper)

May 13

**Final Exam** (9:00am – 12:00pm).

