Op Mgt 550AB  
PROJECT MANAGEMENT  
Spring Quarter, 2016

Instructor:  Ted Klastorin  
Office:  551 Paccar Hall  
Office Hours:  Monday & Wednesday 12:30 – 1:30 pm  
By appointment  
Phone: (206) 543-1833  
Email: tedk@u.washington.edu

Course Location & Schedule:  
Monday/Wednesday  10:30 – 12:20 pm  
Paccar 395

Required Text:  

Course Description:  
In recent years, there has been a rapidly increasing emphasis on project management concepts and expertise. Organizations increasingly recognize that introducing new products, processes, or programs in a timely and cost effective manner requires professional project management (PM). This is especially important given recent research indicating that companies that miss visible milestones (e.g., the announced introduction of a new product) are likely to suffer significant loss in market value for a considerable period following the delay. In addition, an increasing number of managers recognize that project management offers powerful tools to help them change and redirect an organization's strategic direction(s) and redefine core competencies.

This course examines the management of complex projects and methodologies that can help managers increase the likelihood of successfully completing these projects. Throughout the course, we will emphasize the two most important tasks faced by project managers: (1) planning the project, and (2) managing project risk. Other topics will include project initiation and selection (and timing), requirements and scope planning, scheduling, budgeting, forming and managing project teams, and monitoring and control. In addition, we will discuss commercial PM software products, and the relationship between these products and the requirements of managing risky complex projects in today’s economic environment. We will also discuss PMP certification requirements (PM certification from the Project Management Institute or PMI).

Course Prerequisites: MBA core or equivalent.

Canvas: Most of the course materials (e.g., problem sets, most case studies, final exam, Excel spreadsheets, powerpoint slides) will be available on Canvas. Please check the
Canvas site frequently as I will post notes, comments, and updates on a regular basis. All assignments will be submitted via Canvas.

**Project Management Software**


In addition, we will be using a number of Excel spreadsheets throughout the course to illustrate the types of decisions and trade-offs that are faced by project managers. All Excel spreadsheets will be posted on Canvas.

**Problem Sets and Case Studies:** There will be four problem sets and four case studies throughout the quarter (approximately one homework assignment per week).

Each problem set will be posted on Canvas. *Each problem set is to be completed and submitted individually.* No late problem sets will be accepted. Solutions to problem sets will be posted on Canvas following their due date.

A written analysis for each case study should be prepared by each study group prior to class discussion; the written analysis for each case should respond to the study questions that accompany each case. While study groups will submit a single written analysis for each case study, every class member is responsible for understanding the issues in the case and should be prepared to contribute to the class discussion.

**Harvard Project Management Simulation Game:** Near the end of the course, each study group will play the HBS Project Management Simulation Game—an online game that requires you to manage a new product development project when numerous random disruptions can occur. Points will be awarded to the teams that meet budget, schedule, and scope goals as well as keeping the stress levels of their project team members below a stated level. More information about this game will be posted on Canvas.

**Attendance:** If you miss a class, please let me know so that I can help you with any missed materials. Remember that you are responsible for everything discussed in class (whether included in the text or not).

**Incompletes:** Incompletes will only be considered in highly unusual conditions (such as serious illness). Any request for an Incomplete must be stated in writing and submitted before the last day in class. The statement should include a statement of class progress and reasons why the Incomplete is being requested.

**Final Exam:** The final exam will be an “out-of-class” experience; it will be posed on Canvas on May 31 and will be due on Monday, June 6. No makeup exam will be given for any reason.
**Final Average and Grade:** Your course grade will be determined from performance on the final exam, analyses of case studies, problem sets, performance on the HBR simulation game, and class participation (where quality—not quantity—counts). At the end of the course, I will ask you to confidentially rate the other members of your study group (to discourage the free rider problem); I will use these intra-group evaluations to adjust case study scores for individuals.

Your final grade will be based on the number of points you earn (from a maximum of 500 points as indicated in the following table).

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<th>No. of Items</th>
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<td>Case Studies</td>
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<td>HBS Simulation Game</td>
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<td>Problem Sets</td>
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**PMP Certification:** This course satisfies the 35 hours of PM coursework that is required to take the PMP (Professional Project Manager) certification examination offered by PMI (Project Management Institute). You must also complete an application demonstrating your experience in the project management field. I will be happy to assist with your application and will briefly discuss PMI and the certification exam in class. (Disclaimer: This class is not a PMP preparation course….)
Op Mgt 550 Course Outline

**Week 1**  
**Mon, March 28**  
**Intro to Project Management (PM).**  
Topics: Why PM is important; Definition of projects; success/failure metrics and factors; program versus project management  
**Reading:** TDK: Chapter 1  
**Reading:** Lindblom, Mike. “Stalled Bertha’s tunnel project 70% done?” *Seattle Times* (Dec 27, 2014)

**Wed, March 30**  
**Project initiation and selection (1).**  
Topics: Aligning project selection and organizational strategy; simple numerical metrics; risk adjusted discount rates; the need for options thinking  
**Reading:** TDK: Chapter 2 (pp 23-41)

**Week 2**  
**Mon, April 4**  
**Project initiation and selection (2).**  
Topics: When to start new projects; ranking/scoring methods for evaluating project proposals; project portfolios; Analytic hierarchy Process (AHP)  
**Reading:** Luehrman, T. "Capital Projects as Real Options: An Introduction", *Harvard Business Review*, (March, 1995)  
**Reading:** “Analytic Hierarchy Process (AHP)”

**Wed, April 6**  
**Project planning.**  
Topics: Elements of a project plan; using a WBS to define the tasks in a project; estimating task durations and costs  
**Reading:** TDK: Chapter 2 (pp 41-54)  
**Assignment Due:** Problem Set #1
**Week 3**
**Mon, April 11**  **Defining project networks**
Topics: precedence networks; Gantt charts; Critical Path Method (CPM) defined; slacks (floats) defined

*Reading*: TDK: Chapter 4 (pp 83-97)

**Wed, April 13**  **Deterministic project scheduling**
Topics: CPM linear programming model; budgeting; maximizing project NPV; MS Project 2010 demonstrated

*Assignment Due*: Problem Set #2

**Week 4**
**Mon, April 18**  **Project knowledge and learning; time-cost trade-offs**
Topics: time-cost trade-offs; concurrent engineering; material ordering

*Reading*: TDK: Chapter 5

*Case due*: Managing Knowledge and Learning at NASA and the Jet Propulsion Laboratory (JPL)

**Wed, April 20**  **Project Planning Under Uncertainty (1).**
Topics: task duration uncertainty and “Classic” PERT; Monte-Carlo simulation; project buffers

*Reading*: TDK: Chapter 6 (pp 135 – 152)

**Week 5**
**Mon, April 25**  **Planning Under Uncertainty (2).**
Topics: new project development projects; cycles in networks; Schoenberger’s hypothesis

*Reading*: TDK: Chapter 6 (pp 152 – 159)

*Assignment due*: Problem Set #3

**Wed, April 27**  **Guest Speaker (TBA)**
**Week 6**

**Mon, May 2**

**Risk Management**
Topics: Agile PM; Managing projects under the threat of a project shutdown; new product development projects with possible competition

*Reading:* TDK: Chapter 7


*Case due:* AirShip Technologies

**Wed, May 4**

**Managing Decentralized Projects**
Topics: Risk and contract types; moral hazard and adverse selection

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**Week 7**

**Mon, May 9**

**Bid preparation and presentation**

*Case due:* *Christopher Columbus, Inc.*

(in-class presentation required by all study groups)

**Wed, May 11**

**Resource Management (1).**
Topics: introduction to resource leveling and allocation

*Reading:* TDK: Chapter 8 (pp 175-198)

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**Week 8**

**Mon, May 16**

**Resource Management (2).**
Topics: theory of constraints and critical chain; non-renewable resources


**Wed, May 18**

**Monitoring and controlling projects.**
Topics: Earned value analysis; quality control

*Reading:* TDK: Chapter 9

*Assignment due:* Problem Set #4
**Week 9**

**Mon, May 23**  
Guest speaker (TBA)

**Wed, May 25**  
New Product Development Projects; Project Teams
Topics: How to assign project teams; optimal team size; efficiency versus effectiveness of project teams

*Reading:* TDK: Chapter 10


*Case due:* Applied Materials

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**Week 10**

**Mon, May 30**  
No Class: Memorial Day Holiday

**Wed, June 1**  
HBS Simulation Game; PM maturity models; multiple projects
Topics: Review of HBS simulation game results (award to winning team); conclusion and review

*Assignment due:* HBS Simulation Game