ME 517 **Syllabus** **Spring**
Product Development **2011**

Instructor:

William Hauser
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617-358-0663
wmhauser@bu.edu

Class Hours:

Monday and Wednesday
6:00PM to 8:00PM, Photonics 210

Office Hours:

Thursday 2:00PM to 5:00PM or as arranged by appointment. The best way to reach me is by e-mail

Websites:

Assignments, readings, class notes are posted to the course website: **http://blackboard.bu.edu**. Class notes will, in general, be posted to the web by noon of the day following each class.

Video recordings of class sessions will be posted to the Distance Learning website: **http://dlp.bu.edu/me517.** Video recordings will, in general, be posted to the web within ½ hour after each class ends.

Textbook and Cases:

Textbook (Book1): *Rapid Development: Taming Wild Software Schedules,* by Steve McConnell, ISBN-13: 9781556159008, Available new and used at the BU Bookstore, Barnes & Noble, Amazon.com, and other outlets.

Book 2: *The Machine That Changed the World*, by James P. Womack, Daniel T. Jones, and Daniel Roos, ISBN-13: 978-0-7432-9979-4, paperback. Available new and used at Amazon.com and other outlets.

Case material can be purchased through the Harvard Business School Press website: **http://cb.hbsp.harvard.edu/cb/access/7907308**. Some case material will be distributed in class or posted to the course website.

Description:

Introduction to the leadership practices required for world-class product and process development in manufacturing companies. The development process is decomposed and its elements are examined critically using case studies and supplemental reading. Topics covered include: the development process, project leadership, project economics, product and process design practices, service innovation, organizing for success, managing portfolios and the link to business strategy. Examples are drawn from a variety of markets and industries.

Methodology: A combination of lectures and case studies will be used. Cases will be drawn from multiple sources, including the current press.

Course Outline: Included below, but subject to change, and likely to change, as the semester progresses. Slots have been left open for guest lecturers. There will be some flexibility in topics depending on availability of speakers and interests of the class members.

Grading: There will be three major homework assignments and one quiz during the semester. 66% of the grade will be determined by these assignments. 14% will be determined by the quiz and 20% by attendance and cogent participation. The homework assignments will be case analyses and possibly some primary research, depending upon the subject matter. You may collaborate with others during the research, but each paper must be your own work and present unique findings and conclusions. If you are in doubt as to what use of sources or what type of collaboration is permitted, be sure to ask first. Plagiarism will not be tolerated.

The grade for the three written assignments will be determined as either the average grade for all three assignments, or the average grade for the second and third assignment, whichever is higher. Nonetheless, all three assignments are required. Failure to complete any one of the assignments will result in failure of the course. If there is any legitimate issue which prevents your timely completion of an assignment, you must notify the instructor as soon as you anticipate the problem.

Distance Learning Considerations: This course is presented through the Distance Learning Program of the Department of Mechanical Engineering. Please be aware that you are on camera. You must assume that your words and your actions will be recorded. If you are joining the course by video link, please log in with sufficient time to debug the connection before class starts.

Technical and Administrative Support: Your primary contact for administrative matters and networking support will be Andy Abrahamson, 617-353-4208, **andrewa@bu.edu**. You may, in any case, bring any problem to my attention.

Topic	#	Date	Reading Assignment	Source
Introduction	1	**Wed, Jan 19**		
The Nature of Product Development	2	**Mon, Jan 24**	Case Study: Hewlett Packard Company: The Sally Project	Paper / Posted
			Managing Innovation: Controlled Chaos - J B Quinn	HBSP 85312
Scope of development processes	3	**Wed, Jan 26**	Guts of a New Machine, Rob Walker, New York Times	Posted
			Following the Path from Idea to IPO, Boston Globe	Posted
			Innovation and Technological Development (at DuPont)	Posted
Customer Needs, Product Requirements	4	**Mon, Jan 31**	Case Study: Innovation at 3M Corp. (A)	HBSP 699012
Hearing the voice of the customer	5	**Wed, Feb 02**	McConnell, *Rapid Development*, Chapter 10	Textbook
What customers can't tell you			Case Study: Innovation at 3M (B)	HBSP 699013
Translating customer requirements			Acela troubles seen as pattern for Amtrak, Boston Globe	Posted
into product requirements	6	**Mon, Feb 07**	Case Study: The Cyclone Grinder	Posted
			Reducing the Risks of New Product Development	HBSP SMR196
Managing the Design Project				
Rapid Development Strategy	7	**Wed, Feb 09**	McConnell, Rapid Development, Chapters 1 &, 2	Textbook
Classic Mistakes, Lifecycle Planning	8	**Mon, Feb 14**	McConnell, Rapid Development, Chapters 3 & 7	Textbook
Project Management	9	**Wed, Feb 16**	Bringing Discipline to Project Management	HBSP 98203
		Holiday		
→	10	**Tue, Feb 22**	**First Written Assignment Due**	
Project Management	11	**Wed, Feb 23**	Bringing Discipline to Project Management	HBSP 98203
Feature-Set Control			McConnell, Rapid Development, Chapters 14 & 16	Textbook
Project Management Formalism			Project Management Manual	HBSP 697034
Estimation and Scheduling	12	**Mon, Feb 28**	McConnell, Chapters 8 & 9	
How to Fail In Project Management	13	**Wed, Mar 2**	How to Fail in Project Management	HBSP BH010

Organizing for Success	14	**Mon, Mar 7**	Managing Professional Intellect: Making the Most of the Best	HBSP 96209
Design for organizational learning	15	**Wed, Mar 9**	Another Look at How Toyota Integrates Product Development	HBSP 98409
		Spring Break		
Design for organizational learning	16	**Mon, Mar 21**	Silicon Graphics, Inc. (A)	
Design for organizational learning	17	**Wed, Mar 23**	Guest Lecturer	
➔	18	**Mon, Mar 28**	**Second Written Assignment Due**	HBSP 695061
Collaboration and outsourcing	19	**Wed, Mar 30**	McConnell, Rapid Development, Chapter 18 Manager's Guide to Supply Chain Management Success Factors in Cross-Organization Projects	Textbook HBSP BH044 Posted
Product and Process Technology	20	**Mon, Apr 04**	Case: Corning Glass Works: The Z-Glass Project	HBSP 681091
The Importance of experience	21	**Wed, Apr 06**	The Growth of Intel and the Learning Curve	HBSP OIT27
Managing Risk	22	**Mon, Apr 11**	Guest Lecturer	TBD
Platforms and Standards	23	**Wed, Apr 13**	Strategic Maneuvering and Mass Market Dynamics	Posted
		Patriots Day Holiday		
Additional Breath Topics	24	**Wed, Apr 20**	Guest Lecturer	To be assigned
Links to Business Strategy				
Project Economics	25	**Thu, Apr 21**	Investment Analysis and Lockheed Tri-Star	HBSP 291031
The Business Plan	26	**Mon, Apr 25**	How to Write a Great Business Plan	HBSP 97409
➔	27	**Wed, Apr 27**	Third Written Assignment Due	
Additional Breath Topics	28	**Mon, May 02**	Guest Lecturer	
	29	**Wed, May 04**	Course Summary	

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