



Syllabus for TECH 443: Managing Portfolios and Projects

Kellogg School of Management, Northwestern University

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Professor

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Course Info Web Site

Center for Research in Technology and Innovation

<http://www.kellogg.northwestern.edu/research/tech/index.htm>

Joseph F. Norton http://www.kellogg.northwestern.edu/Faculty/Directory/Norton_Joseph_F.aspx

Joseph F. Norton www.joenorton.com

Office Hours

If you have any questions about the material please come and see me. I am very happy to talk with you. My office hours are by appointment. Please talk to me after class, by phone, or email me to schedule a meeting. I will be available for appointments before every class at Jacobs Center, Evanston Campus.

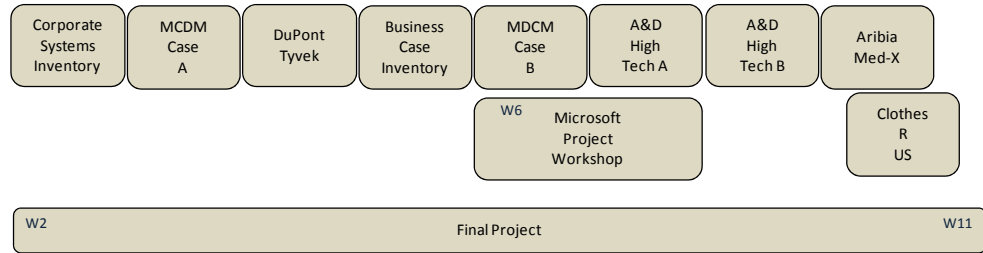
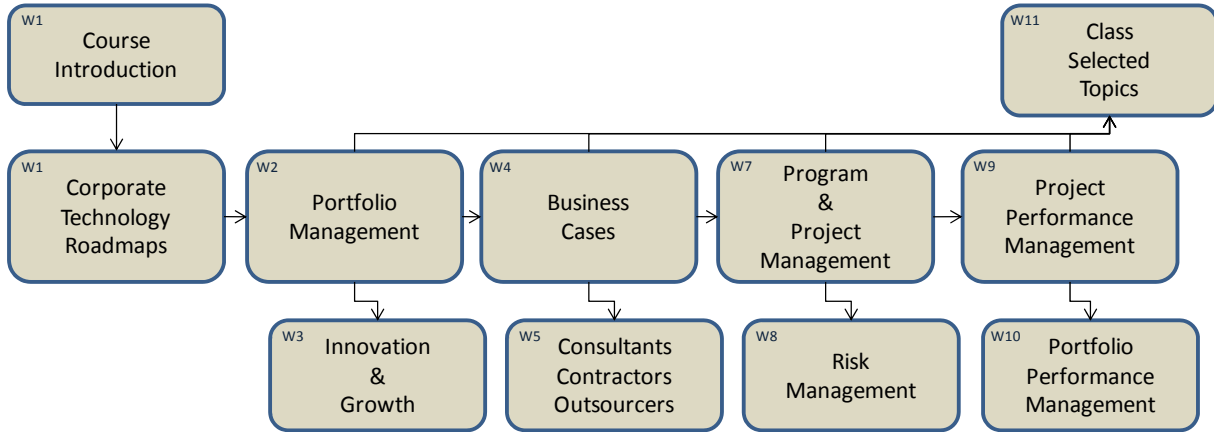
Course Description:

Synchronizing enterprise technology, innovation, marketing, and growth investments with corporate strategy is a major challenge for many firms. This course teaches the essential executive skills of portfolio, program and project management and is designed for prospective consultants, technology, marketing, product, finance, and general managers. The course incorporates real life case studies that span the product life cycle, and students work together in teams to develop case solutions. Specific cases include strategic portfolio optimization, innovation management, growth portfolio management and corporate information technology, program and project management, project risk management and performance management of portfolio, programs and projects. The emphasis of this course will be gaining a practical understand of and practice in applying professional portfolio and project management practices from the executive perspective. One case assignment will engage students to turnaround a project in trouble and use Microsoft Project to conduct what-if recovery analysis. Other portfolio and project management software tools will be introduced, including the use of Microsoft Excel in determining the performance of portfolios and projects. Senior executive speakers complement the case discussions. While not required, TECH-914 is a recommended prerequisite for students who do not have a technology background.



Course Activity Diagram

TECH443 Course Activity Network Diagram



Course Outline & Schedule

Week 1	<p><u>Introduction</u> Why project portfolio management? Portfolios, programs and projects defined</p> <p><u>Individual Assignment Intro</u></p> <p><u>Corporate Technology Roadmap</u> Corporate Systems Inventory Elements of an Enterprise System</p> <p><u>Form Teams</u></p>
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Week 2	<p><i>Individual Assignment: Corporate Systems Inventory</i></p> <p><u>Case Assignment Intro</u></p> <p><u>Portfolio Management</u> Strategic Alignment of Investments and Business Objectives</p>
Week 3	<p><i>Team Assignment: MDCM Case A</i></p> <p><u>Case Assignment Intro</u></p> <p><u>Innovation & Growth</u> Innovation & Information Technology The Innovation Radar, Three Horizon Maps, Initiative Portfolio Maps, Resourcing to Win</p>
Week 4	<p><i>Team Assignment: DuPoint Tyvek – Managing Disruptive Innovation</i></p> <p><u>Individual Assignment Intro</u></p> <p><u>Business Cases</u> Components of a Business Case Cost & Return Elements of an Information Technology Business Case Making a Business Case</p>
Week 5	<p>Individual Assignment: Business Case Inventory & Assessment</p> <p><u>Case Assignment Intro</u></p> <p><u>Consultants, Contractors & Outsourcers</u> What are the differences, Statements of Work, Requests for Proposals, Contracting Terms and Forms, Evaluating Proposals</p>
Week 6	<p><i>Team Assignment: MDCM Case B</i></p> <p><u>Case Assignment Intro</u></p> <p><u>Microsoft Project Workshop– A&D High Tech Case A Set Up</u></p>



Week 7	<p><i>Team Assignment: A&D High Tech Case A – Managing Projects for Success</i></p> <p><u>Case Assignment Intro</u></p> <p><u>Program and Project Management</u> Program and Project Management for Executives Execution Methods for Product and Technology Projects</p> <p><u>Microsoft Project Workshop– A&D High Tech Case B Set Up</u></p>
Week 8	<p><i>Team Assignment: A&D High Tech Case B – Managing Scope Change</i></p> <p><u>Case Assignment Intro</u></p> <p><u>Risk Management</u> Risks to Project Performance and Returns Risk Management Method</p>
Week 9	<p><u>Project Performance Management</u> Project Performance Baselines Project Performance Measures and Metrics Earned Value Management</p> <p><i>Team Assignment: Ariba-Med-X Case In-Class</i></p> <p>Final Project Q&A</p>
Week 10	<p><u>Portfolio Performance Management</u> Using EVM to Manage the Performance of a Portfolio of Projects In-Class Examination of the Clothes-R-Us Case</p> <p>Course Summary</p> <p>Final Project Q&A</p>
Week 11	<p>Class Selected Topics for Further Examination</p> <p>Final Team Project Assignment Due</p>

TECH 922 Student Deliverables

Individual Assignments

Two individual research assignments will be assigned which require identifying, sourcing exhibits of, and assessing the sourced exhibits of course subject topics. Submitted exhibits can be in any Microsoft Office compatible format (electronic copy). Assessment should consist of no more than a one page write up assessing the strengths and weakness of the sourced exhibit as compared to learning during the course, and be not less than 10 point Times Roman or equivalent font. An electronic copy of all materials and exhibits submitted for the individual assignments are due prior to the start of class on the



day the assignment is due as listed in the Course Outline and Schedule (above) and in the Reading List at the end of this Syllabus. Electronic submittals should be delivered via email to joe-norton@kellogg.northwestern.edu. Case questions are posted under Assignments in blackboard for this course.

Team Case Assignments

A case write-up is required for all the cases in the reading list labeled 'Case Assignment' in the syllabus reading list. Each case write-up should consist of not more than 2 pages of text and be not less than 10 point Times Roman or equivalent font. You may have up to 3 pages of additional exhibits – graphs, Excel spreadsheets, MS Project etc. An electronic copy of all materials and exhibits submitted for the team case assignments are due prior to the start of class on the day the assignment is due as listed in the Course Outline and Schedule (above) and in the Reading List at the end of this Syllabus. Electronic submittals should be delivered via email to joe-norton@kellogg.northwestern.edu. Case questions are posted under Assignments in blackboard for this course. Your team will also be required to present cases to the class. These presentations will factor into your final case assignment grade.

Case Write-Up Expectations

Please think of the two page write-up as a document you would give to your CEO and board. Also note the disclaimer given with the questions; that just answering the questions is not necessarily the 'answer' to the case. The goal of all of these cases is for you to simulate being real managers and executives, making real decisions, for real cases.

More specifically, a not so good write up would just list the questions and provide answers to each question. A good write up would be a coherent 2 page memo clearly articulating the management decision and the logic supporting the decision, along with the important management issues to consider. An excellent write-up would, in addition, articulate relevant management insights that are not obvious.

It is not necessary to include detailed background on the firm in your write up, only relevant background supporting your decision. Most important is that you make a decision – the great thing about the MBA program is that it is a place to safely learn, and the right or wrong answer is not as important as the process you used to come to the decision.

Final Case Project

As a final group assignment your team will write an original case study on portfolio, project or performance management and put together a power point debrief of the case. This case will be graded out of 100 points and is due anytime before 11:59 PM on the last (11th) class day. Electronic submittals of the final case project should be delivered via email to joe-norton@kellogg.northwestern.edu.

Peer Evaluation

In an effort to evaluate individual effort you are required to submit team member peer evaluations. The evaluation will be in a word document form uploaded to your drop box on the course info web site. The form is posted under Assignments to Blackboard Course Info. Please see the important note on the following page and the course info web site for the evaluation form.



Grading Details

All assignments must be completed. None are optional. Course grading will comprise of the following:

% Total Grade

- 25% Class participation, attendance, and peer evaluations
- 10% Individual Assignments
- 40% All group case write-ups and presentations
- 25% Final Project Case Assignment

Where possible, all assignments will be graded blind. Group assignments should have all team member names on the first page, and a group name of your choice.

While not graded, you are obligated to participate in TeamNet for peer evaluations.

Peer Evaluations

As a last assignment, you are required to complete a peer evaluation of your final project team members and a self-evaluation of your class participation. This evaluation is helpful for determining grades of students who are on the borderline between an A, B, or a C, and for assigning your class participation grade. Note that the peer evaluation is *not* anonymous. These evaluations are confidential and will only be used by the professor for grading purposes. You may request to see your individual peer evaluations in the professor's office. All team member names will be deleted so you can see anonymous peer rating numerical scores and any comments pertaining to you.

Important Note: *All those who do not submit group peer evaluations via email to joe-norton@kellogg.northwestern.edu by 11:59 PM on the day of the final class will be penalized 10% of their grade.*



Other Important Information

Groups

There are no assigned groups. Teams of 4 are recommended with 5 as a maximum number.

Text

See the following reading list for the required texts, and the articles for each class. All articles are in the Case Packet. All cases are in the course packet.

Mandatory First Class Attendance

There is no mandatory first class attendance. However, admission into the class after the first class will require the OK of an existing team to accept the new team member.

Attendance Policy

Students are expected to attend all classes. An attendance sheet will be circulated to check attendance. Prof. Norton understands that interviewing is a time consuming process for students. However, please make an effort to schedule interviews outside the class time, and let Prof. Jeffery know in advance if you will miss class for any reason. Student who miss more than two 90 min classes in the full time program, and more than one 3 hour class in the TMP program may lose a letter grade.

Classroom Etiquette

Come prepared to ask and answer questions. **Please be on time.** Beverages and small food (bagels, muffins, etc.) are OK, but please be considerate of your classmates and refrain from consuming food with noisy wrappers, odors, etc. **Laptop interconnection to the school intranet / internet during class should be used to support assigned classroom activities only. It is your class and your learning opportunity. Online distraction during class will be noted and be reflected in your classroom participation grade component. If you are lost in or wandering the internet / email / text messaging / electronic chat or any other informatics tool during class, you are not in attendance. If you distract others, you will be called on it. All Cell Phones are requested to be set to silent mode while in class.**

Midterm Evaluations

Your feedback on the class is important and you will be asked to complete a web survey for the midterm evaluation.



TECH922 Managing Portfolios and Projects

Required Texts

Fundamentals of Project Management, Third Edition, James P. Lewis, American Management Association, The Worksmart Series, 2007

Required Software

Microsoft Project. Not needed until the sixth week when a Microsoft Project Workshop will be conducted.. Microsoft online tutorials and help files are a good way to get started and learn the basics. Microsoft Project is essential for use with the A&D High Tech Cases. Free 30 day trial demo copies of Project are available for download at: <http://www.microsoft.com/office/project/prodinfo/trial.mspx>

Week 1

SUBJECT: Introduction

Part 1

No reading assignments

SUBJECT: Corporate Technology Roadmaps

Part 2

No reading assignments

Week 2

Part 1

Individual Assignment: Corporate Systems Inventory.
(Hand in Individual Assignment and Discussion)

Part 2

SUBJECT: Portfolio Management

Creating Project Plans to Focus Product Development, Steven Wheelright and Kim Clark, Harvard Business Review, March-April 1992. pp. 70-82. A great article on R&D and Product Portfolio Management

Best Practices in IT Portfolio Management, Mark Jeffery and Ingmar Leliveld, Sloan Management Review, Reprint 45309; Spring 2004, Vol. 45, No. 3, pp. 41-49.

Leveraging the New Infrastructure, Peter Weill and Marianne Broadbent, 1998
Chapter 2 and Chapter 6 are must reads.

MDCM Case A



Week 3

Part 1

Case Assignment: MDCM Case A..
(Hand in Case Assignment and Presentation)

Part 2

SUBJECT: *Innovation & Growth*

The 12 Different Ways for Companies to Innovate, Mohanbir Sawhney, Robert Wolcott and Inigo Arroniz, MIT Sloan Management Review, Spring 2006.

DuPont Tyvek Case– Managing Disruptive Innovation

Week 4

Part 1

Case Assignment: DuPont Tyvek – Managing Disruptive Innovation
(Hand in Case Assignment and Presentation)

Part 2

SUBJECT: *Business Cases*

Reading Assignment: TBD

Week 5

Part 1

Individual Assignment: Business Case Inventory and Assessment
(Hand in Individual Assignment and Discussion)

Part 2

SUBJECT: *Consultants, Contractors and Outsourcers*

MDCM Case B

Week 6

Part 1

Case Assignment: MDCM Case B
(Hand in Case Assignment and Presentation)

A&D High Tech Case A – Managing Projects for Success

*Microsoft Project Workshop: **You need to download and install the Microsoft Project 2007 software free 30 day trial from Microsoft.com prior to the class.***

Microsoft Project Workshop: Set-up A&D High Tech Case A



Week 7

Part 1

Case Assignment: A&D High Tech Case A – Managing Projects for Success
(Hand in Case Assignment and Presentation)

Part 2

SUBJECT: Program and Project Management

Fundamentals of Project Management: Developing Core Competencies to Help Outperform the Competition, Second Edition, James P. Lewis, American Management Association, The Worksmart Series, 2001, ISBN: 0-8144-7132-3

This is an easy to read short book. Read the entire book before the first class on Project Management, and especially read Chapter 8 and be familiar with the acronyms BCWS, ACWP etc.

A&D High Tech Case B – Managing Scope Change

Microsoft Project Workshop: Set-up A&D High Tech Case B

Week 8

Part 1

Case Assignment: A&D High Tech Case B – Managing Scope Change
(Hand in Case Assignment and Presentation)

Part 2

SUBJECT: Risk Management

A Framework for Identifying Software Project Risks, M Keil, P Cule, K Lyytinen, and R Schmidt, Communications of the ACM, Vol. 41, No 11. Nov. 1998.

The Mythical Man-Month – Essays on Software Engineering, Frederick P. Brooks, Addison-Wesley, 1982. Chapters 2, 11, and 14. *This is the classic text on project management. Much of modern project management methodology was developed and understood during the IBM mainframe system development projects of the 1970's. An easy must read.*

Week 9

Part 1

SUBJECT: Project Performance Management

The Earned Value Management Maturity Model, Ray, W. Stratton, Management Concepts, 2006. Chapters 1: Introduction to Earned Value Management and Chapter 2: Basic Concepts of Earned Value Management. *These two chapters provide one of the better tutorials on EVM and introduce the concept*



of the planned value of a project being all of its resource inputs applied toward creating or delivering a business or product capability.

Part 2

Ariba Med-X Case

Case Assignment: Ariba Med-X
Case Assignment In-Class Exercise

Clothes-R-Us Case – Reading Assignment Only

Week 10

Part 1

SUBJECT: *Portfolio Performance Management*
In-class examination of the Clothes-R-Us Case

Part 2

SUBJECT: *Course Summary and Wrap-up*

Week 11

Part 1

SUBJECT: *Class Selected Topics for Further Examination*

Part 2: The final case assignment is due before 11:59 PM on the day of the last (11th) class. One team member upload an electronic copy of your final project submittal to joe-norton@kellogg.northwestern.edu.

Honor Code = http://www.kellogg.northwestern.edu/stu_aff/policies/honorcode.htm

Code of Classroom Etiquette =
http://www.kellogg.northwestern.edu/stu_aff/policies/etiquette.htm