MANAGING CREATIVITY AND INNOVATION
MST 525 – Winter 2010

COURSE SUMMARY

In this class, you will learn some new ways of thinking and managing the creative and innovative processes.

You will read three books and five articles on innovation and creativity.

There will be five case studies and four mini-cases, illustrating the main ideas of the course.

The class will make frequent use of guest lecturer practitioners.

There will be four take-home assignments on the readings. These take-home assignments will require a synthesis of the key concepts from the assigned readings with actual work-related experience. The take-home assignments will not ask for a summary of the assigned readings.

The take-home assignments will be collected at the start of the second, third and fourth class. The assignment for Week 4 will be due by the end of the term.

You will be required to read the case studies and make notes, for your own use, concerning the assigned questions. No written answers are due. You will be given time in class to collaborate with other students and jointly craft and present answers to the questions.

For the mini-cases, you will be expected to answer the questions and submit written answers by email.

There will also be a creativity journal, intended to capture your experiences, thoughts, ideas, observations and other resources related to creativity and innovation. I will also provide several assignments for inclusion in the journal. Each student will submit his/her creativity journal at the end of the term.

For the final team project, students will demonstrate their design and creative abilities by redesigning a product, service or process. During the final class, each team will present their findings to the entire class.

NOTE: The dates and topics indicated for this syllabus are subject to change. Guest speakers and their topics are being finalized. Timely updates will be provided by email.
LEARNING OBJECTIVES

Upon successful completion of this course, students will be able to:

1. Understand the nature and context of creativity and innovation, including:
   - What makes you creative?
   - What makes for a creative workplace?
   - What you can do to increase your problem-solving abilities?

2. Apply idea-generation and idea adoption techniques.

3. Apply several techniques to stimulate creativity.

4. Describe and explain alternative approaches designed to help develop a creative climate, share knowledge and manage innovation.

5. Understand how innovation and creativity contributes value to new business products, services and processes.

6. Improve and demonstrate team work and time management skills

BOOKS (3)


ARTICLES (5)

Antoine de Saint Exupery, The Little Prince, Chapter 1  

Eric Von Hippel, Stefan Thomke, Mary Sonnack, Creating Breakthroughs at 3M (HBSP 99510)

Teresa M. Amabile, Constance N. Hadley, and Steven J. Kramer, Creativity Under the Gun (HBSP R0208C)

Gordon E. Moore, Cramming more components onto integrated circuits  

S-Curve: A Concept and Its Lessons (HBSP 7201BC)
CASE STUDIES (5)

There will be five cases covered in the class, as follows:

The Evolution of the Circus Industry, (ECCH 302-057-1)

Even A Clown Can Do It: Cirque du Soleil Live Entertainment, (ECCH 302-058-1)

Innovation at 3M Corporation (A) & (B), HBSP 699012/699013)

IDEO Product Development, (HBSP 600143)

Google’s Organizational Culture, (ECCH 404-016-1)

Project Platypus: Mattel’s Unconventional Toy Development Process, (ECCH 404-005-1)

MINI-CASES (4)

There will be four mini-cases, as follows:

Gladwell, Malcolm, The Bakeoff, Project Delta Aims to Create the Perfect Cookie

http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande

Gladwell, Malcolm, The Televisionary, Big Business and the Myth of the Lone Inventor
http://www.newyorker.com/archive/2002/05/27/020527crat_atlarge

Gladwell, Malcolm, Smaller, The Disposable Diaper and the Meaning of Progress

CREATIVITY JOURNAL

The creativity journal is a personal collection of your experiences, thoughts, ideas, observations and other resources related to this course and to creativity and innovation in general.

When you see a great design (whether a product, service, process or experience), make a note of it. Do the same for flawed designs or other features that “bug” you.

Before long, you’ll be looking at graphics, interiors, environments, and much more with greater acuity. And you’ll understand in a deeper way how design decisions shape our everyday lives.
In addition, the journal should include one page summaries for each of the following:

- What does it mean to innovate?
- What does it mean to manage innovation?
- List up to five innovations you have encountered in your work experience that were regarded as “home runs” and describe why you think each failed (or succeeded).
- Think about a time when you needed a particular resource (e.g., money, time, support) to see an innovation from start to finish. What obstacles did you face in securing the resource and how (if at all) did you overcome them?
- Think about a time when you needed to move an innovative project forward in an organization that required help from a “friend” or “friends.” How did you get advice for the problem? Did you go through your friend first, contact the “friend of a friend” directly, or do it some other way?

Also include the answers to the following personal questions in your Creativity Journal:

- When you face a “problem,” what is your first reaction?
- When do you feel most creative?
- How do you motivate others to be creative?
- Taking creative risks leads to successes and failures. How do you turn “failures” into learning experiences?

You will also be asked to select a creativity tool (topic to be selected in consultation with Professor Raiton) and include a summary of the tool in your journal.

Each student should create a plan for his or her creativity journal after the first class session and arrange to review the plan with Professor Raiton before the second class.

Students should add material to the journal on an on-going basis throughout the quarter.

The creativity journal is due at the end of the term.

**TAKE-HOME ASSIGNMENTS**

There will be four take-home assignments covering reading assignments due at the start of the second, third and fourth weekend. The assignment for Week 4 will be due by the end of the term. These assignments will generally be composed of essay questions synthesizing key concepts from your assigned readings with actual work-related experiences.

The assignments will *not* ask for a summary of the readings.

**FINAL TERM PROJECT**

Teams will select their topic and submit to Professor Raiton for approval prior to the second class session.

Each team will be required to present an oral presentation to the class in 15-20 minutes. These presentations are scheduled for the final weekend.
Your team must be as innovative as possible in crafting your presentation. You can do a play, make a video, organize a class activity, make a mobile, build a float, cook a meal, etc. You will be graded on the effectiveness of your oral presentation and communication, how well you work together as a team, and the creativity of your project. PowerPoint presentations are **NOT** allowed!

Student teams will be required to demonstrate their design and creative abilities. Teams will be asked to find websites, retrieve information about the topic, summarize what you find, and include examples.

On your team, research the product or service you intend to redesign during the term. For example, if you were to plan a *New Space Age Toaster*, your oral report will be on this topic. In this example, do some research on toasters. You should become experts on toasters. Then, using all this information, brainstorm to get new features and/or designs for toasters. Design the new toaster, talk about how it would be made, how it would be used, its advantages, who would buy it, etc.

As you go about your work, focus on designing an “experience,” not an “artifact.”

You will have 15-20 minutes to present during the last class. Consider making a model of your idea or some representation. Imagine that you have to sell this idea to your boss and it has to be impressive and detailed enough to get a budget for it. You are encouraged to use other artifacts to make your product/service easy for the boss to understand or visualize.

Additionally, during your presentation, discuss, explore and analyze the processes your team followed in its creative effort to redesign the product or service. How were options generated? How did the team settle on its final design? What inspired you during your design work? What creative resources did you use in arriving at your final design?

Your goals are to be so well-informed and present such a well-designed product/service that your boss will fund it and to inform the entire class of the creative steps you used and the hurdles you encountered in arriving at your final design.

You will be graded on the originality and practicality of your design and creative approach as well as how creative you are in delivering your presentation.

**EVALUATION**

The final grade for the class will be calculated as follows:

- case studies (5 x 25 pts)  125 pts
- take-home exams (4 x 25 pts)  100 pts
- mini-cases (4 x 25 pts)  100 pts
- creativity journal  100 pts
- final team project  100 pts
- Class participation and the quality of individual class contribution  100 pts

**Total Possible Points**  625 pts
DETAILED SYLLABUS

FEBRUARY 5-6, 2010

Read:

- Thinkertoys: Chapters 1-9
- The Art of Innovation: Chapters 1-3
- Managing Creativity and Innovation: Chapters 1-3
- The Little Prince, Chapter 1
- Gordon E. Moore, Cramming more components onto integrated circuits
- S-Curve: A Concept and Its Lessons (HBSP 7201BC)

In Class Exercise: Discuss The Little Prince, Chapter 1

Assignments:

- Go to the following website and complete the Myers Briggs test:
  - http://humanmetrics.com/cgi-win/Jtypes2.asp

- Review the pre-class material on Six Thinking Hats. Then go to the following website and complete the deBono Six Hats analyses:
  - http://www.stanford.edu/class/msande277/handouts/Six_Hats_Analysis.xls

- Go to the following website and complete the CREAX creativity self-assessment exercise:
  - http://www.creax.com/csa/

- Review the pre-class material on Six Thinking Hats and send Professor Raiton a description of your Myers Briggs, deBono Six Hats profile and the CREAX creativity exercise prior to the start of the first class. Do these scores accurately reflect your working style and your creative nature?

- Review the pre-class material on mind mapping and create a mind map that captures your working style. Email Professor Raiton your mindmap prior to the start of the first class session. Free mind mapping software is available at:

Videos:

- Nurturing Innovation, Judy Estrin, Stanford University

Mini-Case I: Smaller, The Disposable Diaper and the Meaning of Progress.

1. How did the technology evolve?
2. Does it fit the S-model outlined by Foster?

Case Study I: Read The Evolution of the Circus Industry (ECCH 302-057-1) and Even a Clown Can Do It: Cirque du Soleil Recreates Live Entertainment (ECCH 302-058-1) and, working individually, be prepared to discuss and support your answers to the following questions in class:

1. Was it appealing to enter the circus market in the early 1980's?
2. What assumptions did traditional circus owners/managers make about the success factors for a circus?
3. What value were they providing?
4. What other forms of entertainment did they see as competitors?
5. How did Cirque du Soleil challenge assumptions of the traditional circus?
6. What aspects of the traditional circus did Cirque du Soleil continue, which did they discontinue, and what new innovations did they add?

In-Class Exercise and Video
A History of Blue Ocean Strategic Moves: Is There a Pattern?

Take-Home Assignments:
Tinkertoys, Chapters 1-9
FEBRUARY 12-13, 2010

Read:

- *Thinkertoys*: Chapters 10-16
- *The Art of Innovation*: Chapters 4-6
- *Managing Creativity and Innovation*: Chapters 4-8
- *Creating Breakthroughs at 3M* (HBSP 99510)

Assignment

Complete the following short brain tests at:


In-Class: Build a Wallet

Videos:

- Breakthrough Products and Services – Lead User Studies, Eric Von Hippel, MIT
- The Deep Dive – IDEO

Mini-Case II: The Bakeoff, Project Delta Aims to Create the Perfect Cookie

1. How does team organization impact the innovation process?
2. How did the groups in the Bakeoff differ their approach to innovation and development?
3. Under what circumstances would you prefer each type of team?

Case Study II: Read *Innovation at 3M Corporation (A) & (B)* (HBSP 699012/699013) and, working as a team, be prepared to discuss and support the answers to the following questions in class.

1. How has 3M’s innovation process evolved since the company was founded? Why, if at all, does 3M, known as a “hothouse” of innovation, need to regain its historic closeness to the customer?
2. How does the Lead User research process differ from and complement other traditional research methods?
3. Has the Medical-Surgical team applied the Lead User research process successfully? Why or why not?
4. What should the Medical-Surgical Lead User team recommend to Dunlop: the three new product concepts or a new business strategy? What are the risks to the new Lead User process at 3M? What are the risks to the Medical-Surgical business unit?

Case Study III: Read *IDEO Product Development* (HBSP 600143) and, working as a team, be prepared to discuss and support the answers to following questions in class.

1. How would you characterize IDEO’s process, organization, culture, and management?
2. Decision point: should IDEO accept the Visor project as is (on a dramatically reduced schedule?) Should they try to persuade Handspring’s management to change its aggressive launch schedule? Or should they simply decline the project? In your discussions, please consider the IDEO and Handspring perspectives.

Take-Home Assignment:

- *Managing Creativity and Innovation*, Chapters 1-8
- *Thinkertoys*, Chapters 10-16
FEBRUARY 26-27, 2010

Read:

*Thinkertoys:* Chapters 17-21  
*The Art of Innovation:* Chapters 7-9

Videos:

Fostering Innovation:  11 ½ Weird Ideas That Work, Robert L. Sutton, Stanford University  
Accessing Your Creativity: Overcoming the Challenges of Time and Stress, Michael L. Ray, Stanford University

In-Class:  Entrepreneurial Week Exercise

Mini-Case III:  The Checklist, If Something So Simple Can Transform Intensive Care, What Else Can It Do?

1. Pilots Use Checklists. Doctors Don’t. Why Not?
2. Contrast these two statements: “Beware of the tyranny of making small changes to small things. Rather, make BIG changes to BIG things.” By Roger Enrico, Former Chairman, PepsiCo; Beware of the tyranny of making small changes to small things. Rather, make BIG changes to BIG things…using *Small, Almost Invisible Levers with Big Systemic Impact,*” Tom Peters

Case Study IV: Read Google’s Organizational Culture (ECCH 404-016-1) and, working as a team, be prepared to discuss and support the answers to the following questions in class.

1. Analysts felt that Google was an example of a perfect blend of technology and culture. Analyze the organizational culture at Google and how it contributed to the success of the company.
2. Google’s recruitment process was criticized for placing more emphasis on grades and educational background than on experience. Analyze the recruitment process at Google and Comment on the same. Do you think Google should give emphasis to experience also? Justify your stand.
3. Analyze the negative aspects of Google’s culture. Do you think Google needs to change its organizational culture? Why or why not?

Case Study V: Read Project Platypus: Mattel’s Unconventional Toy Development Process (ECCH 404-005-1) and, working as a team, be prepared to discuss and support the answers to the following questions in class.

1. Describe Mattel’s process for innovation?
2. What do you find unique in Mattel’s application of innovation tools?

Take-Home Assignment:

*Thinkertoys,* Chapters 17-21
MARCH 19-20, 2010

Read:

- *Thinkertoys*: Chapters 22-33
- *The Art of Innovation*: Chapters 10-15
- *Creativity Under the Gun* (HBSP R0208C)

In-Class:  T-Shirt Exercise

Mini-Case IV:  The Televisionary, Big Business and the Myth of the Lone Inventor

1. Why did the TV opportunity that Gladwell describes in The Televisionary lead to failed entrepreneurship?

Final Team Reports