



GMGT 7370
MANAGING INNOVATION
Summer 2009

INSTRUCTOR

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COURSE DESCRIPTION

An examination of organizational design characteristics in the context of a competitive international perspective. Emphasis is on organizational and technological innovation to facilitate the development of new products or processes or to implement change in existing products or processes. Topics covered include Canadian experience and policy, facilitators and inhibitors in the creative process, diffusion of innovations, and the aims of the patent process.

COURSE OBJECTIVE

At the completion of this course students will be able to analyze and communicate the importance and implications of emerging technologies to management based on an understanding of: (1) technological change and how it affects competition between new and existing firms; (2) strategies for firms competing in industries that are heavily influenced by emerging technology; (3) technology development and intellectual property.

GRADING

To enhance the learning experience, all students are expected to participate in class discussion and the in-class case exercises. Attendance in class sessions is an important component of this grade. Quantity and quality of questions, comments, contributions and insights offered during class is important to the success of the course and you will be graded for your overall engagement and participation. Excessive absences will significantly impact your class participation grade.

Component	Marks
Class and Case Discussions	20
Assignment	20
Case Midterm and Final Exams (2)	60
Total	100

Final grades will be assigned as follows;

Cumulative Marks	Grade	GPA	Performance
90-100	A+	4.5	Excellent
80-89	A	4.0	Very Good
75-79	B+	3.5	Good
70-74	B	3.0	Satisfactory
65-69	C+	2.5	Marginal
60-64	C	2.0	Unsatisfactory
50-59	D	1.0	Unsatisfactory
Below 50	F	0.0	Unsatisfactory

In fairness to others, late work will be penalized 10% per day overdue.

Class and Case Discussions:

Participants are expected to engage actively in the discussion of concepts and frameworks. There are approximately 30 hours of lecture discussion, which is sufficient for everyone to speak up for a minimum of 30 minutes.

Assignments:

There is one written assignment worth 20%. Submissions should be concise, to the point, and should be single spaced.

Assignment:

Read the New Yorker article “The Flash of Genius” by John Seabrook AND watch the movie ‘Flash of Genius’ with Greg Kinnear about Bob Kearns and his battle against the Ford Motor Company over the invention and marketing of intermittent wipers. Then, write an essay evaluating what Bob did in the development and marketing of his invention, what he might have done differently, and what you think his motivations might have been.

Write a paper of no more than five pages on this topic. **Due date: April 30th, 2009**

Include, at minimum, answers to these questions:

- With the benefit of hindsight, explain at least two things that Bob did correctly and two things that he did not do correctly in developing and marketing his invention.
- Why do you think Bob wanted to manufacture the device himself? How reasonable was this idea? Provide two examples of things that were in his favour and two examples of what wasn't in his favour.
- Provide two reasons for why you think Ford hadn't invented the wiper controller itself.
- With the benefit of hindsight, explain two different scenarios that Bob might have followed that could have resulted in a successful outcome without litigation.

Case Exams:

There are two in-class case exams. The first is about midway through the course and the second is on the final day of class. The case exam will be team-based. Students will be provided with a case study at least 24 hours prior to the class and will be asked to provide a concise analysis of the issues and problems in the case as well as answering specific questions about the case. Each exam is worth 30 marks.

You will have the full class period to work on the exam.

COURSE SCHEDULE

Date	Topic and Readings
Tuesday, April 7	Introduction: Invention, Innovation, and Competitive Advantage <u>Readings:</u> <ul style="list-style-type: none">• Chapter 1, White and Bruton, "Management of Technology and Innovation"• Schumpeter, J. (1943), "Creative Destruction" Case Study: (<i>opening case study</i>) Rosenbloom and Cusumano (1987), "Technological Pioneering and Competitive Advantage: The Birth of the VCR Industry," California Management Review. <u>Questions To Consider:</u> <ul style="list-style-type: none">• What is the value of technological innovation?• What is "creative destruction", and why does it happen?• List and explain the reasons why you think Betamax failed.
Thursday, April 9	How Does Technology Evolve? <u>Readings:</u> <ul style="list-style-type: none">• Utterback, James (1994), "Dominant Designs and the Survival of Firms," Chapter 2 in Mastering the Dynamics of Innovation, Harvard Business School Press, pp. 23-55 and 79-102.• Foster R. (1986), "The S-Curve: A New Forecasting Tool," Chapter 4 in Innovation: The Attacker's Advantage, Summit Books, Simon and Schuster: NY, pp. 88-111. <u>Questions To Consider:</u> <ul style="list-style-type: none">• What determines the timing of technological revolutions? Can they be predicted?• When is an S-curve analysis helpful, and how should it be used?• What is a dominant design? Can you think of 2-3 other examples of products that followed a dominant design process similar to the examples given in the Utterback chapter?

Date	Topic and Readings
<p>Tuesday, April 14</p>	<p>Patterns of Technological Change</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Introduction and Chapter 1, Christensen, ‘Innovator’s Dilemma’ <p>Case Study: Netflix</p> <p>Analysis: SWOT</p> <p><u>Questions To Consider:</u></p> <ul style="list-style-type: none"> • Was mail order video rental an example of a disruptive technology? • Was online video rental subscription an example of a disruptive technology? • Were either the mail order or online businesses “strategic” to Blockbuster? Why or why not? • Should a company obsolete itself before a competitor does it to them? • What are Hastings’ options and how should he proceed?
<p>Thursday, April 16</p>	<p>Introducing Emerging Technologies to New Markets</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Hargadon and Douglas “When Innovations Meet Institutions: Edison and the Design of the Electric Light” • Moore, G. (1999) Crossing the Chasm, Harper Collins: NY, pp. 12-21, 29-40. <p><u>Questions To Consider:</u></p> <ul style="list-style-type: none"> • What is the difference between an “S-curve” and the “Chasm”? How are they different to manage? • Is it true that all emerging technologies are resisted? If so, what are the reasons for this? Can you think of exceptions to this ‘rule’. • What solutions are available for overcoming the problems cited by these authors?

Date	Topic and Readings
Tuesday, April 21	<p>The Marketing Decision</p> <p>Case Study: Segway Human Transporter</p> <p>Analysis: SWOT</p> <p><u>Questions To Consider:</u></p> <ul style="list-style-type: none"> • Should Kamen go ahead with commercializing this invention, and what options are available for moving from invention to commercialization? • In your opinion, what is the best option for commercialization, and why? • Which customers and applications represent the greatest market potential for the Segway HT? • What are the most critical issues that will influence the commercial success of the Segway HT? • What should Kamen's priorities be over the next 12 months?
Thursday, April 23	<p>In-class case midterm exam</p> <p>Case: TBA</p> <p>The case study will be provided 24 hours in advance of the class. This is a team-based assignment, students will work on the case study in groups.</p>
Tuesday, April 28	<p>Intellectual Property and Technology Patents</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Markus Reitzig, "Strategic Management of Intellectual Property", MIT Sloan Management Review; Spring 2004, Vol. 45 Issue 3, p35-41 <p>Case Study #1: The Flash of Genius (<i>before the break</i>)</p> <p>Case Study 2: TBA (<i>after the break</i>)</p> <p><u>Questions To Consider:</u></p> <ul style="list-style-type: none"> • What are the advantages and disadvantages of patents, trademarks and copyrights? Do they suppress technological innovation? • When are they effective, and how should you manage them? • What protection did patents provide for Bob Kearns?

<p>Thursday, April 30</p>	<p>Private Versus Public Technological Development: What Role Should Government Play?</p> <p><u>Guest Lecturer: Steve James</u></p> <p><u>Readings:</u> Stuart Leslie , “The Biggest ‘Angel’ of Them All: The Military and the Making of Silicon Valley”, Chapter 3 in <i>Understanding Silicon Valley: The Anatomy of an Entrepreneurial Region</i></p> <p><u>Questions To Consider:</u> Should government become involved in developing emerging technology? If so, when should they be involved and what should their role be?</p>
<p>Tuesday, May 5</p>	<p>Entrepreneurial Networks & Closing Case</p> <p>Case Study #1: Heidi Roizen (<i>before break</i>)</p> <p>Closing Case Study: Eli Lilly and Company: Innovation in Diabetes Care (<i>after break</i>)</p> <p><u>Questions To Consider:</u></p> <p>Heidi Roizen:</p> <ul style="list-style-type: none"> • Roizen maintains different types of interpersonal networks, some of which overlap, such a ‘friend’ network and a ‘past colleague’ network. Can you tell what each network seems best able to provide; if so, what is it? • What specific steps did Roizen take to develop her network? To maintain it? • How does your own network compare with Roizen’s? To what extent are the differences due to personal preferences and style? • Come prepared to share at least one of your own examples of using/benefiting from social networks in an innovation, business development, or entrepreneurial context. <p>Eli Lilly and Company: Innovation in Diabetes Care Analysis: SWOT</p> <ul style="list-style-type: none"> • Going back in history, what mistakes did Lilly make in its product development efforts? • Why were those mistakes made? • As you analyze the lessons Lilly needs to have learning from its past experiences, apply those lessons to the innovation projects on Larry Ellingson’s current agenda. Is he pursuing the right opportunities? What should he do to ensure the success of those efforts?

Thursday, May 7	In-class Case Final Exam Case: TBA The case study will be provided 24 hours in advance of the class. This is a team-based assignment, students will work on the case study in groups assigned at the exam.
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DISABLED STUDENTS

Students are encouraged to contact Disability Services at 474-6213 or the instructor should special arrangements need to be made to meet course requirements.



ACADEMIC INTEGRITY

I.H. Asper School of Business—Faculty of Management, The University of Manitoba

It is critical to the reputation of the I. H. Asper School of Business and of our degrees that everyone associated with our faculty behaves with the highest academic integrity. As the faculty that helps create business and government leaders, we have a special obligation to ensure that our ethical standards are beyond reproach. Any dishonesty in our academic transactions violates this trust. The University of Manitoba Graduate Calendar addresses the issue of academic dishonesty under the heading “Plagiarism and Cheating.” Specifically, acts of academic dishonesty include, but are not limited to:

- using the exact words of a published or unpublished author without quotation marks and without referencing the source of these words
- duplicating a table, graph or diagram, in whole or in part, without referencing the source
- paraphrasing the conceptual framework, research design, interpretation, or any other ideas of another person, whether written or verbal (e.g., personal communications, ideas from a verbal presentation) without referencing the source
- copying the answers of another student in any test, examination, or take-home assignment
- providing answers to another student in any test, examination, or take-home assignment
- taking any unauthorized materials into an examination or term test (crib notes)
- impersonating another student or allowing another person to impersonate oneself for the purpose of submitting academic work or writing any test or examination
- stealing or mutilating library materials
- accessing tests prior to the time and date of the sitting
- changing name or answer(s) on a test after that test has been graded and returned
- submitting the same paper or portions thereof for more than one assignment, without discussions with the instructors involved.

Many courses in the I. H. Asper School of Business require group projects. Students should be aware that group projects are subject to the same rules regarding academic dishonesty. Because of the unique nature of group projects, all group members should exercise special care to insure that the group project does not violate the policy on Academic Integrity. Should a violation occur, group members are jointly accountable unless the violation can be attributed to a specific individual(s).

Some courses, while not requiring group projects, encourage students to work together in groups (or at least do not prohibit it) before submitting individual assignments. Students are encouraged to discuss this issue as it related to academic integrity with their instructor to avoid violating this policy.

In the I. H. Asper School of Business, all suspected cases of academic dishonesty are passed to the Dean’s office in order to ensure consistency of treatment.



MEDICAL ABSENTEEISM FORM

I.H. Asper School of Business—Faculty of Management, The University of Manitoba

STUDENT IDENTIFICATION: (PLEASE PRINT CLEARLY)

_____	_____	_____	_____
Last Name	First Name	Middle Initial	U of M Student Identification Number
_____	_____		
Course #	Instructor Name		
_____	_____		
Student's Signature	Date		

TO BE COMPLETED BY THE ATTENDING PHYSICIAN: (after the above section is completed) (PLEASE PRINT CLEARLY)

_____	_____	_____
Physician's Last Name	Physician's First Name	Middle Initial
_____	_____	_____
Street Address	City, Province	Postal Code
_____	_____	
Telephone Number	Fax Number	

To the attention of the physician: Your evaluation of the student's condition is being used for the purpose of determining whether or not the student has a valid reason to miss an important exam or assignment. Your professional evaluation is necessary to ensure that only valid cases are excused.

I certify that the nature of the student's condition is severe enough to prevent the student from taking an exam or completing an assignment. If requested, my associates or I will verify for the above named instructor/administrator that this information is accurate.

The student's condition will likely span the following dates:

_____ until _____
(Indicate start date) (Indicate end date)

_____ Date
Physician's Signature

NOTES TO PHYSICIAN:

- Please make a note in the student/patient's file indicating that the student has given the above named instructor/administrator permission to verify with you, your staff, or your colleagues, that the information contained on this form is correct. Thank you for your professional evaluation of this student's condition.
- **PLEASE ATTACH THIS FORM TO YOUR REGULAR OFFICE STATIONERY THAT INDICATES THE STUDENT VISITED YOUR OFFICE.**

NOTES TO STUDENT:

- The use of this form is at the option of the student. However, in order to obtain an excused absence for an assignment or exam the student must obtain a doctor's certification that the student's condition is severe enough to prevent the student from taking the exam or completing the assignment.
- It is **NOT SUFFICIENT** to provide a note that only indicates the student visited the doctor's office.



**ASPER
MBA**

FACULTY BIOGRAPHY

I.H. Asper School of Business—Faculty of Management, The University of Manitoba

Dr. Chris Street
Department of Accounting and Finance
I.H. Asper School of Business

Chris Street is an Assistant Professor in the Accounting and Finance department at the I.H. Asper School of Business. Dr. Street currently teaches in the school's Information Systems program as well as teaching in the areas of Technology Strategy and Technology Entrepreneurship. Dr. Street's professional background was as a Software Developer in the utility and financial services industries and he is currently involved in a research program on the topic of technology strategy with a focus on small business development.