

**Peter F. Drucker and Masatoshi Ito  
Graduate School of Management  
Claremont Graduate University**

**MGT 359  
Technology Innovation & Entrepreneurship  
Summer 2009<sup>1</sup>**

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## **Course Description**

This course is designed to explore the creation of new companies based on technological innovations. No scientific background is required of students. The special challenges facing entrepreneurs who base their new enterprises on novel technologies will be examined in this course. Many ideas for technology-based entrepreneurial opportunities arise from university research laboratories, and the challenges of identifying, evaluating and then transferring the technology from the university setting to the commercial sector will be explored. Likewise, technology innovations are generally protected by patents, and the process of filing patent applications and obtaining issued patents will be explained. Technology companies face important strategic decisions in building and defending their patent portfolios, and students will begin to appreciate the role of these decisions in shaping the company and creating competitive advantage. Business plans will be examined, both to understand their basic structure, as well as to appreciate their utility as a risk management tool. The basics of venture capital financing will be explained along with other financing options that are available to technology-based companies. Venture financing impacts the growth rate and maturation of a young technology company, and this course will examine the challenges faced by companies needing to build value and satisfy investor desires for liquidity. The course will provide case studies and opportunities for evaluating technology-based business opportunities.

## **Learning Objectives**

Following the successful completion of this course, students should be able to:

- Understand the basics of technological entrepreneurship – how and when technology, money, people and the right market environment can create new business opportunities.
- Evaluate the basic features of a technologically-based business opportunity.
- Converse knowledgeably with entrepreneurs and explore potential roles in technology startup companies.

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<sup>1</sup> Appreciation and acknowledgements to Professor J. Darroch of the Peter F. Drucker and Masatoshi Ito Graduate School of Management for much of the formal structure and grading norms used in this course description.

**Class Meeting Time:** Thursdays 4-6:50 p.m., May 18- July 11

**Course Readings:** The MGT-359 course reading package is available at Huntley Bookstore.

**Course Requirements:** Assessment comprises two components. These are outlined in more detail on the following pages.

Participation	40%
Written assignments	60%

### **Prior to the first class**

**Prepare a brief biography of your educational and career background prior to attending the first entrepreneurship class** (and give this to me at the start of the first class). The biography should be about 2 pages long and cover:

- Your educational and career background, including your scientific or technical background, if any;
- The reasons for your interest in entrepreneurship, and whether you specifically have an interest in technical entrepreneurship;
- What you expect to get out of this course.

I will encourage you to share your background and opinions with others during the class and will collect your biographies at the end of class.

### **Class Meetings**

Preparation and participation are critical to your success in the course. You will be graded on the quality (not necessarily quantity) of your contribution.

Absences: \*\*\*If you miss more than **one** class, you will be marked as absent for the entire course (NO EXCEPTIONS)\*\*\*

Preparation: I expect that you will come to the class having read the assigned background reading(s) and already thought through and analyzed the case study. This way, we can devote the bulk of the class time to thinking about and responding to each other's analyses of the cases and only the necessary minimum to getting the facts out.

Sign-in and bring name cards to class: Please sign yourself in prior to class; this is the attendance record. You should bring your name cards to class, and make them visible to me.

Classroom etiquette: When in class, mobile phones and pagers must be switched off. The use of laptops during class is strongly discouraged.

### **Class participation – 40% of grade**

I encourage active student participation in class, and participation is an important part of determining your grade in this course.

General criteria for class participation grading include the following:

- Prompt attendance
- Brings name card to class

- Regular and substantive participation
- Familiarity with the required pre-readings
- Asks helpful, insightful and relevant questions during class
- Volunteers comments, proactively responds to open questions
- Thoughtful and courteous interactions with fellow students
- Offers questions or comments via email or posted to the Sakai website
- Maintains a respectful classroom atmosphere, which includes appropriate use of computers and silencing cell phones

### **Characteristics**

- A and A- Comes to class prepared. Contributes readily to the conversation but does not dominate it. Makes thoughtful contributions that advance the conversation. Shows interest in and respect for others' points of view. Participates actively in small groups. Makes a genuine effort to assist colleague presenters by being engaged and involved in presentations.
- B+ and B Comes to class prepared and makes thoughtful comments when called upon. Contributes occasionally without prompting. Shows interest in and respect for others' points of views. Participates actively in small groups.
- B- and C+ Participates in discussion but in a problematic way. Such students may talk too much, make rambling or tangential contributions, bluff their way, or otherwise dominate discussions, not acknowledging cues of annoyance from other students or the professor.
- C and C- Comes to class prepared but does not voluntarily contribute to discussions and gives only minimal answers when called upon. However, does show interest in the discussion, listens attentively and takes notes.
- F Seems on the margin in class and may have a negative impact on the participation of others. Often does not participate because has not read the material in advance. May be disruptive or radiate negative energy via hostile or bored body language. May be overtly rude.

The Instructor's role: My role in the class is to facilitate discussion. In part, I serve as a clarifier and sometimes an intensive questioner in order to help you present and develop your ideas. One of my primary roles is to manage the class process and to assure that we collectively reach a clear understanding of the issue at hand.

### **Written Assignments – 60% of grade**

There are 5 written assignments, which should be handed in at the start of class on the date due. All written assignments should be 12pt, 1.5 spacing, and should have a cover page with your name and email address. More information on Assignment #2-5 will be given in class.

Assignment #1 – your biography – as described above, a 2-page document providing an introduction to yourself, and your motivation for taking this course. This will be graded based on clarity in writing, carefulness of preparation, thoughtfulness, and creating an interesting case to describe your motivation for taking this entrepreneurship course. See above (page 2 - Prior to the first class) for additional information. (5% of grade)

Assignment #2 – Write a memo analyzing why Bernstein should or should not join ILinc. (2p. maximum) (10% of grade)

Assignment #3 – Write a memo assessing university technology & IP positions. This will be graded on evidence of ability to identify university technology and relevant US Patents or US or PCT Patent Applications related to the technology, ability to summarize the patent status of an invention, and use publicly available tools to assess patent status. (2p. maximum) (15% of grade)

Assignment #4 – Venture Capital Problem set. This will be graded on evidence of ability to correctly construct capitalization tables, calculate ownership percentages in simple venture financing rounds, with limited preference options. (15% of grade)

Assignment #5 – Note on Trexel. (2p. maximum) (15%)

Extensions on written assignments. **No extensions on written assignments will be granted,** as it is not fair to your classmates or to me. If you fail to turn in one assignment on time, the next assignment due will be increased in percentage value. If you fail to turn in Assignment #5 on time, Assignment #4 will count double. If you fail to turn in two or more assignments on time, you will receive no credit for those assignments.

### **Appealing your grades**

You will receive a grade for participation in each class. Individual class participation grades cannot be appealed, but they will be discussed. If you decide to appeal a grade on a written assignment, please write a paragraph explaining why you believe your grade should be higher. Then, submit the paragraph, along with your graded assignment and the feedback sheet by a date we will agree upon in class. I will endeavour to return your re-graded assignment back a week later.

### **Academic Honesty**

You should be familiar with the University policy regarding academic honesty. The policy can be found at <http://www.cgu.edu/handbook/Academic%20Honesty.doc>. You should also consult the Writing Center's guidelines as to what constitutes plagiarism (<http://writecenter.cgu.edu/students/plagiarism.html>).

I **do not** tolerate academic dishonesty and will actively monitor students' work to ensure dishonesty does not occur. A student who violates the University policy on academic honesty will get a minimum of zero for the piece of assessment for which dishonesty is established and I will ask the MBA Director to put a note on that student's file.

It is very important that you correctly reference everything you use. Here is a link to one of many examples of APA referencing (<http://www.lib.usm.edu/~instruct/guides/apa.html>). You might prefer to use the Harvard style of referencing (see: <http://www.shef.ac.uk/library/libdocs/hsl-dvc1.html> as an example of a style guide). I do not mind which style you use as long as your referencing style is consistent.

## Grading

The following reflects the grading system used to mark your work.

	<b>Characteristics of the grade</b>
A+	Truly exceptional performance, rarely given.
A	Performance significantly above expected levels.
A-	Performance moderately above expected levels.
B+	Expected level of performance.
B	Performance moderately below the expected level.
B-	Performance significantly below the expected level.
C+	Passing but marginally acceptable performance.
C	Unacceptably poor performance.
C-	Very poor performance.

## Course Schedule

Week #	Date	Topic	Readings	Assignment	Key Learning Objectives
1	21-May-09	Entrepreneurship & Intrapreneurship - Why it matters. Case Studies of Entrepreneurs	9-805-087 ( <i>Stan Lapidus: Profile of a Medical Entrepreneur</i> )	Written Assignment #1: ( <b>due start of class 22-May-2009</b> ) - Personal Statement	Identify with the range of entrepreneurial activities; set the context for the remainder of the course
2	28-May-09	Technology Transfer - the University Industry Interface; Explore the role of the university in research, the rights and responsibilities of university inventors. The "Who?, Where?, When?, How? and How Much?" of sourcing university technologies	9-807-124 (Tech Transfer) BAB111 <i>ILinc: Case Study of a Startup</i>	Written Assignment #2: ( <b>due start of class:</b> Write a memo analyzing why Bernstein should or should not join IInc. 2p	<ul style="list-style-type: none"> <li>*Be ablt to find the sources of Innovation.</li> <li>*Strategies for evaluating technology for the non-technologist</li> <li>*Understand the Bayh-Dole Act 1980 and its impact on the university's role in commercializing technology</li> <li>*Appreciate the impact of deal terms on the viability of the enterprise</li> </ul>
3	4-Jun-09	Protecting technology and inventions - the US and global patenting process; trademarks, trade secrets. "Freedom to Operate"...or not (and what to do about it)	9-704-493 <i>IP and Strategy</i>		Understand the basics of the patent process and strategies for protecting inventions. Appreciate the impact of intellectual property on the technology-based startup.
4	11-Jun-09	The Business Plan - What is it? What does it look like? Business planning as risk management - technological risks, market risks, regulatory risks, execution risks. Speed Business Plan Exercise	<ul style="list-style-type: none"> <li>• HBS-9-897-101 <i>Some Thoughts on Business Plans</i></li> <li>• 9-807-040 <i>Calloway Laboratory: Pee for Profit</i></li> </ul>	Written Assignment #3: Write a memo identifying university technology and assessing the IP position, 2p ( <b>due start of class 12-June-2009</b> )	Become familiar with a business plan's contents
5	25-Jun-09	Financing the start-up organization: venture capital, valuations, termsheets, exits	<ul style="list-style-type: none"> <li>• HBS 9-804-042 <i>The Basic Benture Capital Formula</i></li> <li>• HBS 9-807-036 <i>The Venture Capital Valuation Problem Set</i></li> <li>• E126 Tenex Greehouse Ventures</li> </ul>	Written Assignment #4: Venture Capital Method Problem Set, questions #1, 2, 3 ( <b>due start of class, 26-June-2009</b> )	Appreciate the range or sources of financing; the implications of types of financings on the enterprise. Students understand the basics of, options to, and sources of equity financing; where venture capital is found, what are the characteristics of VC money, types of investments, types of transactions.

Week #	Date	Topic	Readings	Assignment	Key Learning Objectives
6	18-Jun-09	Market and Product assessment. "Too many technology start-ups develop a solution for which there are no customers." – Scott Ryles, Managing Director, Global Technology Investment Banking, Merrill Lynch. "What can go wrong?" exercise	E-222 FHP Wireless		Taking the cold, hard look. Finding the customers, identifying their "pain", providing a real solution.
7	2-Jul-09	Building the organization – from startup to growing company; changes and challenges the organization faces from startup to liquidity events.	<ul style="list-style-type: none"> <li>• "The New Venture" (Ch 15: pp 188-206) in <i>Innovation &amp; Entrepreneurship</i>, Peter F. Drucker.</li> <li>• HBS 9-899-101 <i>Trexel</i></li> </ul>	Written Assignment #5: Note on Trexel ( <b>due start of class, 10-July-2009</b> )	Appreciate the challenges of the startup organization; how the organization will be stressed as it grows.
8	9-Jul-09	Wrap-up – evaluating business cases	Business Plan assessment: LicAway Lollipops		Evaluating a business opportunity.