

MGT 6831
Technological Innovation: Generating Economic Results (TI:GER®)
Seminar on the Fundamentals of Innovation II
Spring 2009 Syllabus

Faculty & Staff:

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Meeting Time: Tuesdays, 4:35 – 6:55 pm

Locations: a) **Tech Square**, College of Management – Room 221
b) **Emory Law** – Room 1C

Required Readings: MGT 6831/ Course pack will be sold by members of the Honorary Accounting Organization during the first class on January 6. Price TBD. Cash and checks are accepted (checks should be made payable to HOA). No credit cards.

Additional readings may be distributed in class.

Course Overview

Innovation and technological change play an important role in strengthening our world's economy. The preface of a recently published text on the topic suggests that innovation and technological change allow some individuals to seek opportunity where others see insurmountable problems.

The Seminar on the Fundamentals of Innovation II is the second of a two-course sequence focusing on the concepts needed to understand the technology commercialization process. In the Spring semester, the course focuses on:

- 1) Making the new venture or licensing decision;
- 2) Building on the Industry Analysis and Intellectual Property assignments from Fall semester by developing market strategies;
- 3) Developing valuation strategies and understanding the impact of legal decisions in business structuring;
- 4) Building rapport in multidisciplinary teams; and
- 5) Writing a commercialization plan.

Students are also encouraged to “keep current” on general topics of innovation and technology commercialization. Excellent business-oriented web sites that provide free content (sometimes just excerpts of articles are free) that are helpful in individual development, class preparation, and team activities include Forbes at www.forbes.com and Fortune at www.fortune.com, the Kauffman Foundation at www.kauffman.org, Business Week at www.businessweek.com, the Wall Street Journal at <http://online.wsj.com/home/us> and www.researchoninnovation.org.

A library of relevant books on business startup and technology innovation and commercialization are housed in the TI:GER lab and available for check-out. See Jenn Smith for more information.

Class Activities and Assignments

TI:GER faculty **will meet with any students who received lower than expected evaluations from their team members** on the Fall semester team evaluation exercise to discuss improvement.

Team Meetings

Each TI:GER team will meet with TI:GER faculty during the weeks of January 20 and March 2 to give an update on team activities and to receive any needed direction on specific team activities. These meetings will be conducted on either the Tech or Emory campus. Teams that do not meet as scheduled will be penalized in terms of the overall course evaluation.

Mentors

Teams are expected to meet with their mentor(s) 1-2 times during the semester, depending on needs and the mentors' availability.

Written Discussion Questions – Due 1/13, 1/20, 1/27, 2/3 – hard copy in class

Please provide a 2-3 page double-spaced document on the classes with written discussion questions noted in the assignment column. Hard copies **are due at the beginning of class.** Questions will be posted at least one week in advance on Lexis/Nexis under "Assignments." If you have an excused absence you can email the write-up in advance of the class time with no penalty.

Customer/Industry Interview Assignment – Due 3/3 5:00 PM

This assignment involves interviews with potential customers, industry experts, etc. who can contribute to your understanding of the market, customer needs, and competitive advantage. Additional information will be provided in class.

Lecture Series write-ups - Due 4/22 – 5:00 PM.

You need to attend two outside lectures (webcasts can be substituted for ONE with advance faculty approval). These write-ups should be a one-page summary of what you heard and what you learned. These lectures could be part of the Georgia Tech Impact Series, or Georgia Tech Public Policy Series, Emory TechLaw[®] Series or other lectures on relevant commercialization topics.

Commercialization Plan – Due 4/20 5:00 pm

This is the final project for your team's product or service. More information will be provided in class and during faculty team meetings. Teams will also present the plan verbally and outside mentors and/or industry advisors will be invited to evaluate.

Team Evaluation – Due 4/27 5:00 pm

You will evaluate your fellow team members and they will receive grades based on your point allocations.

Course Evaluation

Assignments will be evaluated as follows:

<u>Basis</u>	<u>% of Grade</u>
Commercialization Plan	40%
Plan Presentation	15%
Customer/Industry Interview Report	10%
Team Evaluation	10%
Attendance/Participation	10%
Write-ups	10%
2 Outside Lectures write-ups	5%

Class Attendance and Participation

In-class discussions and participation are an integral part of the TI:GER curriculum and account for 10% of the final grade. The participation grade will be based on overall class attendance (including timeliness), quality of participation in class discussions, team meetings preparedness, and attendance at other required meetings or events.

Class attendance will be taken weekly and is an important part of the participation grade. Because this three-credit class meets only once per week, missing a class means missing an entire week of information. We understand that job interview conflicts or illness can impact attendance. **Any student needing to miss a class must notify both Professors Berbari and Rector in advance.** After one class absence, students will be expected to ask in advance for an excused absence, without which they will receive a reduction to their course grade appropriate to the number of unexcused absences.

Late assignments will lose 10% of the total points available for the assignment for every day the assignment is late (i.e. 10% will be deducted if 1 day late, 20% will be deducted if two days late, etc.)

Academy Honesty and Student Rights

This course will follow the guidelines established by Georgia Tech's honor code and student handbook and the Professional Conduct Code for the Emory University School of Law. All sources of information utilized in any of the course assignments are to be appropriately acknowledged. Please keep in mind that academic dishonesty includes (a) cheating, (b) fabrication and falsifications, (c) multiple submissions, (d) plagiarism, and (e) complicity in academy dishonesty.

Date	Time	Event/Topic/Lecturer	Location	Assignments
1/6	4:35- 6:55	Semester Introduction Commercialization Plan Margi Berbari	Georgia Tech	Reading: <ul style="list-style-type: none"> • <i>From Invention to Innovation</i>, Roarke, Marcia; Lux David, Mohawk Research Corporation; July 2000
1/10	7:00 - ??	New Years Party All TI:GER students and faculty and mentors	Drs. Marie & Jerry Thursby's Home	Come and have fun!!
1/13	4:35 – 6:55	A Primer on the Economics of Costs Dr. Jerry Thursby, Professor of Strategic Management, Georgia Tech	Emory	Reading: <ul style="list-style-type: none"> • <i>A Primer on Costs</i>, Jerry Thursby, December 2008 Written Discussion Questions (posted on Lexis/Nexis)
1/20		Team Meetings with Faculty this week	Varied	
1/20	4:35 – 6:55	Market Segmentation, Target Market Selection and Positioning Visiting Instructor: Dr. Leslie Vincent, Professor Marketing, University of Kentucky	Emory	Readings: <ul style="list-style-type: none"> • Leslie Vincent, L 2007, <i>Marketing Strategy Considerations in the Commercialization of New Technologies</i>, Chapter 6 in <i>Advances in the Study of Entrepreneurship, Innovation, and Economic Growth</i>, Vol. 18. • Harvard Business Module Note, <i>Market Segmentation, Target Market Selection, and Positioning</i>, 2006 • Matrix Semiconductor Inc (A): <i>Tackling Challenges of Strategic Dimensions</i>, Stanford Graduate School of Business Case, 2005 Written Discussion Questions (posted on Lexis/Nexis)
1/27	4:35 – 6:55	Commercialization Strategies for Technology Entrepreneurs Professors: Dr. Marie Thursby and Dr. Ken Gall, Professor, Material Sciences & Engineering, Georgia Tech	Emory	Readings: <ul style="list-style-type: none"> • Anne W. Fuller and Marie C. Thursby, <i>Technology Commercialization: Cooperative Versus Competitive Strategies</i>, Chapter 8 in <i>Advances in the Study of Entrepreneurship, Innovation, and Economic Growth</i>, Vol. 18 • Gans, J. & Stern, S., <i>The Product Market and the Market for "Ideas": Commercialization and Strategies for Technology Entrepreneurs.</i>, Research Policy, February, 2003 (optional)

Date	Time	Event/Topic/Lecturer	Location	Assignments
				<p>Written Discussion Questions (posted on Lexis/Nexis)</p>
<p>2/3</p>	<p>4:35 – 6:55</p>	<p>Finance Professor Mathew Higgins, College of Management, Georgia Tech</p>	<p>Georgia Tech</p>	<p>Readings:</p> <ul style="list-style-type: none"> • Mathew Higgins, <i>Introduction to Finance and Valuing Early Stage Technology</i>, Chapter 9 in <i>Advances in the Study of Entrepreneurship, Innovation, and Economic Growth</i>, Vol. 18 • <i>Innovation Killers</i> – Harvard Business Review • Stewart, <i>Biotechnology Valuations for the 21st Century</i>, 2002 • Villiger & Bogdan, <i>Getting Real About Valuation in Biotech</i>, Nature Biotechnology; April 2005 • Villiger and Bogdan, <i>Valuing Pharma R&D: The Catch-22 of DCF</i>, 2005 <p>Written Discussion Questions (posted on Lexis/Nexis)</p>
<p>2/10</p>	<p>4:35 – 6:55</p>	<p>Finance Professor Mathew Higgins, College of Management, Georgia Tech</p>	<p>Georgia Tech</p>	<p>Readings and Preparation:</p> <ul style="list-style-type: none"> • <i>Pharmasset, Inc. Analyst Report</i> (focus on valuation section) • HBS: Merck & Company: <i>Evaluating a Drug Licensing Opportunity</i>, 2003 • HBS: <i>Penelope's Personal Pocket Phones</i> (PPPP) <p>Read the cases above and begin preparing the following:</p> <ul style="list-style-type: none"> • HBS: Merck & Company Draft the decision trees for the two options. We will start the class by completing the decisions trees and walking through the valuation to determine: • HBS: PPPP (1) What is the NPV of the investment, ignoring the second generation project? (2) How valuable does the option have to be in order to justify the investment in the first generation of phones? What about the option to sell the equipment? What does that do for the value of the first investment (not considering the future investment option)? What does this say about the option to abandon in most high tech entrepreneurial firms?

Date	Time	Event/Topic/Lecturer	Location	Assignments
2/17	4:35 – 5:45 5:55 – 6:55	<ul style="list-style-type: none"> Fundamentals of Business Documents and Power Point Presentations Margi Barbari <ul style="list-style-type: none"> TI:GER Experiment Part 2 Kelli Lanier	Emory	
2/24	4:35 – 5:35 5:45 - 6:55	Regulatory Compliance Guest Speakers: <ul style="list-style-type: none"> <i>FDA testing and certification</i> William H. Kitchens, Attorney At Law, Arnall Golden Gregory <i>From Life Sciences to Electronic Arts: How Different Businesses Face Different Legal Challenges</i> Fish & Richardson 	Emory	
3/3	4:35 – 6:55	Communications – Presentation Style and Content Organization Professor Spring Asher, College of Management, Georgia Tech	Ga Tech	Customer and Industry Interview Report Due
3/10 and 3/17		No Class Emory and Georgia Tech Spring Break		
3/23	variable	Team Meetings with faculty	Emory or Ga Tech	
3/24	4:35 – 6:55	Hands-on exercises using Crystal Ball Software	Georgia Tech	Class Preparation: <ul style="list-style-type: none"> Download 30 day trial version of Crystal Ball Software http://www.oracle.com/technology/products/bi/crystalball/index.html Begin familiarizing yourself with its operation. Gather the data needed to begin some basic valuations for your team's project. Bring laptop to class with trial version of Crystal Ball pre-loaded.

Date	Time	Event/Topic/Lecturer	Location	Assignments
3/31		Commercialization Plan Presentations Practice Session with Mentors	Emory	
4/7	4:35 – 6:55	Commercialization Plan Presentations for Industry for Advisory Board	Ga Tech	
4/14		Early Stage Financing Panel: <ul style="list-style-type: none"> • Angel Investing • Private Equity • SBIR Grants 	Ga Tech	
4/18				Lecture Write-ups Due by 5:00 PM
4/20				Commercialization Plans Due by 5:00 PM
4/23				Team Evaluations Due by 5:00 PM