

**Syllabus for CEIE 690**  
**Technical Entrepreneurship**  
**Fall 2008**

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**Course Location:** 8401 Arlington Boulevard  
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**Texts:**

1. *The Successful Business Plan, 4<sup>th</sup> Edition*, Rhonda Abrams, The Planning Shop, 2003.
2. *Made to Stick*, Chip Heath and Dan Heath, Random House, 2007.
3. *The Fred Factor*, Mark Sanborn, Doubleday, 2004.
4. *Think Better*, Tim Hurson, McGraw Hill, 2008.

**Course Time:** Wednesdays, 4-6:40 pm

**Course Objective:** The goal of this three-credit, graduate level course is to enable technical employees to think and act in an entrepreneurial manner within the context of their current job. This course is intended to help employees gain a more entrepreneurial perspective. The idea is to enable students to understand the importance of enterprise goals and to instruct students how to bring a concept to reality within the context of their current employment. The students will be introduced to concepts of business development as related to products. Development of enterprise goals and a business strategy as well as execution of the strategy will be covered in this course. Students will learn how to: (1) develop a new idea, (2) identify the opportunities associated with the idea, (3) estimate the market

audience and impact of the concept, (4) estimate the costs of development and implementation, (5) promote a program, and (6) how to compete for financings of projects/programs. Students will demonstrate their entrepreneurship by developing a management plan for a product or service within a technical enterprise. A panel of successful business executives will evaluate the business concepts on December 3<sup>rd</sup>. Awards will be given to the best business strategies and management plan.

**Grades:** 50% Homework and class presentations (see attached handout)  
30% Business Concept - Written  
20% Business Concept - Oral

## CEIE 690 Technical Entrepreneurship

Date	Description	Readings
Week 1 08/27/08	Introduction to Entrepreneurship Creating a New Business Entrepreneurial Questionnaire and Self Test Synergistic Decision Making	The Fred Factor Think Better, Parts 1 and 2
Week 2 09/03/08	Thinking Out of the Box	Think Better, Parts 3 and 4
Week 3 09/10/08	Identifying New Business Opportunities The Successful Strategy	Made to Stick, Introduction
Week 4 09/17/08	Legal Constraints/Intellectual Property Good Business Planning	Made to Stick, Chapter 1
Week 5 09/24/08	Identifying the Target Market/Sector within the Government	Made to Stick, Chapter 2
Week 6 10/01/08	Estimating the Development and Implementation of Your Technical Idea	Made to Stick, Chapter 3
Week 7 10/08/08	Promoting Your Idea	Made to Stick, Chapter 4
Week 8 10/15/08	Capital Requirements	Made to Stick, Chapter 5
Week 9 10/22/08	Financial Planning	Made to Stick, Chapter 6
Week 10 10/29/08	Financing Projects Within Your Organization	Made to Stick, Epilogue
Week 11 11/05/08	Bootstrap Developments	The Successful Business Plan
Week 12 11/12/08	Group Presentation Rehearsals	The Successful Business Plan
Week 13 11/19/08	Made to Stick – Lessons Learned	The Successful Business Plan
11/26/08	Thanksgiving Break	The Successful Business Plan
Week 14 12/03/08	Group Presentations	The Successful Business Plan

## Homework – Fall 2008

Late work will not be accepted. If you are unable to attend class to give your oral presentation, please make arrangements to hand in your written work on the date assigned. You must schedule another presentation time with the course instructor (*in advance*).

### Assignment 1 – The Idea

(Due 09/10/08)

Prepare a brief oral presentation that describes a new and innovative business idea for Dewberry. This can be a technical innovation (expedited wetlands mitigation approach, self-maintaining pavements, BIM design build innovations, etc.) or an improved business concept (optimal earned value management, improved cost tracking software, just-in-time project management processes, radical procurement strategies, etc.) or any other idea that will improve the performance, cost-effectiveness, productivity, customer service or individual job satisfaction. Do not be limited by institutional or organizational barriers. Use your “out-of-the-box” newly acquired skills. Be prepared to share your idea in class on 09/10/08. Your idea may form the basis for the business concepts will be developed in the course. Limit your presentation to one idea. You must present your idea in less than 5 minutes. This is a graded assignment. Points will be deducted for presentations that are longer than 5 minutes. You will be graded on your ability to clearly present your idea. Be creative in your idea as well as your presentation format. No written material will be accepted.

### Assignment 2 – Biography of a Successful Entrepreneur

(Due 09/24/08)

Prepare a brief written report not to exceed 5 pages, double-spaced and a 5-minute oral presentation that describe your entrepreneur. The following must be addressed in both your written report and oral presentation:

- Discuss the personal traits that contributed to the success of this individual.
- Describe the business venture that this person initiated.
- How well suited was this individual to their business venture?
- What skills, abilities, and knowledge do/did they have?
- How did their education and work experience prepare them for their venture?
- What was their motivation?

Your oral report will be presented in class on 09/24/08. Written reports will also be due 09/24/08.

### Assignment 3 – Selecting a Target Market for your Business Concept

(Due 10/22/08)

Describe in 5 pages or less (double-spaced) a step-by-step approach to determining the size of the market for your business concept. Answer the following question:

*How will you determine the target market for your business concept?*

Make sure that you customize the approach for your business concept. You must indicate not only what you will do but how you will do it. For example, don't just say: “I will determine who the primary customers are for my product/services.” You must indicate **how** you will determine who the primary customers are, how many there are, how many will implement your concept, and what costs they are willing to incur, etc.

## **Assignment 4 – Start-up Funding and Endorsement**

(Due 11/5/08)

How much money will be needed to start-up your business idea at Dewberry? What is the approval chain for your idea? Who will endorse your proposal? Describe in 1-page succinctly how you plan to obtain the funding and the “go ahead” to put your business plan into action. Obtain one endorsement from an influential individual. Discuss who has endorsed your plan and how this endorsement will help you to obtain the approval to proceed with your idea.

## **Assignment 5 – *Made to Stick***

(Due 11/19/08)

Read *Made to Stick*. Prepare a list of ten “lessons learned” from this text. Prioritize your list (1 being most important). Present your ten lessons learned to the class. Briefly discuss your list and prioritization. Discuss how the author’s ideas relate to the business concept that you are developing for class. In what ways did this book influence the development of your business concept? Present your findings in class.

## Class Project - The Business Concept

“... business plans rank no higher than 2 – on a scale from 1 to 10 – as a predictor of a new venture’s success.”

“Detailed financial projections for a new company are an act of imagination.”

Harvard Business Review on Entrepreneurship, 1999

Background: Countless books and articles have been written about business plans. Unfortunately, business plans are usually poor predictors of a new venture’s success. Too much emphasis is placed on the detailed financial projections and too little time is spent on the issues of importance. Few if any entrepreneurs can correctly predict the financial outcome of a new enterprise. Similar inaccuracies exist in predictions of start-up funds required for a venture initiation.

The objective of this assignment is to analyze your proposed business concept and address the factors critical to the success of your endeavor: the people, the opportunity, the context, and the risk/reward. Prepare a document that details your business concept and addresses these issues. Make your document creative. Sell your idea.

Advice is important when starting your first venture. To improve your business concept, develop a list of three individuals who are in a position to critique your concept. Why did you select this group to review your ideas? How can they help you? Have your plan reviewed and critiqued by these individuals. Design a review form for the reviewers and collect feedback from them regarding your business concept. Provide copies of the completed form as appendices in your concept paper. Analyze and incorporate the feedback into your business concept. You do not have to take all of their advice; however, you should be prepared to defend your ideas and have solid reasons for not incorporating their suggestions.

### Assignment:

Groups will consist of between two and four individuals. Your group will prepare the following;

1. One copy of your business concept. You may make it any length that you like. Please include copies of your completed review forms in an appendix. Your document should include an executive overview that defines the purpose of the document and its intended audience. Discuss the industry and the nature of your products/services. Present your market research (market size and trends). Show the estimated market share and projected implementations. What is your competition? What is your market advantage? Present your financial analysis. Project your operating costs and expenses. What is the return on investment for your concept? How will you finance the venture? What is your marketing plan? Who is your technical/management team? Stakeholders?
2. An oral presentation. The presentation schedule will be distributed prior to the rehearsal on November 12<sup>th</sup>. An independent panel will evaluate your concept and provide you with feedback. The final presentations will be scheduled for December 3<sup>rd</sup>.

### Award:

A panel of government representatives and successful business executives will evaluate the business concepts on December 3<sup>rd</sup>. The concept that is judged to be the best will receive \$1,000 to be divided equally between the team members.