Course:

95-794 - Tech Startup: Tools and Techniques

Course Description:

There are important entrepreneurial traits and abilities that can only be learned and developed through the direct experience of starting and growing a business. This is particularly true for tech-based businesses in the critical early years (e.g., first three years) when the “DNA” of the company is set. However, there are several very important practical entrepreneurial insights, tools, and skills that can be taught and must be learned if the tech entrepreneur is going to be able to get the business from an interesting notion to a business with capital and customers and, most importantly, set the company on a positive and sustainable trajectory.

This course focuses on teaching the following three skills essential for successful launch of a tech business:

• **Creating, developing and evaluating your concept of a business** – Is my idea a viable business or just a product or neither? How do I know how big the market is for my product? What are the technology, market, competitor risks inherent in my idea and how do I assess them? Can I compete with the big boys? Can I sell it? How? When? Where?

• **Identifying, managing and evaluating a start-up team** – Do I have the skills, interests, and abilities to be a tech entrepreneur? Can I found a company, really? Should I be the CEO or VP of Engineering, or something else altogether? What should my team look like on day 1, a year from now, or three years from now? How do I incent them? Manage them? Lead them?

• **Raising money** – I know I need money but how much, where, when and what kind of money?

This course will feature several important tried-and-true tools and techniques for learning and applying these three core early-stage skills. Course learning is reinforced through a practical exposure to the challenges of creating and growing a tech-based business through (1) hypothetical case studies, role-playing, solving actual problems of local tech-based businesses, and lecture from experienced entrepreneurs and investors.
Course Objectives:

Each student will be better able to do the following at the end of the semester:

- Create a viable and “venturable” concept of a business.
- Understand how to resource, sequence, and time the core activities of the early stages of a new tech-based venture.
- Know why, when, where and how to raise capital.

Course Requirements:

Each student must complete two team-based hypothetical case studies (e.g., see attached hypothetical case studies), two role-playing assignments and one assigned real-world problem. Students are, of course, encouraged to draw on resources beyond the assigned reading and lectures.

Grade weighting is as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Hypothetical Team Presentation A</td>
<td>30%</td>
</tr>
<tr>
<td>Hypothetical Team Presentation B</td>
<td>30%</td>
</tr>
<tr>
<td>Real-world Team Assignment Presentation:</td>
<td>25%</td>
</tr>
<tr>
<td>Role Playing and Class Participation</td>
<td>15%</td>
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</tbody>
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Course Grade 100%

Hypothetical Assignments A and B

Students will serve as a member of a small consulting team (team size depends on class size) that is assigned a sequence of two hypothetical technology startups, each facing several challenging problems. The consulting team will rely on learning the course content to develop practical recommendations to address these issues and advance the goals of the company.

Hypothetical Assignment Role Playing

Students will also serve in a role-playing capacity as various members of the hypothetical case study companies. That is, as a member of the hypothetical management team each student will receive and critique the recommendations of their opposite on the consulting team. Therefore, each student can expect not only to help develop and provide recommendations in two case studies but also receiving recommendations from the class peers in two other case studies.

Team recommendations will be presented in an oral report of no more than 20 minutes to the fellow hypothetical management team and take questions from the hypothetical company’s “management” and members of the class. Case
presentations will be judged on the quality and depth of the analysis and clarity of presentations. The presentation assessment forms are attached.

Real-world Assignment

Students will also serve as a member of team to address a specific problem of an actual challenge faced by a local tech-based start-up. The problem will be one that is addressable given the practical time and effort constraints of a mini. The focus of the challenge will be consistent with the core themes presented in the course description at the front of this syllabus.

Group Evaluations of Team Presentations

Team presentations for the hypothetical case studies and real-world case studies will take place on the last three classes (e.g., Oct 2, 9, and 16). At the conclusion of each of these sessions the students will collectively evaluate the quality, depth and usefulness of the recommendations of their peers for that session. Though course grades will be assigned by the professor, he will consider the discussion in these collective evaluations in his grading.

Required Readings:

- Entrepreneurship: *Starting, Developing and Managing a New Enterprise, 2nd ed.* by R.D. Hirsch and M.P. Peters
- Entrepreneurship: *A Contemporary Approach* by D. Kuratko and R. Hodgetts

Suggested Readings

- Competitive Strategy by Michael E. Porter
- The Rise and Fall of Strategic Planning by Henry Mintzberg

Resource Readings:

- Done Deals: Venture Capitalists Tell Their Stories by Udayan Gupta
- Selling the Invisible: A Field Guide to Modern Marketing by Harry Beckwith
- Real Time: Preparing for the Age of the Never Satisfied Customer by Regis McKenna
- Inside the Tornado: Strategies for Developing, Leveraging, and Surviving Hypergrowth Markets (Collins Business Essentials) by Geoffrey A. Moore
- The Innovator's Dilemma: The Revolutionary Book that Will Change the Way You Do Business by Clayton M. Christensen
- Crossing the Chasm by Geoffrey A. Moore
• The McKinsey Way by Ethan M. Rasiel
• High Tech Start Up, Revised and Updated: The Complete Handbook For Creating Successful New High Tech Companies by John L. Nesheim

Course Schedule:

Session 1 – The tech startup

Learning Objectives: (1) understanding the importance and challenges of the first three years, (2) learning the core operational, funding, planning and market challenges unique to tech start-ups, and (3) learning strategy and tactics, the difference between the two and why both are important for tech start-ups.

To Do: (1) quick review of syllabus and course, (2) teams identified and organized and (3) address student concerns and questions.

Session 2 – Creating, developing and evaluating your concept of a business

Learning Objectives: (1) learning the “Venture Opportunity Screening Analysis” tool, (2) learning how to sort ideas from opportunities and (3) learning how to sort good businesses from “venturable businesses.”

To Do: (1) teams assigned to real-world companies, (2) teams assigned to case studies and (3) teams assigned to role-playing.

Required Readings: (1) Entrepreneurship: Starting, Developing and Managing a New Enterprise, Chapters __ and ___ (2) Entrepreneurship: A Contemporary Approach, Chapters __ and ___ and (3) TBD

Session 3 – Creating, developing and evaluating your concept of a business

Learning Objectives: (1) understanding how and why traditional business planning is different from tech-start-up planning, (2) applying market assessment to new technology products and (3) understanding sales channels and the critical importance of the “first customer.”

One Hour Guest Lecture

To Do: instruct students on using the online self-diagnostic test

Required Readings: (1) Entrepreneurship: Starting, Developing and Managing a New Enterprise, Chapters __ and ___ (2) Entrepreneurship: A Contemporary Approach, Chapters __ and ___ and (3) TBD
Session 4 – Identifying, managing and evaluating a start-up team

Learning Objectives: (1) understanding the basic principles of Project Management as applied to starting a new tech venture, (2) learning who, why, and when to hire in the first three years, and (3) managing and motivating a tech team.

One Hour Guest Lecture

To Do: review results of student self-diagnostic

Required Readings: (1) Entrepreneurship: Starting, Developing and Managing a New Enterprise, Chapters __ and ___ (2) Entrepreneurship: A Contemporary Approach, Chapters __ and ___ and (3) TBD

Session 5 – Raising money

Learning Objectives: (1) learning and applying the sources and uses of funds tool, (2) understanding equity investment and all that it implies, and (3) why raising money is and is not as hard as you think.

One Hour Guest Lecture

To Do: Quick Q&A regarding case presentations

Required Readings: (1) Entrepreneurship: Starting, Developing and Managing a New Enterprise, Chapters __ and ___ (2) Entrepreneurship: A Contemporary Approach, Chapters __ and ___ and (3) TBD

Session 6 – Hypothetical case assignment A team presentations

To Do: Group evaluation of presentations

Session 7 – Hypothetical case assignment B team presentations

To Do: Group evaluation of presentations

Session 8 – Real-world assignment team presentations

To Do: Group evaluation of presentations