EEL4933 - Engineering Entrepreneurship
Three Credits, Two hours and forty minutes, Engineering Topic.

Instructor: Reynaldo Max Padro

Authors: Steve Blank and Bob Dorf ISBN-10: 0984999302
Business Model Generation Authors: Alexander Osterwalder & Yves Pigneur

Specific Course Information:
This course provides real world, hands-on learning on what it is like to start a high-tech company. This class is not about how to write a business plan. It is not an exercise on how smart you are in a classroom, or how well you use the research library to size markets. The result is not a PowerPoint slide deck for a VC presentation. It is most definitely not an incubator where you come to build the “hot-idea” you. This is a practical class – essentially a lab, not a theory or “book” class. Our goal, within the constraints of a classroom and a limited amount of time, is to create an entrepreneurial experience for you with all the pressures and demands of the real world in an early stage start up.

You will be getting your hands dirty talking to customers, partners, competitors, as you encounter the chaos and uncertainty of how a startup works. You will work in teams learning how to turn a great idea into a great company. You will learn how to use a business model to brainstorm each part of a company and customer development to get out of the classroom to see whether anyone other than you would want/use your product. Finally, based on the customer and market feedback you gathered, you would use agile development to rapidly iterate your product to build something customers would use and buy. Each block will be new adventure outside the classroom as you test each part of your business model and then share the hard-earned knowledge with the rest of the class.

Specific Goals for the Course
a. Specific outcomes of instruction
Upon successful completion of this course, the student will:
1. Use experiential learning as the paradigm for engaging in discovery and hypotheses testing of business models.
2. Understand and practice the process to test business model hypotheses for a real business.
3. Understand how to work in a team environment to bring market needs forward.
4. Present recommendations using team-based selling approaches.

b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.
In this course the student will have to show
(a) an ability to apply knowledge of mathematics, science, and engineering (N/A)
(b) an ability to design and conduct experiments (simulations), as well as to analyze, interpret data (N/A)
(c) an ability to design a system, component, or process to meet desired needs (N/A)
(d) an ability to function in multi-disciplinary teams (N/A)
(e) an ability to identify, formulate, and solve engineering problems (homework) (N/A)
(f) an understanding of professional and ethical responsibility (N/A)
(g) an ability to communicate effectively (through project reports) (N/A)
(h) the broad education necessary to understand the impact of engineering solutions in a global and societal context (N/A)
(i) a recognition of the need, and an ability to engage in life-long learning (N/A)
(j) a knowledge of contemporary issues (N/A)
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (N/A)
(l) a knowledge of probability and statistics (N/A)

**Brief list of the topics to be covered**
1. Introductions and Business Canvas
2. Team Assignments and Project Approvals
3. Value Proposition
4. Customer Segments
5. Customer Discovery
6. Customer Acquisition
7. Channels
8. Customer Relationships
9. Revenues
10. Cost
11. Activities, Partners and Resources
12. Preparation for Final Presentations

**GRADING:**

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<th>Course Requirements</th>
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**Conversion of Numerical Grade to Letter Grad**

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