Engineering 145

Startup Entrepreneurship

Session 1: Course Overview

Professors Steve Blank and Ann Miura-Ko

Agenda

“Is This the Right Course for Me?”

- Course Objectives
- Introductions
- Entrepreneurship in the Engineering School
- How does E-145 (this class) fit?
- What is Entrepreneurship?
- Class Logistics
- **Break**: *Stay If You Want to Be in the Class*
- Class “Culture” and Next Steps
Course Objectives

• Understand what Startup Entrepreneurship is
  – How do startups work?
  – Am I an entrepreneur?
  – Dispel entrepreneurial myths and misconceptions

• Act like an entrepreneur
  – Put together a startup team
  – Analyze and assess a real-world opportunity

• Learn whether entrepreneurship is for you
What Will you Learn?

• Opportunity evaluation
• Business Model rigor
• Operating in chaos with insufficient data
• Real-time decision making
• Teamwork
• Influence and persuasion
• Oral and written communication
• Start-Up finance and accounting
• There are No Rules
The Course ‘By the Numbers’

• 4 Units of Credit
• 2 Instructors, 2 CAs, 10+ Mentors,
• 20 Regular Sessions
• 2 Textbooks

• 7 Case Studies
• 1 Team Opportunity Assessment Project
• 1 Team Opportunity Execution Project
• 1 Personal Business Plan summary
Introductions
Steve Blank and Ann-Miura-Ko

8 startups - 32 years in Silicon Valley
• Semiconductors
• Supercomputers
• Consumer electronics
• Video games
• Enterprise software
• Military intelligence

Teach: Stanford, Berkeley, Columbia

Details at www.steveblank.com

• Yale BS EE
• McKinsey and Co.
• Charles River Ventures
• Stanford Ph.D MS&E
• TA: E145, Mayfield Fellows, MS&E 273
• V.C. @ Maples Investments

Details at http://www.maplesinvestments.com/
Course Assistants (CA’s)

Daisy Chung
- B.A. Science, Tech & Society
- PhD Candidate W.T.O.

David Hutton
- B.A. in Economics
- B.S/M.S. in Industrial Engineering
- PhD Candidate MS&E

- CA’s role: Class/lecture questions, Lead workshops, Grading and attendance
Mentors

• Mentors are Venture Capitalists or Entrepreneurs
• Mentors role is to:
  – Help you with the OAP and OEP Projects
  – Help you “Get you out of the building”
  – Offer “Real-world” entrepreneurial advice
• You arrange your schedule for the mentors, not the other way around
• When assigned a mentor **You Will** contact them the same week
Your Turn …

• What is your declared (primary) major of study?
• What year are you currently in at Stanford?
• What geographical area is home?
• Have you been involved in a start-up?
Entrepreneurship in the Engineering School

STVP
The Stanford Technology Ventures Program (STVP) is dedicated to accelerating high-technology entrepreneurship education and creating scholarly research on technology-based firms that, in turn, provides new insights for students, academics, and business leaders.

STVP provides students with the entrepreneurial skills needed to use technology innovations to solve major world problems, with an emphasis on the environment, human health, and other global issues. Our goal is to inspire and prepare students for leadership roles within existing organizations, new ventures, and academia.

http://stvp.stanford.edu
Entrepreneurial Thought Leaders (ETL) Seminar Series

Wednesdays, 4:30PM-5:30PM  Skilling Auditorium

• Jan 13  John Adler, Accuray/Trip Adler, Scribd
• Jan 20  David Hansson, Ruby on Rails, 37 Signals
• Jan 27  Elisabeth Pate Cornell Chair of MS & E
• Feb 3  William Hagstrom, Crescendo Bioscience
• Feb 10  Young Entrepreneurs
• Feb 17  Rashmi Sinha /Jonathan Boutelle, SlideShare
• Feb 24  Entrepreneurship Week at Stanford - Steve Case
• March 3  Polly Sumner (Salesforce)/Elizabeth Tinkham (Accenture)

http://etl.stanford.edu
Mayfield Fellows Program 2010
Application Deadline is February 1st

Winter
Undergrads & Coterms Apply To Be “Mayfield Fellows”

Spring
Learn Structure & Methods of Start-ups;
Students Seek Paid Assignments at High Tech Start-up Companies

Summer
Students Leverage the Power of Real World, Hands-On Experience

• 3 Courses
• Paid Summer Internship
• Mentors

Autumn
Students Bring Back Experiences and Learn From Them As a Group

Info sessions
• Wed, Jan 13th, 5:30 - 6:30 or
• Thurs, Jan 21st, 5:30 - 6:30

http://stvp.stanford.edu/teaching/mfp/
How Does E145 Fit in the Big Picture of Entrepreneurship?
Entrepreneurship is a Process…

Idea
- Feasible?
- Credible?
- Buildable?
- …

Opportunity
- Market Size
- Customer Demographics
- Selling Price
- Manuf Cost
- Sales Cost
- Competition
- …

Business Plan
- Financial Model
- Capitalization Plan
- Sales Plan
- Marketing Plan
- Manufacturing Plan
- …

Execution
- Customer Development
- Launch Strategy
- Hiring
- Revenue Plan
- …
E 145 and Entrepreneurship

E 145: Technology Entrepreneurship:
Fundamentals of entrepreneurship.
Introduction to translating ideas into opportunities and opportunities into execution.
Top 10 Classes to Learn Entrepreneurship

- E 145: Technology Entrepreneurship
- E 140 A, B, C: Mayfield Fellows Program
- NVC: New Venture Creation
- MS&E 178: Spirit of Entrepreneurship
- MS&E 271: Global Entrepreneurial Marketing
- MS&E 285: Negotiation
- MS&E 177: Innovation, Creativity, and Change
- MS&E 277: Creativity and Innovation
- MS&E 272: Entrepreneurial Finance
- MS&E 273: Technology Venture Creation
- MS&E 282: Innovation Implementation in Complex Organizations

For additional entrepreneurial courses, see the STVP web site: [http://stvp.stanford.edu/teaching/courses.html](http://stvp.stanford.edu/teaching/courses.html)
What is Entrepreneurship?
What is Entrepreneurship?

Entrepreneurship is about building *scalable* startups that start small and *grow into large company’s.*

Startups that scale require a unique set of skills: opportunity assessment, team building, Customer Development and fund raising.
Scalable Startup Entrepreneurship

• Vision
  – Broad, deep and very big

• Huge Opportunity
  – Create a industry not a product or a company

• Risk Reduction
  – Customer & Agile Development

• World Class Team
  – Irrational Passion and Extreme Confidence
  – Belief that only they could pull it off
Business Plan

1. A document your investors make you write that they don’t read

2. A useful place for you to collect your guesses about your business
   - Size of Opportunity
   - Customers
   - Channel
   - Demand Creation
   - Revenue/Expenses/Profit

This class in NOT about Business Plans
Business Model -1

• All businesses (startups or large companies) have a “business model”
• Describes all components of the business to generate revenue and earn a profit
• Revenue generating components:
  – sales, marketing
• Expenses
  – Manufacturing, development
• Financing
• Strategy

This class IS about understanding Business Models
The Business Model
Am I an Entrepreneur?
Am I an Entrepreneur?  
Startup Personal Checklist

• Are you comfortable with:
  – Chaos
  – Uncertainty

• Are you:
  – Resilient
  – Agile
  – Passionate
  – Driven
  – Articulate
Entrepreneurship
Your Role in a Startup

- Founder
- Co-founder
- Early Employee
- Late Employee

They don’t require the same risk/personality profile
Class Logistics
Course Website

• Course Website
  – Course Description and Policies
  – Course Calendar and Schedule
  – All Assignments
  – Key Email Lists

• You need to check this site frequently
Course Reading

• Reading
  – Technology Entrepreneurship Dorf/Byers,
  – Four Steps to the Epiphany by Blank
  – HBS Online (course reader)
  – Links and Session Handouts

• Regular Sessions and Workshops

• Books on Reserve at the Eng Library
Teams

- Teams of 5
  - Deadline for team formation is Jan 8th
  - Must contact your mentors by Jan 11th

- Three team projects
  - Opportunity Assessment Project
  - Opportunity Execution Project
  - Case study analysis (individual lead for each case)

- Class is about teamwork
Case Studies

• Read cases describing business dilemmas
• Analyze the case and tell us what you would do
• 7 cases
  • Chegg
  • IMVU
  • WebTV
  • NanoGene
  • Wily Technologies
  • SolidWorks
  • Barbara Arenson
• 25% of your grade
Opportunity Assessment Project (OAP)

- Form team
- Pick an idea
- Get out of the building
- Figure out whether it is a business opportunity
- Team Deliverable Jan 28th
  - Product/Channel/Customer/Acquisition/Size
  - Customer Discovery Summary
  - PowerPoint presentation
  - Written Analysis
- 15% of your grade
Opportunity *Execution* Project (OEP)

- Do you need partners?
- How do you attract a team?
- How do you build it?
- Team Presentation
- March 4\(^{th}\) / 9\(^{th}\)
  - PowerPoint presentation
- 25% of your grade
Grading

Individual - 35%
• Participation in class 20%
• Personal Business Plan Executive Summary 15%

Team - 65%
• Written case analyses 25%
• OAP Team Presentation A 15%
• OAP Team Presentation B 25%

Borderline grades can be helped by insights from attending at least Four sessions of DFJ Entrepreneurial Thought Leaders program
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Doors close at 1:10
Break
Our “Culture” for E145

• Show up on time and stay ‘til we’re done
• Set cell phones on vibrate
• Keep your commitments (in class and out)
• Step outside if you must call, email, skype, twitter, chat, surf the web, or do anything unrelated to E145
• Entrepreneurship is a \textit{team} sport
  \hspace{1em} ½ your grade depends on working with others
What Lies Ahead:
“To Do” List

  – follow directions to prepare for Session 2.

• Check web site for admission lists
  – attendance is mandatory in session 2
  – waitlist (if any) will be cleared at beginning of class.

• Form partial or full teams by Session 2
  – do the best you can … OK to just come “alone”.