

Technology Ventures (Dorf and Byers): Companion Syllabus for Technology Entrepreneurship Course

Updated: August 2004

A warm welcome!

This sample syllabus, complete with session descriptions, teaching resources, reading suggestions and assignments, was created to help educators integrate 'Technology Ventures: From Idea to Enterprise' and other free media (e.g. videos and slidedecks) from the Stanford Technology Ventures Program Educator's Corner into course sessions.

This syllabus is extracted from Professors Tom Byers and Randy Komisar's introductory class 'High-Technology Ventures' at Stanford University. The course consists of twenty 90 minute sessions and four 60 minute workshops (24 sessions total) for a ten-week quarter covering select issues of interest to upper level undergraduates - we acknowledge that courses are structured in a variety of ways other than this and have noted on individual sessions that can be expanded and rearranged for you to use.

A few notes:

- The chapters in the textbook assigned as reading do not always map directly to the each session's material. Students finish most reading and preparatory material in the first half of the course as the second half of the course is dedicated to the team project.
- If you own the textbook, all the teaching notes to the cases in the appendices and powerpoint slide decks for each chapter are available at the McGraw-Hill website for the textbook.
- Other alternative case studies are either available from STVP Educators Corner for a nominal fee or from other sources such as the Harvard Business School and ECCH.
- **Opportunity Analysis Project** is a ten-week long team project where students investigate an entrepreneurial opportunity, keeping in mind the key distinctions between an "idea" and an "opportunity". Teams analyze, thoroughly illustrate and document a pressing market need that has potential to be solved with a high technology product or service.



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A. Course Description

This course introduces the fundamentals of 'technology entrepreneurship', a recent global phenomenon that has driven vital changes in society by empowering individuals to seek opportunity in technological and business solutions when presented with what others see as insurmountable problems.

Technology entrepreneurship, whether in a startup or established company, is a spirited approach to business leadership that involves identifying high-potential, technology-intensive commercial opportunities, gathering resources such as talent and capital, and managing rapid growth and significant risks using principled decision-making skills.

This course is designed to be approachable for all undergraduates and graduates from all majors (particularly science and engineering students) who seek to understand the entrepreneurial process. Topics introduced in this course are not only relevant to future managers, marketers, and investors, but to the future engineer and scientist.

Through a collection of case studies, lectures, workshops, and projects that cover high-growth ventures in information technology, electronics, life sciences, biotechnology and other industries, this course provides the student with the tools necessary to successfully identify a true business opportunity, and to start and grow a technology enterprise.

We will cover material organized in five modules over the next ten weeks:

- A. The Entrepreneurial Perspective
- B. Opportunity Recognition and Evaluation
- C. Gathering Resources
- D. Managing Ventures
- E. Entrepreneurship and You

With this material we will build on seven critical skills for entrepreneurial leaders:

- Creativity and opportunity evaluation
- Real-time strategy and decision making
- Comfort with change and chaos
- Teamwork
- Evangelism, selling, negotiation, and motivation through influence and persuasion
- Oral and written communication
- Basics of start-up finance and accounting

B. Required and Recommended Readings

Required Books Technology Ventures, Richard Dorf and Thomas Byers, 1st Edition
The Monk and the Riddle, Randy Komisar

Cases HBS: Harvard Business School Cases

HBS 9-899-292 Advanced Inhalation Research Inc.
HBS 9-396-245 Palm Computing, Inc. (A)
HBS 9-899-270 Steve Perlman and WebTV (A)
HBS 9-309-049 Vinod Khosla and Sun Microsystems (A)
HBS 9-297-095 BioTransplant, Inc: Initial Public Offering
HBS 9-898-090 Palm Computing, Inc - 1995: Financial Challenges
HBS 9-301-038 New Schools Venture Fund

Articles HBS 97409 How to Write a Great Business Plan, William Sahlman

Recommended Books

Entrepreneurship Textbooks

The Entrepreneurial Venture, William Sahlman
Entrepreneurship, Robert Hisrich and Michael Peters
New Venture Creation, Jeffrey Timmons and Steve Spinelli
Launching New Ventures: An Entrepreneurial Approach, Kathleen Allen
Patterns of Entrepreneurship, Jack Kaplan
The Portable MBA in Entrepreneurship, William Bygrave and Andrew Zacharakis

Entrepreneurial Strategy and Leadership

Art of the Start and Rules for Revolutionaries, Guy Kawasaki
The New Business Road Test, John Mullins
The Origin and Evolution of New Businesses, Amar Bhide
Primal Leadership, Daniel Goleman
Piloting Palm, Andrea Butter and David Poque
The Tipping Point, Malcolm Gladwell
Built to Last and Good to Great, Jim Collins
Weird Ideas that Work, Bob Sutton
Living on the Fault Line and Crossing the Chasm, Geoff Moore
Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron, Bethany McLean and Peter Elkind
Betting It All: The Entrepreneurs of Technology, Michael Malone
The Innovator's Dilemma, Clayton Christensen
The Art of Innovation, Tom Kelley
The Entrepreneurial Mindset, Rita Gunther McGrath and Ian MacMillan

Entrepreneurial Finance

The Money of Invention, Paul Gompers and Josh Lerner
Done Deals, Udayan Gupta
The Successful Business Plan, Rhonda Abrams
Roadmap to Entrepreneurial Success, Robert Price
The Entrepreneurs Guide to Business Law, Constance Bagley and Craig Dauchy

Date	Session Title	Readings: Cases / Articles / Media	Key Takeaways	Assignments	Alternatives
Module I: The Entrepreneurial Perspective					
Session 1 Week 1.A Lecture	Course Overview	<p>Websites Official course website (policies, calendar, etc.) Stanford Technology Ventures Program (sponsor)</p> <p>Videos Jeff Hawkins: On Entrepreneurship Vinod Khosla: Technology and the Future Jeff Hawkins: What I had wished I learnt in college</p> <p>Textbook Ch 1 Capitalism and the Technology Entrepreneur</p>	<ul style="list-style-type: none"> Course objectives and related resources High-tech entrepreneurship definition Seven skills for entrepreneurial leaders 	<p>Team Form team of four for case preparation and term project</p>	Textbook sections: Ch 1
Session 2 Week 1.B Lecture	Silicon Valley and Entrepreneurship	<p>Book 'The Monk and the Riddle', Randy Komisar (to Ch 3)</p> <p>Articles 'Growth of a Silicon Empire', Henry Norr (optional) 'The Deal', Jerry Kaplan 'How to Write a Great Business Plan', Bill Sahlman</p> <p>Videos Heidi Roizen: Why be an entrepreneur now? Vinod Khosla: How the entrepreneurship bug bit me Jerry Kaplan: Timing is Important Jerry Kaplan: Best time to start a company</p> <p>Textbook Ch 2 Opportunity and the Business Summary Ch 3 Building a Competitive Advantage</p>	<ul style="list-style-type: none"> Silicon Valley cluster dynamics & context Creating & growing technology ventures Conceptual frameworks for analyzing tech ventures: Randy Komisar, Jerry Kaplan, Bill Sahlman 	<p>Team Form team of four for case preparation and term project</p>	Textbook sections: 3.1 – 3.3, 6.5, 8.5
Module II: Opportunity Recognition and Evaluation					
Session 3 Week 2.A Discussion	Creativity and Improvisation Guest: Professor Patricia Ryan, Drama	<p>Articles 'Why Managing Innovation is Like Theater', Robert Austin 'Fresh Start 2002: Weird Ideas that Work', Bob Sutton 'Characteristics of Entrepreneur: Social Creatures, Not Solo Heroes', Byers, Kist and Sutton (optional)</p> <p>Textbook Ch 4 Creating a Strategy Ch 5 Technology, Innovation and Timing</p>	<ul style="list-style-type: none"> Role of creativity in entrepreneurship Improvising to stimulate innovation Improvising skills: attention to reality, flexibility, trust, teamwork 	<p>Team Come dressed in a team costume and create a team name.</p>	Textbook sections: 5.3, 5.4, 6.4
Week 2.B Workshop 1	Workshop: Accounting	<p>Article 'How to Read a Financial Report', Merrill Lynch Report</p> <p>Textbook Ch 17 The Financial Plan</p>	<ul style="list-style-type: none"> How to 'run the numbers' Read financial statements Determine company performance Accounting vs. market value <p>Tips and feedback for case study analysis</p>		Textbook sections: Ch 17
Session 4 Week 2.C Case Study	From Idea to Opportunity I Guest: Jerry Yang, Yahoo!	<p>Case Yahoo! 1995: First Round Financing (Textbook p. 566)</p> <p>Textbook Ch 6 Risk, Return and Product Design Ch 8 Creating New Ventures</p>	<ul style="list-style-type: none"> Introduce case method Use Sahlman model to analyze situation Entrepreneur's vision and concept Difference between idea and opportunity Analyzing financing options: selling, corporate sponsorship, VC equity funding 	<p>Individual Case Analysis I suggest that Jerry and David [accept/do not accept -- choose one] Sequoia's offer because...</p>	<p>Textbook sections: 5.1, 8.5 – 8.9</p> <p>Case: Yahoo! 1996: Softbank asks for strategic stake (STVP 1998-006)</p> <p>Case: Yahoo! 1998: Merchant Partnerships (STVP 1998-007)</p>

Session 5 Week 3.A Case Study	From Idea to Opportunity II	<p>Case Advanced Inhalation Research (HBS Case Study #9-899-292)</p> <p>Video Paul Yock on Medical Devices</p> <p>Textbook Ch 14 Acquisitions, Mergers and Global Business</p>	<ul style="list-style-type: none"> Use Sahlman model to analyze situation Difference between idea and opportunity Compare biotech and IT startups What can the entrepreneur control? Personal goals of entrepreneur 	Team Case Analysis	If we were Edwards and McGuire at the end of the case, we [would / would not] sell the company to Alkermes. Why?	<p>Textbook sections: Ch 2, 3.4 – 3.7, 5.5</p> <p>Case: Biodiesel Inc. (Textbook p. 562)</p>
Week 3.B Workshop 2	Workshop: Marketing	<p>Textbook Ch 11 The Marketing and Sales Plan</p>	<ul style="list-style-type: none"> Definition of high-tech marketing Market analysis vs. marketing strategy Positioning statement for 'elevator pitch' Geoffrey Moore's models: technology adoption, crossing the chasm, complete solution 			Textbook sections: Ch 11
Session 6 Week 3.C Case Study	The Role of Context Guest Lecture: Professor Tom Kosnik, MS&E	<p>Case Global Wireless Ventures (Technology Ventures p. 582)</p> <p>Article Longitudes and Attitudes: Exploring the World After September 11', Thomas Friedman (optional)</p> <p>Textbook Ch 13: Acquiring, Organizing and Managing Resources</p>	<ul style="list-style-type: none"> Importance of entrepreneurial context Analyzing locations to start company Learn about and adapt venture to context Respect entrepreneur's personal needs 	Team Case Analysis	Which region is the best place to start Global Wireless Ventures? Why?	Textbook sections: 4.1 – 4.4, 6.3, 13.3 – 13.5
Session 7 Week 4.A Case Study	Intellectual Property	<p>Case Palm Computing (A) (HBS Case Study #9-396-245)</p> <p>Book 'The Monk and the Riddle', Randy Komisar (Ch 4-10)</p> <p>Videos Jeff Hawkins: Genesis of Palm Computing</p> <p>Textbook Ch 10 Name, Legal Formation and Intellectual Property</p>	<ul style="list-style-type: none"> IP as critical asset of a tech venture Patents, copyright, trademark, tradeseecret Leverage IP in strategies with investors, partners, competitors 	Team Case Analysis	Assume Jeff makes the offer he contemplates as the end of the case and that Tandy rebuffs him. What should he do next? Consider Jeff's bargaining chips, his need for funding and the degree of necessity of an agreement with Tandy.	Textbook sections: Ch 10
				Team OAP	Create slidedeck with positioning statement for OAP project. Give 3 minute presentation in class.	
Session 8 Week 4.B Case Study	Negotiating Startup Challenges	<p>Case Steve Perlman and WebTV (A) (HBS Case Study #9-899-270)</p> <p>Article 'Moxi: Jazzy Product, Sizzling Start, Lots of Trouble', Business Week Online</p> <p>Textbook Ch 15 The Management of Operations Ch 19 Presenting the Plan and Negotiating the Deal</p>	<ul style="list-style-type: none"> How to negotiate critical relationships Build ecosystem of investors, partners Leverage assets of startup in negotiations: IP, working prototype, team 	Team Case Analysis	Construct a negotiating scenario for guiding the discussions with Sony. What are the three most important terms that WebTV should request, in order of priority? What should their walk away position be? What are the three most important terms that Sony will ask for, in order of priority. What is Sony's walk away position?	<p>Textbook sections: 4.6, 5.3, 9.4, 15.1 – 15.4, Ch 19</p> <p>Case: Danger Inc. (Textbook p. 523)</p> <p>Case: PCOrder: Revolutionizing the Channel (STVP 1998-003)</p>
Module III: Gathering Resources						
Session 9 Week 5.A Lecture	Key Elements of Venture Finance and Teams	<p>Websites VC firm: Kleiner Perkins Caufield and Byers VC firm: Sequoia Capital VC industry: PriceWaterhouseCooper MoneyTree</p> <p>Videos Heidi Roizen: Bootstrapping Heidi Roizen: Venture Financing Jeff Hawkins: Company Culture</p> <p>Textbook Ch 18 Sources of Capital Appendix A: Business Plans (choose one)</p>	<ul style="list-style-type: none"> Business plans: what is it and why done? Principles of human resources and talent: recruiting, rewarding, building culture Principles of venture finance: sources of capital, deal structure, risk reduction, power of staged financing Critical importance of having cash; where and whom to get funding from 	Team OAP	Topic summary due (1 page).	<p>Textbook sections: 13.1, 6.1, 6.6, 6.9, 8.9, Ch 17</p> <p>Case: Visio Corporation, A Visual Adventure (STVP 1998-003)</p>

Week 5.C Workshop 3	Workshop: Finance and Valuations	Websites	Yahoo! Finance (browse stocks and associated metrics)	<ul style="list-style-type: none"> Public company and industry metrics 'Exploding pie' financing concept Role of employee stock pool Stage financing process and implications 			Textbook sections: 18.8
		Textbook	Ch 16 The Profit and Harvest Plan				
Session 10 Week 5.B Lecture	Group Dynamics and Team Effectiveness	Videos	Carol Bartz: Trust Vinod Khosla: It's the team	<ul style="list-style-type: none"> Improve group dynamics & performance Systematic & individual causes of tension Reinforce importance of teamwork Project group self evaluation activity 	Team Email	'Do Lunch' assignment with your team due. Email confirmation to teaching team.	Textbook sections: 13.2, Ch 12
		Textbook	Ch 12 The New Enterprise Organization				
Session 11 Week 6.A Case Study	Venture Capital and Financing Choices	Case	John Hirschtick's New Venture (Technology Ventures p. 599)	<ul style="list-style-type: none"> Define product for untapped market Recruiting methods for a startup Tradeoffs using staged financing to improve valuation 	Team Case Analysis	Regarding the proposed \$4.5 million investment from the venture capitalist, what would you advise Jon to do (single round, multiple rounds, other)? Please provide a spreadsheet with your calculations with your answer.	Textbook sections: Ch 18
		Article	'A Note on Valuations', Tom Byers				
		Videos	Heidi Roizen: The Business of Venture Capital Vinod Khosla: Fear and Greed		Team Email	Group effectiveness summary due.	
					Individual Case Analysis	Agraquest extra credit due (optional)	
Session 12 Week 6.B Case Study	Recruiting and Rewards	Case	Bonnie Bryte (STVP E145 Exercise)	<ul style="list-style-type: none"> How employee stock options work Analyze company metrics and health Analyze the worth of stock option plan 	Individual Case Analysis	All other factors being equal, and based on the stock option packages only, I would accept the (BioGene / InterWeb) offer. Why? Please provide a spreadsheet with your calculations with your answer.	
		Website	'CPA's Incentive Stock Option FAQ', Michael Gray				
		Article	'How Stock Options Work', Inc. Magazine				
Module IV: Managing Ventures							
Session 13 Week 7.A Case Study	Real Time Decision Making	Case	Vinod Khosla and Sun Microsystems (HBS Case Study #9-390-049)	<ul style="list-style-type: none"> Persistence in critical negotiation Leadership entails bold creativity Know why you need your partners Know what your partners need from you 	Team Case Analysis	As Vinod, our offer to Berret (President of Computervision) to convince him to go with Sun will be to . . .	Textbook sections: 16.1 – 16.3
		Video	Vinod Khosla: Dare to Dream				
		Textbook	Ch 9 Building Knowledge Learning in a New Enterprise Ch 20 Leading a New Technology Venture to Success				
Session 14 Week 7.B Case Study	Initial Public Offerings	Case	BioTransplant: Initial Public Offering (HBS Case Study #9-297-095)	<ul style="list-style-type: none"> IPO 'how-to' process and details Implications of going public When is the company and the marketplace is ready for the IPO 	Team Case Analysis	Is BioTransplant ready to become a public company? What makes it a strong candidate and what factors suggest that it will not perform well as a public company. If you were Elliot Lebowitz, would you go public now?	Textbook sections: 16.4, 16.5, 18.11
		Videos	Heidi Roizen: Shareholder Value				
Week 7.C Workshop 4	Workshop: Making Effective Presentations			<ul style="list-style-type: none"> Entrepreneur must communicate well Prepare for presenting opportunity analysis project at end of quarter 			

Session 15 Week 8.A Case Study	Mergers and Acquisitions Guest: Donna Dubinsky, PalmOne	Case Video	Palm Computing 1995: Financing Challenges (HBS Case Study #9-898-090) Heidi Roizen: VC vs. Corporate Investors Carol Bartz: Spinoffs	<ul style="list-style-type: none"> • Business partnership to finance growth • Evaluating venture capital offers • Merger & acquisition as a viable path for continuing the entrepreneur's vision 	Team Case Analysis	As Jeff and Donna, what are the principle one or two positives and negatives of going at it alone vs. selling to US. Robotics for the following constituents: investors, employees, customers, yourselves. Whose point of view is most important in your making the ultimate decision?	Textbook sections: Ch 14
Session 16 Week 8.B Case Study	Social Entrepreneurship	Case Video Article	New Schools Venture Fund (HBS Case Study #9-301-038) Vinod Khosla: Social Entrepreneurship 'Meaning of Social Entrepreneurship', Gregory Dees	<ul style="list-style-type: none"> • Applying VC model to philanthropy • Associated culture and strategic issues • Social entrepreneurship drivers: scalability, sustainability, opportunity, accountability 	Team OAP	Project website due. Include links to two relevant videos from STVP Educators Corner. Also, organize time to do dress rehearsal with another team. Email confirmation to instructors.	Textbook sections: 8.2, 8.6 Case: College Kids 1999: Fundraising on a shoestring budget (STVP 1999-001)
Module V: Entrepreneurship and You							
Session 17 Week 9.A Presentations	Opportunity Analysis Project Team Presentations I	Websites	Scan through OAP Websites of teams presenting	<ul style="list-style-type: none"> • Present OAP background and analysis • Defend potential business model • Conclude if OAP is idea or opportunity 	Team OAP	Presentation slides due 9:00 am for all teams.	
Session 18 Week 9.B Presentations	Opportunity Analysis Project Team Presentations II	Websites	Scan through OAP Websites of teams presenting	<ul style="list-style-type: none"> • Present OAP background and analysis • Defend potential business model • Conclude if OAP is idea or opportunity 	Individual Email	What is your vote for most viable opportunity from all presentations?	
Session 19 Week 10.A Discussion	Careers and Entrepreneurial Ethics Guest: Bill Campbell	Article Video Textbook	'New Ethics or No Ethics?', Jerry Useem 'The Secret Life of the CEO', Jim Collins 'Corporate Scandals: Is it a problem of bad apples, or is it the barrel?', Kim Clark 'What should I do with my life?', Po Bronson (optional) Carol Bartz: Do what you like Jeff Hawkins: Did I change the world? Jerry Kaplan: Best qualities of the successful entrepreneur Ch 7 Corporate Technology Ventures	<ul style="list-style-type: none"> • Personal values and moral compass • Trust in dynamic business relations • Dealing with ethical situations & conflicts 	Individual Email	Personal Business Plan Executive Summary due.	Textbook sections: 20.4 Ethics Case: Mitali Dutta: Career Crossroads (STVP 1998-007)
Session 20 Week 10.B Lecture	Course Summary	Article Video	'Top 10 Enduring Elements of High-Technology Entrepreneurship', Tom Byers Carol Bartz: Cycles Vinod Khosla: Career Development Vinod Khosla: Work Experience	<ul style="list-style-type: none"> • Summarize & discuss key learnings • Entrepreneurial knowledge and skills • Continuing studies in entrepreneurship 	Team Email Individual Email	Two summary slides with class key takeaways. ETL extra credit due (optional)	Textbook sections: Ch 20