



MASSACHUSETTS INSTITUTE OF TECHNOLOGY

15.390 NEW ENTERPRISES

Fall 2011

COURSE SYLLABUS

15.390 A. Monday and Wednesday, 2:30 – 4:00pm, Room E62-276

15.390 B. Monday and Wednesday, 4:00 – 5:30pm, Room 32-141

Overview

In 15.390, we not only study entrepreneurs, we become entrepreneurs. Students will, over the course of the semester, create a technology-based enterprise and all the essential parts of a business plan and investor pitch. Students will work in teams to launch companies, working through issues of market analysis, technology viability assessment, competitive positioning, team-building, product life-cycle planning, marketing strategy, sales channel analysis, and a strong emphasis on the entrepreneur as a sales person. We'll map the practical steps of organizational and legal issues associated with forming a brand new company, and we'll address the strategic considerations for creating companies that can quickly define and dominate a new category or disruptive technology. The course features a highly relevant line-up of valuable guest speakers and hands-on mentors who have deep and recent experience starting and building companies.

Instructors

Bill Aulet, Senior Lecturer and Managing Director of MIT Entrepreneurship Center (15.390B lead)
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Howard Anderson, William Porter Distinguished Senior Lecturer (15.390A lead)
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Office hours by appointment. Website: <https://stellar.mit.edu/S/course/15/fa11/15.390/>

Other Advisory Resources Available

We also strongly encourage you to take advantage of the Entrepreneur-In-Residence (EIR) resources available through the MIT Entrepreneurship Center. Information on them and signup procedures on the MIT E-Center web site (<http://entrepreneurship.mit.edu> or <http://ecenter.mit.edu>)

REGULARLY CONSULT “STELLAR” FOR MORE UP-TO-DATE VERSIONS OF THIS SYLLABUS AND ASSIGNMENTS.

Instructors Biographies

Howard Anderson

He is also founder and chairman of The Yankee Group, a high-technology research and consulting firm, where he served as President and CEO from 1970 until 1999. The Yankee Group was sold to Reuters in 1996.

Howard was one of the three founders of Battery Ventures, a Boston-based venture capital firm specializing in technology companies. He has served as a Managing Partner and a Special Limited Partner since the company's inception.

Network World recently selected Howard as one of the 25 most important people in communications. Howard is widely quoted in the business press and is known for instructing 7 courses a year at MIT Sloan.

Bill Aulet

Bill Aulet has a 25 year track record of business success in which he has directly raised over \$100 million in funding for his companies and, more importantly, created hundreds of millions of dollars of market value. He started his career with eleven years at IBM, culminating in being named a MIT Sloan Fellow in 1993. Upon graduation in 1994, Bill became a serial entrepreneur running two MIT spinouts as the President/CEO of both Cambridge Decision Dynamics and then SensAble Technologies. The latter became a 2 time Inc. Magazine 500 Fastest Growing Private Company. In 2003, Bill was recruited to help turn around Viisage Technology, as the Chief Financial Officer. During his two and a half year tenure, the market value for Viisage increased from approximately \$50 million to over \$500 million.

In 2005, Bill was appointed Senior Lecturer at the MIT Sloan School of Management and in 2009 became the Managing Director of the MIT Entrepreneurship Center. Bill serves on the board directors or advisors of a number of highly innovative companies.

Matt Marx

Matt Marx is an Assistant Professor of Technological Innovation, Entrepreneurship, and Strategic Management at MIT Sloan. Drawing on his own experience working in both Silicon Valley and Boston startups, he studies systematic, institutional barriers to the growth of new ventures. His current research focuses on the implications of employee non-compete agreements, which are ostensibly used to protect trade secrets but may also impact inter-organizational and cross-regional mobility, utilization of expertise, and the ability of small companies to attract talent. In other work, he examines strategy formation in new ventures as well as the allocation of equity among co-founders.

Professor Marx was previously an inventor and an executive at multiple startup companies in the speech recognition industry. As VP of professional services at Tellme Networks, he led a team of 75 in growing annualized revenue from \$5M to over \$100M. He holds seven patents as well as degrees from Stanford University, the MIT Media Lab, and Harvard Business School.

Scott Stern

Professor Stern is the co-organizer of the NBER Innovation Policy and the Economy Working Group and a Senior Fellow of the Searle Center on Law, Regulation and Economic Growth. He is an Associate Editor of Management Science, the Journal of Industrial Economics, the International Journal of Industrial Organization, serves on the Board of Management of the International Schumpeter Society, and has served on the editorial boards of the Antitrust Law Journal and the Journal of Business and Economic Statistics. In 2005, Stern was awarded the first Ewing Marion Kauffman Prize Medal for Distinguished Research in Entrepreneurship.

Stern explores how innovation — the production and distribution of "ideas" — differs from more traditional economic goods, and the implications of these differences for business and public policy. Often focusing on life sciences industries, this research is at the intersection between industrial organization and the economics of technical change. Recent studies examine the drivers of commercialization strategy for technology entrepreneurs, the determinants of R&D productivity, and the role of incentives and organizational design on the process of innovation.

Professor Stern graduated with a BA degree in Economics from New York University, and received his PhD in Economics from Stanford University in 1996. From 2001-2003 Stern was a Non-Resident Senior Fellow of the Brookings Institution and, from 2001-2010, he was an Associate Professor at the Kellogg School of Management.

Guest Speakers

We will have several guest speakers over the course of the semester. These speakers will be entrepreneurs or CEOs who have started their own companies, or people who are otherwise involved in new venture creation (e.g. venture capitalists or attorneys).

Guest speakers will provide both an overview of their venture as well as specific guidance on the topic of the session they attend. They will generally speak for 20 minutes, leaving 20 minutes for Q&A. We will do our best to get biographical information to the class ahead of time. Either way, be prepared to ask intelligent, relevant questions to our guest speakers. The quality of one's questions will impact the students' class participation grade for the semester.

Business Plan

The main deliverable for the course is a complete business plan for a viable new venture. Every student will need to submit an idea for a new business. Students will then vote on which ideas are the most interesting. The top vote getters will get the chance to pitch their ideas to the class live and work to form teams of three students to work on the business plan.

Over the course of the semester each team will develop the sections of their plans, including an executive summary and sections on vision & values, marketing analysis/segmentation, competition, value proposition, go to market, product technology, and financing. Sections will be turned in roughly every two weeks, graded, and returned with feedback. Each team will also recruit an outside advisory board for guidance. At the end of the semester, each team will submit a final business plan. We encourage students to revise all sections before submitting their final plans.

Business plans range from 15-20 pages. Sample business plans from previous will be made available on Stellar for your reference.

Other Assignments

In addition to the business plan, there is one other written assignment: a two-page “take an entrepreneur to dinner” paper. This is an individual (not a team) assignment.

Comprehensive Exercise

At the end of the course there will be a comprehensive exercise in which individual students (not teams) will have a class period (80 minutes) to develop a PowerPoint-style (i.e., bullet point) presentation outlining a business plan given an idea for a new venture.

Class Participation

Class participation is expected. We will “cold call” students who are not participating on a regular basis. Please display your name on a card in front of you at all times. Consistent with Sloan professional standards, please refrain from using your laptops during class.

After a class presentation, we expect you to respond to a survey that will be posted on Stellar, and to share your insights about the speaker within 48 hours. Your responses will contribute significantly to your class participation grade.

Unavoidable absences due to illness, a death in the family, or religious holidays are excusable but please let your TAs know ahead of time. Any other absences will be taken into account in calculating your class participation grade.

Additionally, each student will have the opportunity to grade each of his or her teammates at the conclusion of the course to ensure that appropriate credit is given to both high performers and slackers.

Readings

The textbook for the course is **Technology Ventures- From Idea to Enterprise (Byers, Dorf, Nelson). Third Edition**. Readings for the Class will be labeled “TV” and the Chapter number.

We also highly recommend getting **Inbound Marketing** by **Halligan & Shah** and **Made to Stick** by **Chip Heath and Dan Heath**. Additional copies of the books and the textbook will be made available on reserve at the Dewey Library and the MIT Entrepreneurship Center in the first floor of E40.

Most classes will start with a mini case that will be made available on Stellar before class. Additional readings will be distributed via Stellar throughout the semester. For these, we expect students to come to class prepared to discuss the readings, and familiarity with the readings will count towards class participation.

Grading

25% class participation (including responses to surveys on Stellar)

25% presentations and written assignments (including business plan sections, executive summary presentations, and “take an entrepreneur to dinner” paper)

25% final business plan

25% comprehensive exercise at end of course

Semester Timeline

All assignments are due (in paper and submitted on Stellar) at the beginning of class unless otherwise indicated.

1. Course Introduction and Elements & Role of a Business Plan (Wednesday, September 7th)
Reading: TV Chapter 1; Mini Case Study #1
2. Idea Generation (Monday, September 12th)
Reading: TV Chapter 2; Mini Case Study #2
3. Analyzing Ideas and Inspirations (Wednesday, September 14th)
Assignment #1A: Face Cards and Submit 3 Ideas Online
Reading: TV Chapter 5; TV Appendix A: “Sample Business Plans”; Mini Case Study #3
4. Speed Dating for Team Formation (Monday, September 19th)
Assignment #1B: Elevator Pitch
Reading: None

*** Student Holiday – There will be no class Wednesday, September 21st***

5. Characteristics of Successful and Unsuccessful Entrepreneurs (Monday, September 26th)
Assignment #1C: Team Formation Due
Reading: Mini Case Study #5
6. Entrepreneurial Culture (Wednesday, September 28th)
Reading: TV Chapter 12.1, 12.2, 12.7; Mini Case Study #6; Watch Zappos Video
7. Market Segmentation (Monday, October 3rd)
Reading: TV Chapter 12.9 – 12.11; Mini Case Study #7
8. Building Insanely Great Teams (Wednesday, October 5th)
Assignment #2: Executive Summary, Vision & Values and PowerPoint Presentation Due
Reading: Mini Case Study #8

*** Columbus Day – There will be no class Monday, October 10th***

9. Competition (Wednesday, October 12th)
Assignment #3: Team Advisor and Description of Target Customer Due
Reading: Mini Case Study #9
10. First Hand Market Research (Monday, October 17th)
Reading: Mini Case Study #10
11. Competitive Advantage (Wednesday, October 19th)
Assignment #4: Market Analysis/Segmentation and Competition Section Due
Reading: TV Chapter 3.7, 5.1-5.4, 10.3-10.8, 10.10; Mini Case Study #11

*** SIP Week – There will be no class Monday and Wednesday, October 24th and 26th ***

12. Value Proposition (Monday, October 31st)
Reading: TV Chapter 3.3; Mini Case Study #12
13. Rapid & Iterative Product Development (Wednesday, November 2nd)
Assignment #5: Value Proposition Due
Reading: Mini Case Study #13
14. Business Model Innovation and Optimization (Monday, November 7th)
Assignment # 6: Product Technology Section Due
Reading: TV Chapter 3.4-3.5; Mini Case Study #14
15. Sales and Distribution (Wednesday, November 9th)
Reading: Mini Case Study #15
16. Inbound and Outbound Marketing Strategy (Monday, November 14th)
Reading: Inbound Marketing by Halligan & Shah: Foreword, Chapters 1-2, 23; Mini Case Study #16
17. Financial Statements (Wednesday, November 16th)
Assignment #7: Go to Market Section Due
Reading: TV Chapter 17; Mini Case Study #17
18. Raising Money (Monday, November 21st)
Assignment #8: Take an Entrepreneur to Dinner Due – INDIVIDUAL ASSIGNMENT
Reading: Mini Case Study #18
19. Scaling the Business (Wednesday, November 23rd)
Assignment #9: Finance Section Due
Reading: Mini Case Study #19
20. Troubles Ahead (Monday, November 28th)
Reading: Mini Case Study #20
21. How to Present Your Business Plan (Wednesday, November 30th)
Reading: Made to Stick by Chip Heath and Dan Heath (Sections TBD)
22. Student Team Presentations (Monday, December 5th)
Reading: None
23. Student Team Presentations, continued (Wednesday, December 7th)
Reading: None
24. Final Exercise (Monday, December 12th)
Assignment #10: Final Business Plan Due
Reading: None

Note: While the session schedule is subject to change the assignment deadline schedule is fixed. Be sure to schedule time to complete each assignment (especially team assignments) taking into account other team member obligations. Assignment extensions will not be granted.

Assignment #1A: Face Cards and Submit 3 Ideas Online

Due Wednesday, September 14th

Submit face cards to TA. Post Ideas to Course Stellar Discussion Forum

Face Cards

Turn in 2 face cards to your TA that include your first and last name, course number, graduation year, past experience and a picture of you in the beginning of class

Short Summary of Three Business Ideas

Go to the class Stellar page and click on Forum on the left. Create a new discussion for each of your **three** ideas. Give your ideas a name, a one paragraph written summary pitch, and (if you are brave) post an elevator pitch via YouTube. Your creativity will be rewarded. Remember you are posting ideas for brand new ventures or early stage ideas you may already be working on. Your ideas should employ an application or development of technology. No consulting businesses or McDonald's franchises please. In your summary you should address the following points:

- What is the problem your product or service is going to solve?
- What types of people or what types of companies suffer from this problem?
- How widespread is this problem? How critical is it that customers solve this problem?
- What is the technology behind your product?

Assignment #1B: Elevator Pitch

Due Monday, February 19th

Post to Course Stellar Discussion Forum

Decide on your top idea for new company and develop a 2 minutes "elevator pitch" to summarize the idea. The elevator pitch should convey the overarching problem you are trying to solve and the solution your idea presents. Assume that you are stuck in an elevator with a VC and only have 2 minutes to pitch, what would you say? You will present the elevator pitch in class. Submit the idea online. Review & comment on at least 3 other ideas online.

Assignment #1C: Team Formation

Due Monday, February 26th

Email to TA

Email your TA with the list of team members and the idea (include idea name and description) your team will pursue. Each team can have up to 3 individuals from the same section. We encourage cross-campus/disciplinary teams. Teams cannot have members from different sections.

**Assignment #2: Executive Summary, Vision & Values and PowerPoint Presentation
Due Wednesday, October 5th**

1 hard copy per team turned into TA and 1 soft copy per team uploaded to Stellar for Executive Summary and Vision & Values. Bring to your presentation in hard copy to your meeting with the faculty member. No need to turn in to TA.

Executive Summary

Many books assert that this is the last part of the business plan you should write. However, we would like you to write this part first to help you outline the plan and to guide you through the semester. What you write here is not set in stone and will most likely change by the time you submit your final plan. It should include a concise (1,500 word) summary of what you think you will have in your business plan. This should NOT be a slide deck.

- Market opportunity
- Sales and marketing strategy
- Product description
- Financial projections
- Financing needed and planned exit
- Team biographies

You may want to review the handout “Tips for Researching Your 390 Project” for ideas on how to get the background information you’ll need to write the above sections.

Vision & Values

Describe in one page what your company’s vision and values are. Think about what is important to your company and your team. Draw upon inspiration from examples in class. Remember, your company value must be relevant to creating value for your target customer.

PowerPoint Presentation

The employee/advisory/investor PowerPoint presentation should be a direct reflection of your Executive Summary with the intention of selling your company to potential employees, advisors and investors.

Your team will be assigned a course faculty member and you will give this pitch in person to them sometime during this week. Presentations will be scheduled online through www.doodle.com.

This is your team’s chance to get live feedback back from a successful entrepreneur/faculty member. Take good notes because the comments you hear during this presentation should help inform the creation of the rest of your business plan sections. Be prepared to answer questions and receive lots of advice.

There is no special dress code and you will make your presentation informally sitting in the faculty member’s office

**Assignment #3: Team Advisor and Description of Target Customer
Due Wednesday, October 12th**

1 hard copy per team turned into TA, 1 soft copy per team uploaded to Stellar

Team Advisor

An important part of a new venture is developing an Advisory Board of thought leaders that have relevant industry experience. These advisors can be called upon for strategic advice or introductions to individuals in their personal networks. To gain experience with recruiting and working with an Advisory Board, we ask that your team find one individual to advise you during the business planning process. The advisor may be an alumnus, executive from a former employer, or any other contact. For the purposes of this exercise, we ask that you AVOID using other MIT faculty.

You will rely on your advisor for questions as you prepare each business plan section and for feedback once each section is completed. This feedback will be in addition to the feedback provided by the course faculty in order to provide you with another perspective on your decisions. Your advisor should be prepared to spend between 60 and 90 minutes with a member of your team for each section deliverable (approximately 5 times during the semester). The deliverable for this assignment is either a resume or biography of your advisor.

Description of Target Customer

Prepare a 1-2 page description of target customer. Paint the customer's persona and describe them in all dimensions. How big are the customers? Which industries are they coming from? Who are their customers? Where are they geographically located? What is the target customer's biggest problem and what problem do you solve? What other options do they have?

Also include a list of the first ten customers, their decision making unit (DMU) and their decision making process (DMP).

Assignment #4: Market Analysis/Segmentation and Competition Section

Due Wednesday, October 19th

1 hard copy per team turned into TA, 1 soft copy per team uploaded to Stellar

Use the Internet, trade magazines, trade shows, Dewey library resources, etc. to figure out what the current market is for your product/service, and who else is competing in this space.

Even if there is no existing market for your product/service, talk about how your target customer is spending his/her money, time and resources now, and how you intend to take an increasing slice of that money, time and resources. Remember: there are always competitors, even for seemingly innovative products.

For the section on market segmentation, you might want to answer questions like:

- What is the total being spent on the entire class of products/services of which mine is a part?
- What portion of that total is spent on my segment?
- How are these numbers changing over time?
- On what does market growth depend (lumber sales as a function of new home sales as a function of interest rates)?
- Is your opportunity a function of the overall market growing, or of a shift from one type of product to another?

- How is the market segmented? Choose one or more ways of slicing it. Examples you might consider are:
 - by industry: "x% is sold to financial services companies"
 - by finer definition of product type: "x% of tire sales are high performance tires, y% snow tires"
 - by technology risk takers: "x% is sold to innovative early adopters"
 - by geography: "x% is sold to US markets, y% of that is on the east coast"
 - by features: "x% of customers identify fast service as the top reason for buying"
 - by existing competitor: "x% buy coke, y% buy Pepsi"
 - by type of competitor: "x% of the market is served by mom-and-pop companies"

For the section on competitors, look at all the other companies serving the market now. You might want to answer questions like:

- How long have they been in business?
- What are their revenues?
- What is their annual growth?
- Who do they have partnerships with?
- How are they financed?
- What geographical locations are they targeting?
- What are the advantages of their product?
- What are the disadvantages of their product?
- What patents do they hold?

Create a comprehensive list of features offered in these products. Then compare your product to the other products in a feature-by-feature grid, showing how you do everything they do and more.

Assignment #5: Value Proposition

Due Wednesday, November 2nd

1 hard copy per team turned into TA, 1 soft copy per team uploaded to Stellar

Articulate your company's value proposition in three slides or less. Break the value proposition into primary and secondary value and identify your unique selling proposition.

Assignment #6: Product Technology Section

Due Monday, November 7th

1 hard copy per team turned into TA, 1 soft copy per team uploaded to Stellar

Technology / Product Section

In the product technology section you get to tell us about your product. You will want to cover things like:

- What is the product?
- What is unique about it?
- How does it work?

- What is your intellectual property strategy? Can and should you obtain a patent?
- Are their technical risks associated with it? (e.g., are you making a home fusion reactor that's never been built before, or is your product a new type of plastic dog food dish?) If so, how will you mitigate these risks?

Explicitly discuss the development resources you will need to complete design, specification and production for your venture, and how those resources will grow over time (i.e., number of developers needed, resources (\$\$\$, equipment), etc.)

Include a timeline outlining the major phases of development that you will need to complete in order to take your first product to market.

Assignment #7: Go to Market Section

Due Wednesday, November 16th

1 hard copy per team turned into TA, 1 soft copy per team uploaded to Stellar.

This section describes how the sales projections will be attained. The marketing plan needs to detail the overall marketing strategy that will exploit the opportunity and your competitive advantages. In this section, please include a discussion of sales and service policies, pricing, distribution, promotion, and advertising strategies; and sales projections.

Overall Marketing Strategy

- Describe the specific marketing philosophy of the company, given the value chain and channels of distribution in the market niches you are pursuing.
- Describe which geographic areas will your initially target, how will you expand geographically, and why this makes sense.
- Describe any seasonality to your business and what can be done to promote sales off-season.

Pricing

- Discuss pricing strategy vs. competition.
- Analyze gross margin per product sale and show that you can cover other expenses to reach your desired profit margin on a cost accounting basis.
- Justify the difference in price between you and the competition.
- Describe discounts for early payment.

Sales Tactics

- Described the method (direct, distributors, sales representatives, etc.) that will be used to make sales and distribute the product or service and both the initial plans and longer range plans for the sales force. Include any special requirements (e.g. refrigeration).
- Discuss the value chain and resulting margins to be given to retailers, distributors, wholesalers, and sales people.
- Describe special policies, e.g. discounts, regional exclusivity, etc.
- Describe how your sales force and sales efforts will grow and scale over time and how you will shape its growth.

Include a sales schedule with a budget including sales, advertising, and service expenses. Include what you expect the volume of each sales person/distributor to be and how that will grow. This schedule should also calculate customer acquisition cost (how much does the company spend to get each customer).

Advertising and Promotion

- Describe appropriate methods you will employ to drive customers towards your product. Consider different tactics depending on whether you are selling through channels, direct sales, OEMs. Are you going to buy “key words”? If so, what is your budget? How will you measure success? Failure?

Distribution

- Describe methods and channels of distribution you will use.
- Describe shipping costs if applicable.

Assignment #8: Take an Entrepreneur to Dinner – INDIVIDUAL ASSIGNMENT

Due Monday, November 21st

1 hard copy per student turned into TA, 1 soft copy per student uploaded to Stellar

This assignment has several purposes. We want you to start to learn what it takes to be an entrepreneur.

- What makes an entrepreneur tick?
- How did this person come up with the idea behind his or her business?
- What was this person’s background?
- Do you think you would want to start your own company?

We also want you to learn to network better, which is a big determinant of your success (or failure) as a businessperson. If you can’t find an entrepreneur, call one of the portfolio companies of a successful VC firm in the Boston area. Some good VCs:

- Atlas Venture
- Battery Ventures
- Bessemer Venture Partners
- Charles River Ventures
- Greylock Highland Capital
- Matrix Partners
- Polaris Ventures

We do not want you to interview VC’s; we want you to interview individuals who have started companies (extra credit if you can find a failure who can articulate why he/she failed).

The deliverable for the assignment is a 2-page double spaced memo. The content of the memo should answer a few or all of the questions listed above. **Remember:** This is an individual, not a team, assignment!

Assignment #9: Finance Section

Due Wednesday, November 23rd

1 hard copy per team turned into TA, 1 soft copy per team uploaded to Stellar

The financial plan is the glue that holds the entire thing together. It is the basic evaluation of investment opportunity and needs to represent your best estimates of financial requirements. The purpose of the financial plan is to indicate the ventures potential and present timetable for financial viability. It can also serve as an operating plan for financial management using financial benchmarks. This section unites the assumptions from all other sections in the plan (sales forecasts, gross margin assumptions, technology development, etc.).

Refer back to the Product Technology and Manufacturing section. How does your product development timeline relate that to your need for capital? What and when are you going to need money for? How will you generate/raise/borrow this money? Start with a cash flow analysis, by quarter, taking into account all your major expenses – people, manufacturing costs, etc – and then use a spreadsheet to determine what your quarterly burn rate will be. Show when your firm will reach cash flow break even. All great technologies must be effectively built, and then produced and serviced at a level such that the company can react to growth, as well as service requests that the industry demands.

Your financial analysis should include:

Financial Summary: Annual income statement, balance sheet, and cash flow statements for years 1-3

Pro Forma Income Statements: (monthly for year 1, quarterly for years 2-3, annually for subsequent years)

- Using sales forecasts and accompanying production or operations costs, prepare pro forma income statements for at least three years
- Fully discussed assumptions (e.g., the amount allowed for bad debts and discounts, were any assumptions made with respect to sales expenses were general and administrative costs being a fixed percentage of cost or sales) made in preparing the pro forma income statement and document them.

Pro Forma Balance Sheets: (semi-annually for year 1, annually for years 2 – 3 and onward) Prepare pro forma balance sheets semi-annually in the first year and at the end of each of the first three years of operation.

Pro Forma Cash Flow Analysis: (monthly for year 1, quarterly for years 2 – 3, annually for subsequent years)

- Project cash flows monthly for the first year of operation and quarterly for at least the next two years, detailing the amount and timing of expected cash inflows and outflows; determine the need for and timing of additional financing and indicate the requirements for working capital; and indicate how well-needed additional financing is to be obtained, such as through equity financing, bank loans, and short-term lines of credit from banks, on what terms and how is it to be repaid. Remember to use cash-based, not accrual-based accounting.
- Discuss assumptions, such as those made on the timing of collection of receivables, trade discounts given, terms of payment to vendors, salary and wage increases, and anticipated

increases in operating expenses, seasonality or cyclical business implications for inventory requirements, inventory turnovers per year, capital equipment purchases, and so forth. Again these are real-time (i.e., cash), not accrual.

- Discuss cash flow sensitivity to a variety of assumptions about business factors (e.g., possible changes in such crucial assumptions as receivables collection or sales levels relative to forecasts).

Breakeven Chart:

- Calculate breakeven and prepare a chart that shows when breakeven will be reached, and any stepwise changes in breakeven that may occur.
- Discuss the breakeven for your venture and whether it will be easy or difficult to obtain, including a discussion of the size of breakeven sales volume relative to objective total sales, the size of gross margins and price sensitivity, and how the breakeven point might be reduced in case the venture falls short of sales projections.

Ownership: Which of the founders get how much of the pie? Talk about the investment sought, but do not allude to how much you are willing to give up. In real life, this is the part you negotiate with the VC (valuation).

Cost Control: Describe how you will obtain information about report costs and how often, who will be responsible for the control of various cost elements, and how you will take action on budget overruns.

Financial Conclusions: Highlight the important conclusions, such as what the maximum amount of cash required is and when it will be required, the amount of debt-to-equity needed, how fast any debts can be repaid, etc., that can be drawn.

Addendum: Capitalization Table: Compile a capitalization table indicating ownership percentages of the founders, VCs and option pool assuming you get the financing requested when you request it. Show the valuation multiples for your company and changes in the value of ownership stakes on a year-by-year basis. **Note:** This would never appear in a real business plan, but it is a useful exercise to understand who benefits from value creation over time, and we ask you to include it for purposes of this exercise.

Assignment #10: Final Paper

Due Monday, December 12th

1 hard copy per team turned into TA, 1 soft copy per team uploaded to Stellar

This is an amalgamation of your market analysis/segmentation and competition, your product and manufacturing plan, your sales plan, your financial plan, and your marketing plan. It takes from Assignments 1-9, with a special emphasis of tying all the revenue/expenses to a time line. The business plan should be no more than 20 pages single spaced with half inch margins and including all appendices, charts, graphs, exhibits, etc.