



## ENTR210-H02: Intro to Entrepreneurship

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**Meeting time:** Monday + Wednesday, 11:30 AM – 12:50 PM

**Meeting location:** CAB 3052

**Instructors:** DR. Xi Zhang

**Email:** [xz262@njit.edu](mailto:xz262@njit.edu)

**Webex room:** <https://njit.webex.com/meet/xz262njit.edu>

**Office Hours:** 2:30 p.m. to 4:30 p.m. Thursday or by appointment

### Course Description

This course is intended for the student considering a leadership role in the commercialization of technological innovation. It covers the entrepreneurial process from conception to start-up, growth and harvesting of a new venture. It teaches students how to search for opportunities, gather resources to convert opportunities into a business, and lead the business through growth and harvest. This course covers entrepreneurship skills that are equally applicable in the startup domain and in the established corporate domain (i.e., intrapreneurship).

We consider a broad range of start-ups including high-growth, lifestyle, product-based, service-based, business-to-consumer, business-to-business, and social entrepreneurship. However, we will focus exclusively on start-ups that involve STEM-based innovation (STEM = Science, Technology, Engineering, and Math). The student is not required to develop a product or service, but will be required to form a hypothetical company around such a concept.

Students will work in teams on all aspects of venture creation. They will identify a new venture opportunity, create a business plan for it, and have this business plan subjected to financial simulation and review by their peers. Students will learn to use entrepreneurship tools for market research, business model validation, customer discovery, and fundraising.

Through lectures, visits to and from entrepreneurs, case studies, and peer reviews, the course simulates the experiences that entrepreneurs undergo in conceiving, launching, and operating a business. The course enables students to evaluate an entrepreneurial career for themselves, and provides aspiring entrepreneurs with a framework for selecting, funding, and starting their own ventures or departments within existing corporations.

Any student contemplating creating a new business venture is encouraged to use this course to reduce start-up risk. Similarly, any student with an existing STEM-based business is encouraged to use this course to learn techniques to grow the business (appropriate measures will be taken

during peer-reviews to maintain the confidentiality). Students with STEM-based Capstone or co-curricular projects are also encouraged to use their projects in this class.

## Course Outcomes

In addition to the specific course objectives, the course intends to help students develop a wide range of analytical, communication, interpersonal, and technology skills. Upon completion of the course students should have the following skills:

- Identify business opportunities and evaluate their commercial potential using research tools and entrepreneurial methodologies.
- Write, present and defend business plans and pro-forma financials that are ready for review by financiers including bankers and investors.
- Obtain the resources necessary to pursue an opportunity and to create an entrepreneurial organization.
- Assess the strengths and weaknesses of individuals in a start-up environment, including those of the student himself/herself.
- Integrate people, business structures and processes in entrepreneurship.
- Manage an entrepreneurial organization once it has been established.
- Grow a new business venture into a sustainable enterprise.
- Create and harvest value for the organization's stakeholders.

## Course Structure

### Business Model: Research, Writing, Presenting, and Peer Review

The principal project for the semester is the development of a complete business plan for a new business that has strong growth potential. Each student team will develop a concept for an innovative product or service, and a sustainable business model centered on this innovation. Each team will present the proposed a business model and company structure to the class for peer review. Students will learn both how to present innovation, and how to evaluate it. Each student will then evolve this concept into a complete business plan and submit it to two other students for evaluation from the point-of-view of investors or lenders.

### Activities and Resources at the NJIT Van Houten Library

Students must become proficient in the use of research tools in order to develop their business model. The NJIT Van Houten Library offers these tools (<http://library.njit.edu/resources.php>) and Director of Reference Dr. Davida Scharf (<http://library.njit.edu/staff/scharf/>) is available to assist in the use of these resources. Students are *strongly* encouraged to seek the assistance of Dr. Scharf particularly when researching the size and competitive landscape of their company's primary market. She can be reached at [scharf@njit.edu](mailto:scharf@njit.edu), and any of the librarians can be reached [via chat, email, or in person](#).

Dr. Sharf has prepared a [Business Research Guide](#) that is useful to the students in this course. She also makes available a [Tutorials Guide](#) and many [Research Guides](#) that are relevant to this course. Particularly important are the research guides on [citing your sources](#) and on [making oral presentations](#).

### Activities at the NJIT VentureLink Startup Incubator

In this course, students will uniquely benefit from access to the on-campus VentureLink <http://venturelink.org/>, one of the largest small business incubators in the region, to see entrepreneurial strategies at work. Students are encouraged to attend special entrepreneurial events and workshops hosted at VentureLink.

### Textbook

Entrepreneurship, 4th Edition; Andrew Zacharakis, William D. Bygrave, and Andrew C. Corbett; Wiley & Sons, Dec 2016; ISBN: 978-1-119-29880-9 (paper), ISBN: 978-1-119-29882-3 (electronic)

**Required Simulation:** Available for purchase at: <https://hbsp.harvard.edu/import/1136990>

This course uses the business plan guidelines of the Small Business Administration (during the Obama/[Contreras-Sweet](#) administration):

<https://web.archive.org/web/20170211022242/https://www.sba.gov/starting-business/write-your-business-plan>

### Prerequisites

#### Knowledge

Students are required to have conducted market research, generated pro-forma financial statements, and implemented financial and statistical functions in Microsoft Excel.

#### Courses

None.

## Tentative Schedule of Classes

Assignments must be uploaded to Canvas before class on the due date.

Week	Agenda	Reading Assignment Due	Written Assignment Due
1	Activity: Introductions to each other, to the course, and to the discipline.	Forward and Introduction chapters in TTH <sup>(2)</sup> Lesson 2 “What We Now Know”	Initial Mind Maps, Survey
2	Lecture: The value proposition canvas (VPC)	VPC instructions <a href="http://bit.ly/NJIT_Value_Prop_Canvas">http://bit.ly/NJIT_Value_Prop_Canvas</a> B&Z <sup>(1)</sup> Chapter 2 “The Ent. Process” <a href="http://researchguides.njit.edu/oralpresentations">http://researchguides.njit.edu/oralpresentations</a>	Value proposition canvas <sup>(5)</sup>
3	Activities: present your VPC in class (5 min max).		Lead or join a team (max 3 students/team)
4	Activity: New Venture Simulation: The Food Truck Challenge	Business Assumptions Exercise, and Screwing Up Customer Discovery, in Appendix of TTH <sup>(2)</sup>	
5	Activity: “Where to Play” strategic planning	B&Z Chapter 3 “Opportunity Recognition, Shaping, and Reshaping” <a href="http://bit.ly/NJIT_Where_2_Play">http://bit.ly/NJIT_Where_2_Play</a>	“Where to Play” PPT
6	Lecture: business models and the business model canvas (BMC). Activity: Count the pivots.	B&Z Chapter 4 “Understanding Your Business Model and Developing Your Strategy” Lesson 3 “Business Models and Customer Development” in <a href="https://www.udacity.com/course/how-to-build-a-startup--ep245">https://www.udacity.com/course/how-to-build-a-startup--ep245</a>	
7	Activity: present your BMC in class and discuss your confidence in it.	Business Model Design Workbook Guide Don’t worry about “cognitive murder” – use a single BMC slide and speak to individual blocks	Color-coded BMC <sup>(5)</sup>
8	Lecture: Lean Startup Methodology, testing markets, “too many pivots”.	Introduction chapter in TLS <sup>(3)</sup>	How many pivots did these students make?
9	Lecture: Testing Business Models	Review a peer’s BMC. “Testing and Experimenting in Markets” in <a href="http://bit.ly/NJIT_Lean_Startup">http://bit.ly/NJIT_Lean_Startup</a>	<b>For each BMC block</b> , post a short analysis and suggest improvements. <sup>(5)</sup>
10&11	Lecture: The Business Plan (Putting the cart before the horse?)	SBA web site <sup>(4)</sup> B&Z Chapter 7 “Business Planning Process.”	
12	Activity (bring your laptop): <a href="#">Citations</a> vs. references, <a href="#">Styles</a> , <a href="#">captions</a> , <a href="#">cross-references</a> , Endnote	<a href="http://researchguides.njit.edu/citations">http://researchguides.njit.edu/citations</a> <a href="http://bit.ly/NJIT_Sample_Biz_Plans">http://bit.ly/NJIT_Sample_Biz_Plans</a>	Select and review a sample business plan (12 paragraphs, one per criteria)
13	Activity: Market research (bring your laptop)	B&Z Chapter 5 “Entrepreneurial Marketing”, Market analysis section of SBA web site <sup>(4)</sup>	
14	Lecture: Legal and Tax Issues Activity: Marketing; Adwords campaign (bring your laptop)	<a href="#">B&amp;Z Chapter 13 “Legal and Tax Issues, IP”</a>	“Would you sign this?”
	Lecture: Sources of Finance: Loans and Grants.	B&Z Chapters 10 “Raising Money” and 11 “Debt and Other Forms of Financing”	

3/11	Spring break		
3/13			
3/18	Activity: What is the valuation of your startup firm?	SAFE by Y combinator	
3/20	Activity: Creating your financial model (bring a laptop with Excel)	“Introduction” worksheet in Financials Spreadsheet	
3/25	Activity: Expenses (bring a laptop with Excel)	“Salaries & Wages” and “Fixed Operating Expenses” worksheets in Financials Spreadsheet	
3/27	Activity: Revenue (bring a laptop with Excel)	“Sales Forecast” worksheet in Financials Spreadsheet.	
4/1	Activity: Startup Funding and Loans (bring a laptop with Excel)	“Required Start-up Funds” worksheet in Financials Spreadsheet	First draft of Financials Spreadsheet
4/3			
4/8	Thanksgiving-NO CLASS		
4/10	Lecture: Bootstrapping, Harvesting, and Valuation		Draft of business plan. <sup>(5)</sup>
4/15	Activity: Present your financials to the class		<b>NO LATE DRAFTS ACCEPTED</b>
4/17	How to pitch. Opportunity in AI	Peer business plan.	Review of peer business plan and financials (one paragraph per each of 12-point criteria) <sup>(5)</sup>
4/22	Final presentations		Final business plan and final presentation.
4/24			
4/29	Final quiz		

(1) Textbook is referred to as “B&Z”

(2) Talking to Humans by Giff Constable, in [http://bit.ly/NJIT\\_Lean\\_Startup](http://bit.ly/NJIT_Lean_Startup)

(3) The Lean Startup by Eric Ries, in [http://bit.ly/NJIT\\_Lean\\_Startup](http://bit.ly/NJIT_Lean_Startup)

(4) <https://web.archive.org/web/20170211022242/https://www.sba.gov/starting-business/write-your-business-plan>

(5) Post your work to the Canvas assignment and to the Peer Review discussion thread. If you posting a review of a peer’s assignment, reply to the peer’s post of the assignment.

**Note: Adjustments to this syllabus may be made after the semester begins. Any changes will be announced in class and posted in Canvas**

## Graded Assignments, Percent of Total Course Grade, and Type

1. Initial Mind Maps & Survey	2.5%	Individual
2. Value Proposition Canvas	2.5%	Individual (Peer access)
3. Where to Play forms	2.5%	Team
4. Business Model Canvas	5.0%	Team (Peer access)
5. Count the Pivots	2.5%	Individual
6. Peer Canvas Review	2.5%	Individual (Peer access)
7. Sample Biz Plan Review	5.0%	Individual
8. Draft Pro-Forma Financials	5.0%	Team (Peer access)
9. Draft Business Plan	5.0%	Team (Peer access)
10. Peer Biz Plan & Fin Review	10.0%	Individual (Peer access)
11. Final Business Plan	15.0%	Team
12. Final Pro-Forma Financials	15.0%	Team
13. Final Pitch	5.0%	Team
14. Comprehensive Quiz	10.0%	Individual
15. Final Mind Maps & Survey	2.5%	Individual
16. Participation	10.0%	Individual

The grade on a team assignment is shared among the team members so long as all the members contributed fairly. Every student must upload her/his assignment to Canvas, even if s/he is in a team. “Peer access” assignments must also be posted in the “Peer Review Forum” so that fellow students can access them.

Grade	Score
A	$90\% \leq \text{weighted sum}$
B+	$85\% \leq \text{weighted sum} < 90\%$
B	$80\% \leq \text{weighted sum} < 85\%$
C+	$75\% \leq \text{weighted sum} < 80\%$
C	$70\% \leq \text{weighted sum} < 75\%$
D	$60\% \leq \text{weighted sum} < 70\%$
F	$\text{weighted sum} < 60\%$

## Academic Integrity and Honesty

Integrity and honesty are of paramount importance in this course, and in the careers it supports. We will adhere to the NJIT Honor Code

<http://www.njit.edu/academics/pdf/academic-integrity-code.pdf>.

A link to TurnItIn is provided in Canvas with which students can test the authenticity of their business plan drafts. The test generates a plagiarism report. Students are strongly encouraged to revise any draft that is over 25% copied in order to make it original. The submission of a final business plan that is more than 25% copied requires prior approval of the instructor and an explanation as to why so much of it is copied. Any student submitting a final business plan that is more than 40% copied, regardless of references, receives an automatic F in the course.

## **For honor students only**

As honor students, you will be asked to prepare for an oral presentation. The presentation is to challenge you a bit, mainly to enhance your self-learning ability and to practice how to transfer professional knowledge to people with little background.

1. This presentation instead is more like a lecture that you will instruct the class. Now, you are in charge!!
2. The suggested length would be about 12-18 minutes (as a lecture) and interaction with the class is strongly encouraged.
3. The topic has to be related to new venture management and startup financing. Here are some topics to consider.

Topics:

1. Social Entrepreneurship
2. Startup Survival during Covid-19 and the new norm
3. Crowd Funding for Innovation
4. Overcome the "Valley of Death"
5. Corporate Venture Capital
6. How to compete in Platform Business
7. First Mover Advantage
8. First Mover Disadvantage
9. How to compete in the era of AI
10. How to build a founding team