

## Course Syllabus

**IEMS 325 Engineering Entrepreneurship · Fall 2018**  
**October 1st - December 10th · Mondays from 6:00pm to 9:00pm · The Garage**

325 Engineering Entrepreneurship is designed to expose you to all aspects of the business development process from ideation to the creation, financing and running of a business.

The best way to learn entrepreneurship is to do it. If you have an idea, make it real. The class project will consist of you identifying a meaningful problem to solve, conducting problem interviews, and putting together a business plan for your prototyped solution in small groups.

### Contact

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### Course Objectives

The overall goal is to help you understand how to evolve an idea into a business. We'll teach you to answer the following questions:

- How do I identify a meaningful problem worth solving?
- How do I create an effective solution to this problem?
- Does my product or service serve the intended market?
- Will people pay for my solution/product?
- Can I build a sustainable, repeatable business with this solution?

### Course Reading

- [Competing Against Luck by Clayton M. Christensen](#)
- [Running Lean: Iterate from Plan A to a Plan That Works by Ash Maurya](#)
- [Rework by Jason Fried and David Heinemeier Hansson](#)

In addition to these three books, we will share additional readings and resources throughout the course.

### Your Role

You should spend time reading, analyzing, and writing about the materials shared with you in class. It is our responsibility to see that you get the most out of your efforts. We hope to create a classroom environment that is engaging and exciting. **Your participation in class is critical to accomplishing our goal.** You should come prepared to discuss the assigned readings.

### Grading

Your grade is based on the following breakdown. *(This breakdown is not final and is subject to change when/if assignments are added or replaced.)*

#### Class Participation (10%)

Attendance	5%
Discussion, Engagement, Participation	5%

#### Assignments (40%)

Financial Model	5%
Reading Check-Ins	10%
Customer Interviews/Forces Canvas	25%

#### Final Deliverables (50%)

Lean Canvas	10%
Prototype/MVP	10%
Final Presentation	30%

For the business pitch/canvas, students will form groups of up to four people and develop an idea, pitch and a complete business model with supporting documentation for a problem they would consider solving.

Assignments turned in late will be marked off by 50%. Anything turned in 24 hours past the due date will be given a zero.

### Attendance

The attendance policy is very simple; you are expected to show up for every class on time and stay for the entire class session. You will receive one mulligan for the quarter, where missing a class will not affect your grade. If you have two unexcused absences, you will immediately get a zero for the quarter for attendance (5% of your grade). Missing a third class will result in a zero for the quarter in participation (another 5% of your grade). Any more absences and you will likely not pass the course.

### Course Prerequisite

It is your responsibility to ensure that you meet the prerequisite for this course. An understanding of accounting and finance is required.

### Additional Assignment Information

#### Financial Model

Your financial model will be submitted along with your final presentation. You will learn the details of this assignment as we near the final presentation.

#### Reading Check-Ins

You are required to submit 3-5 key takeaways (2 sentence bullet points) and come up with one relevant discussion question for each chapter of reading that is assigned. To get credit for the readings, these brief reflections must demonstrate an understanding of the reading that is more than surface level.

#### Customer Interviews

You and your team will be required to do three to five interviews per week. The interviews should be about 30 minutes and students should allow time to process the interviews and capture their findings. Teams will be asked to provide progress reports in class at least twice during the quarter.

#### Final Presentation

Your thoroughness, detail and business viability will be judged both in your deck and in your team's final oral presentation. This is a graded group deliverable. Individual grades will be modulated based on a peer review from members of the team. Attendance for the final presentation is mandatory. The presentations will be on **Monday, December 3rd from 6-9 p.m.**

### Notice of Video and Audio Recording

Students in this course may be subject to periodic audio and video recording. Such recordings will potentially be used by Northwestern University in the future and made available through various means, including web pages, to both students and advisors in the program. By registering for the course, you are consenting to such recording and consenting to have the materials made available for academic and marketing purposes.

## Weekly Schedule

**This schedule is meant to provide an overall sense of the class.  
 (It is subject to change as the class progresses.)**

### Week One (10/1): Introduction to Engineering Entrepreneurship

**In Class:**

- Welcome & Introduction to Course Topics (Syllabus review)
- Class Summary
- Jobs to Be Done Lecture Part 1 (Overview)

**For Next Class:**

- Read *Competing Against Luck* Section 1: An Introduction to Jobs Theory (pp. Intro & 0-68) and complete reading check-in
- Complete "What's a Problem You're Burning to Solve" Assignment (Due October 5th at 12am)
- "Choose Your Top Three Problems" (Due October 8th by 12pm)
- "The Mattress Interview" Assignment

### Week Two (10/8): Team Formation & JTBD Interviews

**In Class:**

- Reading Discussion
- Class Housekeeping (Team formation)
- JTBD Lecture Part 2 (Interview techniques + demonstrations)

**For Next Class:**

- Read *Competing Against Luck* Section 2: The Hard Work - and Payoff - of Applying Jobs Theory (pp. 69-150) and complete reading check-in
- "Customer Success Story" Assignment
- "Interview Screening Criteria" Assignment

### Week Three (10/15): Applying Jobs Theory to The Problem Interview

**In Class:**

- Reading discussion
- JTBD Lecture Part 3 (Customer forces canvas and clustering analysis)
- Group Progress Check-ins + Team Activity

**For Next Class:**

- Read *Competing Against Luck* Section 3: The Jobs to Be Done Organization (pp. 151-234) and complete reading check-in
- Read *Running Lean* chapters 1-5 (pp. Intro & 0-68)
- "Customer Forces + Lean Canvas First Pass" Assignment
- Complete Problem Interviews, Analysis, & Refined Jobs Statement Assignment - Round One

### Week Four (10/22): Benefits v. Features

**In Class:**

- Reading Discussion
- Lean Canvas Overview
- Benefits v. Features Lecture

**For Next Class:**

- Read *Rework* (pp. Intro & 1-132) and complete reading check-in
- Read *Running Lean* chapters 6 - 7 (pp. 69 - 94) and complete reading check-in
- "Competitive Analysis" Assignment
- Complete Problem Interviews, Analysis, & Refined Jobs Statement Assignment - Round Two

### Week Five (10/29): Refining the Jobs & Hacking the Solution, Presentation Prep

**In Class:**

- Reading Discussion
- Problem Interview Group Check-Ins
- Prototyping & Hacking the Solution Lecture
- Delivering effective presentations

**For Next Class:**

- Read *Rework* (pp. 133-End) and complete reading check-in
- Read *Running Lean* chapters 8-10 (pp. 95-126) and complete reading check-in
- Problem Interviews, Analysis, & Refined Jobs Statement Assignment - Round Three
- "Customer Forces and Lean Canvas Presentation" Assignment

### Week Six (11/5): Team Presentations, MVP

**In Class:**

- Reading Discussion
- Customer Forces and Lean Canvas Presentations
- MVP & Product Development Process Lecture

**For Next Class:**

- "MVP" Assignment
- Reading Assignment (TBD - Blog post)
- Problem Interviews, Analysis, & Refined Jobs Statement Assignment - Round Four

### Week Seven (11/12): Final Jobs Statements and Clustering, Pricing + Financial Modeling, and Marketing + Positioning

- Marketing + Positioning Lecture
- Pricing + Financial Model Lecture
- Reviewing MVPs + Final Jobs Statements
- In-Class Team Meetings with Neal, Billy, Aish for MVP ideation + final JTBD statements

**For Next Class:**

- "MVP Testing" Assignment
- Reading Assignment (TBD - Blog post)
- Complete Financial Modeling Assignment
- Final Presentation Prep

### Week Eight (11/19): Bootstrapping, Fundraising, and Startup Law 101

**In Class:**

- Venture fundraise vs. F+Seed/Angel/Series A)
- Startup Law 101 Lecture (and some war stories)
- Founder Story Deep Dive w/ Neal (anything goes)

**For Next Class:**

- Final Presentation, MVP, Financial Model, & Lean Canvas Preparation

### Week Nine (11/26): Optional Final Pitch Practice (Downtown @ Basecamp - 30 N Racine)

**In Class:**

- Final Pitch Practice

**For Next Class:**

- Final Presentation, MVP, Financial Model, & Lean Canvas Preparation

### Week Ten (12/3): Final Presentations

**Follow-up assignments:**

- Peer Evaluations
- What's next and how can we help?

### Week Eleven (12/10): Optional Class reflection, feedback, and next steps

FREE FOOD