

Course Title: Startup Lab

Course Numbers: COE2701, CS2701, MGT4803 (Cross listed, may only register for one)

Fall 2020 GTL

Instructor: Henry Owen

Office: 306

Office Hours: T/Th 9:30 to 3:30

Course Objective:

The objective of Startup Lab is to teach evidence based entrepreneurship and inspire entrepreneurial confidence.

Description: Introduction to technology ventures/startups. Different elements of technology venture creation including opportunity identification and validation, ideation, customer discovery, market analysis, minimum viable product development, business models, intellectual property, and capital raises, will be covered. The best time to learn how to “create your own job” is not the day you suddenly have to, but instead it is before you need to. The class involves getting out and interacting with the local community particularly through real world customer discovery interviews. Provides a “safe and supportive” classroom environment to improve public speaking and presentation skills.

Pre-requisites: None

Credits: 3

Purpose of course: Provide undergraduate students with the necessary vocabulary, knowledge, skills, and experience to conceive technology for solving market pain, to translate technology into a commercially viable and relevant offering, and to develop a viable business model for a startup idea. The course emphasizes cross-pollination of ideas, team members, etc., from different disciplines.

CREATE-X:

This course is one of the three components of CREATE-X: <http://create-x.gatech.edu/> CREATE-X is a faculty-led, student-focused initiative to instill entrepreneurial confidence in Georgia Tech students. Students are not required to take any of the other components and the components are not pre-requisites for each other. The history of CREATE-X may be found at: <https://coe.gatech.edu/news/startup-every-student>

STARTUP LAB:

Startup Lab is the signature element of CREATE-X LEARN. In Startup Lab, students learn about the process of evidence-based entrepreneurship and how to systematically vet ideas and validate market need. It is a 3-credit course and is open to all undergraduate students.

IDEA 2 PROTOTYPE:

Idea to Prototype (I2P) is the signature element of CREATE-X MAKE. In I2P, students get faculty mentors, guidance, seed funding, and additional university resources to build functional prototypes of their ideas. Students get 3-6 undergraduate research credits.

STARTUP LAUNCH:

Startup Launch (formerly Startup Summer) is the signature element of CREATE-X LAUNCH. During Startup Launch, teams go from a developed idea or prototype to a fully launched startup. \$20,000 in funding is provided to teams by an external investment fund.

Startup Lab Course Topical Outline Overview

The course has two phases, with the phases organized in parallel.

The first phase is a lecture series that will focus on the elements of a startup ranging from how opportunities are identified, to how ideas are conceived, to what customer discovery means, etc.

The second phase focuses on developing the core of a business model for an actual startup idea. In this second phase, students will conceive a startup idea, perform customer discovery to discover a compelling business model, and customer validation to prove market viability of the startup concept.

Startup Lab Course Topical Outline Details

Phase 1: Startup Basics

The education phase will focus on a variety of elements of a startup creation and building. The lecturers will examine of the following topics:

Opportunity: How are opportunities identified? What makes opportunities more or less monetizable? How can different opportunities be evaluated?

Ideation: Technology driven ideation of solutions to address market opportunities. How can technology be leveraged to achieve both differentiation and entry barriers? How can the time to market be balanced against completeness of technology?

Customer Discovery: Do customers validate business hypothesis consisting of the opportunity and potential solution? How should customer discovery be done?

Market Analysis: How should market research be performed? What is the competitive landscape? How big is the market? What are likely go to market strategies?

Teaming: What kind of a team is required for fulfilling the vision of the venture? When should the team members be added? How should the team members be compensated?

MVP/Validation: How to define the minimum viable product to take to market? How to use customer discovery in defining the MVP? How to build for specific customer use-cases? How to learn from deployments and product adaptation?

Business Models/Metrics: What is the business model for the venture? What are alternatives and trade-offs? What metrics should be tracked to verify chosen business model?

Pivoting: How to pivot product and business models based on customer discovery and validation? How to choose pivot direction?

IP/Legal: What is the importance of IP? When to protect IP? How to license IP that might already exist? What legal help will the venture require?

Capital: How much capital does the venture require? How to raise this capital? In what increments should the capital be raised?

Liquidity/Exit: What are likely liquidity events? What are the trade-offs?

Phase 2: Customer Discovery and Validation

For this phase of the class, students will divide and work in four-person teams. The teams will each pursue a startup concept that they propose. The concept must be a tangible product that supports the Ga Tech “maker culture”. It must be a concept that allows for customer discovery, with a sufficiently large local market. The instructor team must approve the concept.

This course follows an evidence-based startup methodology. The class will use the Business Model Canvas as a tool for defining the startup business model. There are no facts in the building, it is only by interviewing potential customers that the viability of a startup business model can be discovered and validated. Each week, students will identify hypotheses about who their customers might be and what problems or needs they have. They will then interview potential customers and partners in their market’s ecosystem. The results of these interviews will be presented in class. The instructor team will review the progress and help to set the teams in the right direction. Much of the learning comes from watching and even participating in this interaction with other teams. Teams will use this process to set the details on their business model.

The class features a workshop on how to perform Customer Discovery interviews. The nuts and bolts of how to make good hypotheses, how to identify people to interview, how to get the meetings and what to ask, and finally, how to interpret the results will be covered.

In the first half of the class, teams will focus intensely on finding product-market fit. The second half of the class, teams will shift to gathering proof that there is a successful business model that can be deployed. The major goal of the class is to learn evidence based entrepreneurship and inspire entrepreneurial confidence.

Grading:

Class participation and attendance 10%

In-class quizzes 10%

In-class presentations and presentation slides 20%

Test 1 20%

Test 2 20%

Final presentation and presentation slides (due last week of class) 20%

Academic Honesty: Follow the Georgia Tech Honor Code -

<http://www.deanofstudents.gatech.edu/>

Textbook: None, class notes

Suggested reading:

- Running Lean by Ash Maurya
- Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers by Alexander Osterwalder
- Value Proposition Design: How to Create Products and Services Customers Want (Strategyzer) by Alexander Osterwalder
- The Lean Startup by Eric Ries
- The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company by Steve Blank
- The Four Steps to the Epiphany by Steven Blank
- The Mom Test by Rob Fitzpatrick
- Thinking, Fast and Slow by Daniel Kahneman
- The Founder's Dilemma by Noam Wasserman
- Technology Ventures by Byers, Dorf, and Nelson.

Class Attendance: If you miss an exam without notice prior to the start of the exam, you will receive a zero for that exam.

Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as

soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Weekly Timeline (see separate detailed course schedule for up to date schedule)

Week 1	Startup basics overview: focus, and organization. Team formations. Startup basics overview. Business Model Canvas overview. Workshop on customer discovery interviews.
	Customer Discovery: How should customer discovery be done? Do customers validate business hypothesis consisting of the opportunity and potential solution?
Week 2	Opportunity: How are opportunities identified? What makes opportunities more or less monetizable? How can different opportunities be evaluated? Customer discovery with at least 15 interviews. Results presentation and hypothesis refinement. Focus on customer segments of the business model canvas.
	Ideation: Technology driven ideation of solutions to address market opportunities. How can technology be leveraged to achieve both differentiation and entry barriers? How can the time to market be balanced against completeness of technology? Continued customer discovery and updates to hypothesis. Focus on value proposition of business model canvas.
Week 3	Teaming: What kind of a team is required for fulfilling the vision of the venture? When should the team members be added? How should the team members be compensated? Focus on revenue models of business model canvas.
	Market Analysis: How should market research be performed? What is the competitive landscape? How big is the market? What are likely go-to market strategies? Continued customer discovery and updates to hypothesis. Focus on channels of business model canvas.
Week 4	Mid-term presentation on startup idea, refined hypothesis through customer discovery.
	Minimum Viable Product/Validation: How to define the minimum viable product to take to market? How to use customer discovery in defining the MVP. How to build Proof Of Concepts for specific customer use-cases. How to learn from deployments and product adaptation. Focus on metrics of business model canvas.
Week 5	Business Models/Metrics: What is the business model for the venture? What are alternatives and trade-offs? What metrics should be tracked to verify chosen business model? Focus on key resources/activities of business model canvas. Start customer validation phase.

Week 6	Pivoting: How to pivot product and business models based on customer discovery and validation? How to choose pivot direction? Focus on cost structures and partners of business model canvas. Continued customer validation.
Week 7	Mid-term presentation on startup prototype, preliminary results from customer validation, prototype refinements and plan.
	IP/Legal: What is the importance of IP? When to protect IP? How to license IP that might already exist? What legal help will the venture require? Continued customer validation.
Week 8	Capital: How much capital does the venture require? How to raise this capital? In what increments should the capital be raised? Continued customer validation.
Week 9	Liquidity/Exit: What are likely liquidity events? What are the trade-offs?
Week 10	Final presentations of startup idea, refined prototype, customer validation, and future plans.

Note: This syllabus was authored by the many previous instructors of Startup Lab. The course director is Joy Harris:
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