Title: *Technology Entrepreneurship: Teaming, Ideation, and Entrepreneurship: ECE 6001*

Abbreviated Title: *Technology Entrepreneurship – A, B, and TEV*

Semester: *Fall 2026*

CRN(s): 87777, 87778, 87779, 87780, 87781, 87782, 92562, 88498

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TBD

Description: The course teaches evidence-based entrepreneurship skills and principles, benefiting students launching a business or pursuing careers with technology and innovation driven companies. We designed the course to be an experiential, project-based, innovative, and cross-curricular program educating and developing future engineers and entrepreneurs through discovery and "real-world" experiences.

Pre-requisites: Graduate standing

Credits: 1-2-3-3

1= 1-hour lecture, 2= 2-hour studio, 3= 3-hours unsupervised lab, 3 =total credit hours

Purpose of Course: Provide graduate MSECE students with practical knowledge, skills, vocabulary, and experience necessary to understand entrepreneurship and intrapreneurship terminology and principles, real—21st "Centergy" engineering skills.

Student Learning Outcome:

1) Demonstrate an understanding of Evidence based Entrepreneurship through identification and analysis of potential technology-based business opportunities.

2) Apply the scientific method in customer discovery interactions through designing, executing, and evaluating business hypotheses.

3) Create a Minimal Viable Product (MVP) for one or more prototype business theses.

4) Demonstrate an understanding of the importance to continuously learn and improve in the following skills that are an important part of entrepreneurship as well as

intrapreneurship: 1) Critical thinking and problem solving, 2) Oral/Written Communication, 3) Teamwork and collaboration, 4) Leadership, 5) Professionalism and ethics, and 6) Career Management.

Grading: A = 90 – 100%, B = 80 – 89.9%, C = 70 – 79.9%, D = 60 – 69.9 %, F < 60 %

The table is the planned distribution of grading. The instructor may remove or add assignments during the semester, which may shift the distribution and total points. Those points will be reduced or added to the total. Grades are determined by the percentage of total points earned over total points graded.

Individual or Team	Description	Percentage	Points
Individual	Quizzes	19.5 %	195
Individual	Discussion	14.0 %	140
Individual	Attendance	16.5 %	165
Team Individual	Studio Assignments	50.0 %	500
	Total Points	100 %	1000

Topical Outline Overview: The course is structured around 3 platforms: 1)In-person Weekly *Lectures* on the principles, processes, and tools of technology entrepreneurship and intrapreneurship. 2)*Unsupervised lab* for real-world interactions where students and teams develop, test, and validate their ideas through customer discovery, and 3)In-person *Studio* sections where students practice, demonstrate, and share their customer discovery results and provide peer feedback.

Topical Outline:

Lecture Series

This didactic format will focus on a variety of elements of entrepreneurship and intrapreneurship. This will be a weekly lecture. The regular lectures will include the topics outlined below. Please note this is an overview, and the order, and repetition, or topics will be adjusted to maximize learning and accommodate guest lectures.

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 readiness of technology?

Evidence-Based Entrepreneurship (EBE): What is evidence-based entrepreneurship? What does evidence mean? How is evidence gathered? What does evidence gathering accomplish?

Intrapreneurship: How can an employee act like an entrepreneur within a larger organization? What are the similarities and differences?

Lean Startup Methodology: Developing businesses, products, and services through a method to shorten development cycles. How can we employ this approach on a constructed timeframe and adopt these techniques during the course?

Customer Discovery: How can we identify, listen, and learn from our customers? How can we test and validate business theses and hypotheses?

Cognitive Biases: What are cognitive biases? How do they impact customer discovery? How do you control for them when doing customer discovery and negotiations?

Business Models Canvas: What is a business model canvas? What are the nine elements of the canvas? How do the elements relate to each other? How can evidence-based entrepreneurship be used to support your business model canvas?

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

Minimal Viable Product and Rapid Prototyping: How to build a rapid prototype of a product? What are the modalities available? How can the rapid prototype help learn about what the product must be? How to use customer discovery in defining the Minimum Viable Product (MVP)?

Intellectual Property: What is the definition of intellectual property? How is it viewed, and valued, at a startup company vs. an established company?

Basic Financials and Financing: How do we assess the value of a project? What financial metrics drive business. How much capital does the venture require? How to raise this capital?

Teaming: What kind of a team is required for fulfilling the vision of the venture? How do we operate effectively and efficiently within a team?

Management/Leadership: What is management and leadership? What are the different models of leadership? Can leadership be systematically cultivated?

Global Technology Entrepreneurship: How do other countries encourage and support technology entrepreneurship? What tools do corporations use to manage entrepreneurship?

Georgia Tech Entrepreneurial Eco-System: What options do students and alumni have to launch a start-up? What organizations at Tech support entrepreneurship?

Studio Sections:

For this element of the class, students will work on teams or individually and perform real-world customer discovery. Following an evidence-based entrepreneurship methodology, students will develop hypotheses on their business model and then collect evidence to validate or invalidate their hypotheses. Students will interview and conduct tests with potential customers, users, and partners in their market's ecosystem. They'll learn how to secure, conduct, record, and assess customer discovery data, perform tests, develop and refine a minimal viable products (MVPs), validate business models, and will present in teams and individually on their discovery results. While the instructional team provides feedback, much of the learning comes from seeing what other teams have done. Throughout the semester, students will provide feedback to their peer groups and teammates, share and discuss best-practices, and engage in studio workshops.

Textbooks: (Free for students, download non-profit versions)

1. Talking to Humans, Constable & Rimalovski, https://www.talkingtohumans.com/(Links to an external site.)Links to an external site.Links to an external site.Links to an external site.
2. Testing with Humans, Constable & Rimalovski, https://testingwithhumans.com/(Links to an external site.)Links to an external site.Links to an external site.Links to an external site.

Optional Reading:

3. Business Model Generation, Alexander Osterwalder ($25)
4. Value Proposition Design: How to Create Products and Services Customers Want (Strategyzer), Alexander Osterwalder, Yves Pigneur, Greg Bernarda and Alan Smith ($25)
5. Testing Business Ideas, Alexander Osterwalder and David Bland ($25)
6. The Lean StartUpby Eric Ries, 2011. (used or new between $5-15)
7. Entrepreneurship, Theory, Process, Practiceby Donald F. Kuratko – Cengage publishing ($200)
8. Launching New Venturesby Kathleen R. Allen – Cengage publishing ($129)
9. Understanding Management by R. Daft and D. Marcic – Cengage publishing ($100-200)
10. Leadershipby Peter Northhouse – Sage publishing ($15-90)
11. Technology Ventures, Byers, Dorf, and Nelson ($10-130)
12. The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company,Blank ($20)
13. Thinking: Fast and Slow, D. Kahneman ($10)
14. The Founder's Dilemma, Noam Wasserman ($10)
15. The Invincible Company: How to Constantly Reinvent Your Organization with Inspiration From the World's Best Business Models, by Alexander Osterwalder et al ....($17)
16. Working Backwards - Insights and Secrets from Amazon, by Colin Byar and Bill Carr ($20)

Course Material and Video Recordings

All class recordings, lectures, presentations, and other materials posted on Canvas are for the sole purpose of educating the students currently enrolled in the course. Classes may not be recorded by students without the express consent of the instructor unless it is pursuant to an accommodation granted by the Office of Disability services.

Students may not record or share course materials or recordings, including screen capturing or automated bots, unless the instructor gives permission. Digitally proctored exams may require students to engage the video camera, but those recordings will not be shared with or disclosed to others without consent unless legally permitted.

Instructor Commitment:

All of the instructors commit to dedicating our time and energy to ensure that you have a productive learning environment where you feel supported in exploring technology entrepreneurship. We will provide clear instructions, timely feedback, and transparent grading criteria to help guide your progress. We will be available during office hours and responsive to email inquiries.

Student Commitment:

As the student, you agree to engage actively in class discussions, team projects, and entrepreneurial exercises with curiosity and professionalism. You will commit time and energy to complete readings and assignments, watch recordings, complete assignments in a timely manner, and will contribute fairly to team efforts. You agree to communicate openly with your peers and instructor, respect diverse viewpoints, and ask for help when needed.

For more information on Faculty and Student Expectations see: XXI. Student-Faculty Expectations | Georgia Tech Catalog

Academic Integrity:

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code. Academic Honor Code | Policy Library

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Late Assignments:

If you're aware an assignment will be late, please discuss with your TA and instructor prior to the due date. Otherwise, late assignments will be accepted, but for each 24 hour period the assignment is late, the assignment will be reduced one letter grade or point equivalent of one letter grade.

Absences and Attendance:

Students are required to attend the class in-person unless granted an institute approved absence (Institute-approved absence requestsLinks to an external site.) by the university. Attendance will be taken each lecture and studio.

- Lecture and studio attendance is worth 5 points each, a total of 10 points per week.
- If a student is more than 5 minutes late, they'll receive 2.5 points.
- If a student is 30 minutes or more late, they'll receive no points for attendance.

We recognize that students juggle work, family, and health throughout the semester so we allow students to skip or attend 3 lectures/studios remotely. Students are responsible for all material covered in their absences, and they are responsible for the academic consequences of their absences. If a student receives an approved institute absence, the student must notify all TAs and the instructor prior to the start of the missed lecture or studio. After notification, the TA and/or Instructor will discuss options to make up missed assignments.

We will comply with Georgia Tech (GT) guidelines to safely teach and attend the class. Students are expected to be familiar with and abide by the Institute guidelines. For more information on institute policies see: IV. Attendance | Georgia Tech Catalog
For more information on Institute policy on absences for illness or personal emergencies may be found at: Student Absence from Class Due to Illness or Personal Emergencies | Georgia Tech Catalog

Office of Disability Services:

If you are a student registered with the Office of Disability Services (ODS), please make sure the appropriate forms and paperwork are completed and sent to Prof. Mihalik by the end of the first week of class. The instructors will abide by all accommodations required by ODS. It is the responsibility of the student to properly arrange test accommodations for each quiz with ODS in sufficient time to guarantee space for quiz administration. ALL quiz accommodations must be handled through ODS. If the student does not register accommodations with ODS for the quiz, then the student will take the quiz at the normally scheduled times, without any additional accommodation unless the instructor is given specific directive from ODS on the students behalf. For more information on services provided by ODS use this link: Home | Disability Services

Diversity and Mutual Respect Statement:

The School of Electrical and Computer Engineering is committed to creating, supporting, and maintaining an inclusive, equitable, and respectful environment. Our teaching approach hinges upon bringing together individuals with various backgrounds, as well as academic and industrial experiences, to challenge each other. We rely upon the diversity of our community to seed innovation and share different perspectives. In this course, we critically assess and vet ideas, so it is essential that we conduct ourselves in a respectful and professional manner as we are exposed to a variety of thinking approaches.