



## CS 4803 ICD: Entrepreneurial Capstone Design

### Course Information

- **Course Prefix and Number:** CS4803
- **Course Name:** Special Topics, Entrepreneurial Capstone Design
- **Instructor:** Jennifer Whitlow, EdD

### Introduction

Students will work in teams to develop computer science solutions to real-world challenges. Projects progress from identifying a market-driven problem to delivering a functional MVP, drawing on prior coursework in areas like software engineering, algorithms, and AI. Along the way, students apply design standards, address technical and ethical constraints, and practice systematic, iterative development. The course blends hands-on prototyping (in many cases with AI), team collaboration, and insights from faculty and industry experts to transform ideas into impactful prototypes.

### Learning Outcomes

After successfully completing this course, you will be able to:

1. Synthesize knowledge from prior coursework to design and implement computer science and AI-driven solutions.
2. Define requirements and systematically develop a functional prototype that addresses real-world constraints.
3. Critically evaluate and refine designs using technical, ethical, and societal criteria.
4. Work collaboratively and communicate effectively in a professional, team-based environment.
5. Demonstrate self-directed learning by identifying design challenges and pursuing appropriate solutions.

### Core Impacts

Not applicable

## Technology & Textbooks

- **Technology:**
  - **Canvas** will be the official platform for this class regarding announcements, assignments, and grading.
  - **Microsoft Teams** will be used for general group project communications with course instructors and TAs.
- **Textbook:** There is no required textbook for this course. All supplemental course materials will be provided in the files section of Canvas or linked to the corresponding module/assignment.

## Course Structure

The course meets twice a week and will include a mix of lectures, discussions, team presentations, and project work time. Starting in Week 4, your team will also have a weekly 1:1 coaching session, alternating between the instructor and an external coach, where you'll share progress and get personalized guidance to keep your project moving forward.

The course is organized into five modules with key deliverables, and each module concludes with a presentation and peer review, giving you the chance to showcase your work and learn from your peers.

- Module 0: Ideation and Team Formation
- Module 1: Customer Discovery
- Module 2: Design & MVP
- Module 3: Final Prototype
- Module 4: Capstone Showcase

## Grading Policy

The course is graded on a letter grade basis.

- **A:** 90-100
- **B:** 80-89
- **C:** 70-79
- **D:** 60-69
- **F:** 59 or below

The final course grade is calculated based on the following deliverable categories:

- **Participation:** 20%
- **Assignments:** 25%
- **Pitches:** 15%
- **Final Report & Demo:** 40%

# Course Policies

## Collaboration

All work in this course must be completed either individually or within your assigned project team, as specified in each assignment. Unauthorized collaboration, plagiarism, or any form of academic misconduct will not be tolerated. Georgia Tech upholds a community built on trust, integrity, and honor, and students are expected to adhere to the highest ethical standards.

Suspected violations of the **Academic Honor Code** will be reported to the Office of Student Integrity for investigation and appropriate action.

For more information, see: <http://www.policylibrary.gatech.edu/student-affairs/academic-honor-code>.

## Use of AI

AI and generative AI tools may be used in this course as aids for **brainstorming, idea generation, and design exploration**. These tools can help spark creativity and support the design process, but they are not a replacement for your own technical work, problem-solving, or analysis.

When using AI, students should:

- **Be transparent:** note when and how AI tools contributed to your work.
- **Think critically:** check and refine AI outputs rather than accepting them at face value.
- **Take ownership:** ensure your final deliverables are your's and your team's own ideas, designs, and decisions.

Responsible use of AI is encouraged and reflects professional practice, where AI is increasingly a tool for innovation. **Over-reliance or failure to disclose AI use, however, will be treated as a violation of the Georgia Tech Honor Code.**

## Georgia Tech Honor Code:

Throughout the course, students are expected to operate with honesty and integrity, abiding by the Georgia Tech Honor Code. For additional details, visit <https://policylibrary.gatech.edu/student-life/academic-honor-code>

## Student-Faculty Expectations:

The Georgia Tech community believes that it is important to continually strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. Therefore, we herein endeavors to enumerate the specific expectations of each side. However, this document is not intended to be either comprehensive or limiting in regards to the Institute's statutes. Ultimately, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. We remain committed to the ideals of Georgia Tech, agree to abide by these principles in our time here, and will encourage each other to uphold these responsibilities.

For additional details, please visit <https://catalog.gatech.edu/rules/21/>

## **Expectations Regarding Guest Speakers & Mentor Meetings**

Throughout the semester, you will have the opportunity to interact with GT alumni, founders, industry experts, and members of the broader entrepreneurial ecosystem. Students are expected to actively participate in these interactions by reviewing any background information provided on each guest, preparing relevant materials or documentation about your team's project, and engaging in thoughtful, professional discussions.

Many of our guest speakers will invite you to connect with them personally. Should you wish to connect with any of the guests, I ask that you please wait until after the date in which they speak so that they may provide you with their preferred way to connect and have context for the connection.

## **Participation/Attendance**

One of the most important aspects of entrepreneurship is a strong network, for this reason, your attendance and participation in class each week is vital. Participation points will be assessed based on a student's daily attendance in class, peer reviews, active participation in course discussions/presentations, and consistent updates on your team's bi-weekly sprints.

## **Late Work & Questions Regarding Grades**

- **Late Work:** Late work will only be accepted for this course with prior approval/accommodations from the instructor, an institute approved absence, or other approved accommodations. It is your responsibility to submit all your assignments by the posted due date and time. In some cases, a grace period may be extended for an assignment. If you do have an institute approved absence or accommodation, you will need to communicate with your instructor and provide documentation as early as possible.

**Questions Regarding Assignment and Course Grades:** Rubrics with comments will be used to grade all assignments that are not graded for completion. If you would like to discuss your grade or individual assignments, please email your instructor to schedule a time to meet or schedule time during office hours.

# Campus Resources

## Office of Disability Services

The Office of Disability Services collaborates with students, faculty, and staff to create usable, equitable, inclusive, and sustainable learning environments. However, there may be times when there are aspects of the instruction or design of a course that results in barriers to accurately assess achievement. When that is the case, the Disability Services staff will work with you to arrange for accommodations. <https://disabilityservices.gatech.edu/students/getting-started>

Please make an appointment with ODS to discuss your needs and to obtain an accommodation letter. Additionally, please email me as soon as possible to set up a time to discuss your learning needs.

## Mental Health & Well-Being:

Georgia Tech has many resources available regarding mental health and well-being. It is important to take care of yourself so that you can be successful in your academic and personal life. Take time to explore these resources at <https://wellnesscenter.gatech.edu/> and ask a trusted staff or faculty member for help if you are ever feeling overwhelmed.