Masters Project

Course Information

Instructor: Divya Mahajan (divya.mahajan@gatech.edu)
Course Prefix and Number: CS 6999 M27
Term: Fall 2026

Course Description

Independent graduate-level research conducted under the supervision of a faculty advisor. The project may be completed as a paid or volunteer research experience, with the specific modality determined collaboratively by the student and faculty mentor. The course emphasizes the development of advanced research skills, critical thinking, and professional communication within the discipline.

Course Learning Outcomes

1. Communication

- Demonstrate proficiency in professional and discipline-specific language
- Present ideas clearly and effectively in both oral and written formats
- Produce well-structured, concise, and grammatically accurate written work
- Interpret, evaluate, and create visual representations of complex ideas

2. Creativity

- Apply innovative and flexible approaches to problem-solving
- Integrate diverse concepts and methodologies effectively
- Demonstrate intellectual resourcefulness in the use of information

3. Autonomy

- Work independently while recognizing when to seek guidance
- Incorporate feedback constructively to improve work quality
- Manage time efficiently to meet project goals and deadlines

4. Resilience and Problem-Solving

- Persevere through challenges and adapt to unforeseen obstacles
- Demonstrate flexibility and willingness to revise approaches

- Effectively troubleshoot and optimize research processes

5. Intellectual Development

- Recognize the complexity and ambiguity inherent in research problems
- Evaluate multiple perspectives and potential solutions
- Acknowledge limitations in knowledge and identify areas for further inquiry

6. Critical Thinking and Analysis

- Apply reflective and iterative approaches to problem-solving
- Identify root causes and develop appropriate solutions
- Critically assess assumptions, arguments, and evidence

7. Research Process and Inquiry

- Formulate research questions and hypotheses grounded in the discipline
- Collect, analyze, and interpret reliable data
- Understand how knowledge is generated, validated, and communicated

8. Disciplinary Knowledge

- Understand what constitutes meaningful contributions within the field
- Engage with key literature and foundational works
- Apply insights from scholarly sources to the research project

9. Project-Specific Knowledge and Skills

- Demonstrate mastery of relevant concepts, methods, and tools
- Apply appropriate methodologies to the research problem
- Develop and execute a coherent and rigorous research plan

10. Ethical Conduct in Research

- Adhere to principles of Responsible Conduct of Research (RCR)
- Demonstrate integrity, accountability, and ethical decision-making in all research activities

Required Course Materials

No textbooks or materials are required. Resources for research are determined in consultation with the instructor.

Grading Policy

This course is graded on a **Visitor (V) / Withdrawn (W)** basis.

- A grade of **Visitor (V)** indicates that the student has made acceptable progress in the research project.
- A grade of **Withdrawn (W)** indicates that the student did not meet the expectations for satisfactory performance during the term.

The grade will be assigned based on agreed upon objectives commensurate with the difficulty and scope of the project, the number of credit hours, as well as the technical proficiency of the student. It is the joint responsibility of the instructor and the student to discuss expectations and how meeting or not the expectations affects the final grade. The grading process will be clearly articulated to the student to allow reasonable prediction progress towards the final grade throughout the semester.

Attendance Policy

This course does not include scheduled class meetings. Masters students will participate in research activities on a weekly basis commensurate with registered credit hours and as discussed with faculty research mentors.

Academic and Research Honesty/Integrity Statement

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 the Student Code of Conduct and the Academic Honor Code, especially Appendix A: Graduate Addendum to the Academic Honor Code.
Students are expected to perform research in an ethical and responsible manner.
Any student suspected of cheating or plagiarizing 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.
Allegations of scientific or scholarly misconduct are handled in accordance with the procedures outlined by the Policy for Responding to Allegations of Scientific or Other Scholarly Misconduct.

Core IMPACTS

Not applicable

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services 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.

Student-Faculty Expectations

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. The Student-Faculty Expectations articulates some basic expectations that you can have of me and that I have of you. Additional information for research-related work is given in The Expectations of Advisors and Advisees. 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.