

CS8803 Introduction to Research Syllabus

Summer, 2026

Delivery: 100% Web-Based, Asynchronous

Dates course will run: Summer Full Semester Term

Instructor Information

Nicholas Lytle, nlytle3@gatech.edu

TA Staff:

Please see Ed Discussion Post for most up to date staff listing and contact.

Office Hours: Ed Discussion will serve as primary contact mechanism for staff (Ed Discussion does have a private contact feature for sensitive messages). If something needs to be discussed through video conferencing, we will offer video conferencing with TA or Instructor by appointment.

General Course Information

Description

This course serves as a general introduction to research methods and CS research more specifically. Students will understand how to conduct, analyze, and communicate research in a variety of CS domains. Students will develop their own independent research in the form of a group written literature review and an independent research proposal.

Pre- &/or Co-Requisites

There are no pre-requisites for this course. This course will be much more writing and reading intensive than other courses at OMSCS.

Course Goals and Learning Outcomes

[To demonstrate mastery of the goals above, students will be able to do the following:

- Identify elements of the research lifecycle.
- Identify common research methodologies in computer science in a variety of subfields.
- Develop a comprehensive research proposal, outlining an original research question, a method of answering that question with appropriate data analysis methods, and able to communicate the broader societal impacts and intellectual merit of pursuing such research.
- Identify social structures of research, including funding agencies, PhD programs, etc.
- Demonstrate how to search for, read, and interpret academic research articles.
- Demonstrate how to synthesize research articles into an original literature review.

Course Materials

All course materials will be within the Canvas Learning Management System.

Course Text

There is no textbook for this course. Required and optional readings will be provided through Canvas.

Course Website and Other Classroom Management Tools

This course will use Canvas for assignment submissions, Ed Discussion for course discussion, and PeerFeedback for peer feedback.

Course Requirements, Assignments & Grading

The requirements for this course are broken down into three main categories: the group research project, the individual research proposal, and effort on the quizzes and peer grading/participation. The workload for this course will focus heavily on academic and technical writing.

Assignment Distribution and Grading Scale

Assignment	Description	Weight (Percentage , points, etc.)	Due Date
Group Systematic Literature Review		40%	See Canvas for most up to date due dates
Group Project Check in 1: Procedural Overview	Groups will write the Inclusion/Exclusion, Database, Search String, and Motivation for the Paper.	5%	
Group Project Check in 2: RQs and Analysis Procedure	Groups will write the Final RQs and method of obtaining answers to these RQs.	5%	
Group Project Check in 3: Introduction and Methodology Section	Students will have the final or near final set of papers. Students will produce an introduction and methodology section to their Literature Review.	5%	
Group Project Check in 4: Results	Students will write the results and discussion section for the group paper.	5%	

Group Project Check in 5: Discussion			
Group Project: Final Paper	Final Report on Group Research project (structured as an ACM article)	15%	
<i>Individual Proposal</i>		40%	
Literature Review Reports	Reports on Reviewed Papers in Preparation for the Research Proposal	12% (6 * 2%)	
Individual Proposal: Research Question Document	Intermediate Research Question Document detailing proposed RQs for Proposal	4%	
Individual Proposal: Methodology Section and Measures	Intermediate Discussion of Methodology for Proposed Research	5%	
Individual Proposal: Data Analysis Procedure and Schedule	Intermediate Discussion of Data Analysis for Proposed Research	4%	
Final Proposal Document	Overall Individual Research Proposal Document (structured as an ACM article)	15%	
<i>Peer Feedback, Participation and Training</i>		20%	
Peer Review: Final Proposal	Structured Peer Review to give feedback on final individual Research Proposal	2%	
Peer Review: Final Group Paper	Structured Peer Review to give feedback on final Group Paper	2%	

Peer Review: RQ Document	Intermediate feedback on students Research Question document for their Independent Proposal	1%	
Peer Review: Methodology Section	Intermediate feedback on students plan to carry out study for their Independent Proposal	1%	
Peer Review: Data Analysis and Schedule	Intermediate feedback on students Data Analysis and Schedule of Implementation	1%	
Peer Review: Group Procedural Overview	Intermediate feedback on group projects procedural overview	1%	
Peer Review: RQ and Analysis Procedure	Intermediate feedback on group projects RQs and Analysis	1%	
Peer Review Group Project: Introduction and Methodology Section	Intermediate feedback on group projects introduction and methodology section	1%	
Group Project: Results and Discussion Section	Intermediate feedback on group projects introduction and methodology section	1%	
Participation in Forums and Resource Gathering	Assessment of Student Activity participating in group discussions in forums	2%	
12 Modules Quizzes	End of Module Quizzes related to overall topics in Research Methods	6%(12*.5%)	
Citi Training	Research Training given by University	1%	

Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

There will be no curve. Grades will be updated in the Gradebook regularly to reflect what students can expect for a final grade.

Extra Credit Opportunities

Extra Credit opportunities are not guaranteed in the semester but may include participating in research studies, taking surveys, or completing additional tasks related to your research proposal. These will be posted with enough time for students to complete.

Submitting Assignments

All assignments (homework, knowledge checks, exams etc.) must be completed and submitted within the Canvas. Sending assignments (homework, knowledge checks, exams etc.), whether early, on time, or late to the professors or TA staff through email is not permitted and will not be accepted. If there are technical issues, please notify the help desk, as well as the professor immediately.

Assignment Due Dates

All assignments will be due at the at 11:59:59pm EST unless otherwise noted. All assignments are due per the Eastern Standard Time Zone (EST). Eastern Standard Time is UTC -5. Eastern Daylight Time is UTC -4. We will not accept assignments submitted late due to time zone issues. You should update your canvas to account for EST if you are in a different time zone.

Late and Make-up Work Policy

Students are expected to complete the work on time by the due dates. In case of an emergency, please reach out to TA team through a private Ed Stem post, so we can come up with a plan to make up for the work or alternative solutions, depending on the type of the emergency and the impact it has. Late work may be accepted without reason with a 20% reduction in final grade for each 24 hour period late.

Grading and Feedback

Feedback on quizzes will be given automatically. We will target giving feedback on written assignments within 1 week of submission. Feedback on progress updates for Research Proposal and Group Research Project are designed to prepare students for their final cumulative submissions on both projects.

Technology Requirements and Skills

Computer Hardware and Software

- High-speed Internet connection
- Laptop or desktop computer with a **minimum** of a 2 GHz processor and 2 GB of RAM
- Windows for PC computers OR Mac iOS for Apple computers.
- Complete Microsoft Office Suite or comparable and ability to use Adobe PDF software
- Latest versions of Mozilla Firefox, Chrome and/or Safari browsers

- Slack installed

Technology Skills

Students will need to be familiar with how to write in word processors and be able to learn how to write in structured markdown document editors (LaTeX). Resources will be provided on how to write in LaTeX.

Onboarding Quiz and Proctoring Information

All Georgia Tech online degree and certificate students are required to complete the Onboarding Quiz with Honorlock in the first week of the course. Honorlock is utilized for student identity verification and to ensure academic integrity. Honorlock provides student identity verification via facial and ID photos. You may also be asked to scan the room around you. The Onboarding Quiz is needed to help make sure that your identity is verified and that your system is set up to work with Honorlock online proctoring tool. You are required to complete this quiz early in the semester to avoid problems when taking proctored exams.

Artificial Intelligence Policy

Student will engage in activities including reading and summarizing academic texts, writing academic texts, and giving feedback on other students academic writing. Each of these activities are to be assumed by the grader as the student’s own original thoughts and egregious use of chat-gpt cited or uncited use of AI technologies to complete assignments may results in the student receiving a 0 on the grade. Some examples of AI use and their verdict are below:

Type	Example Prompt	Verdict
Full Generation	“Given this research proposal [ATTACH] can you write a peer review given these guidelines [ATTACH].” “Please generate a summary/connection for this paper.”	Unacceptable
Brainstorming	“Can you come up with ways that students might use ChatGPT on a research proposal assignment?”	Acceptable, But Declare Use
Copyediting	“Could you help me rephrase this paragraph to be a bit clearer as to the broader impacts?” ; ‘Can you check this paper for spelling mistakes?’	Acceptable, But declare Use
Generating Proposal Elements	“Can you come up with a list of questions for my survey given that the research question is X?”; “Can you give me authors that work in this field to look up?”	Sometimes Acceptable, But declare Use and unlike to be as effective as deeper research

Technology Help Guidelines

30-Minute Rule: When you encounter struggles with technology, give yourself 30 minutes to ‘figure it out.’ If you cannot, then post a message to the discussion board; your peers may have suggestions to assist you. You are also directed to contact the Helpdesk 24/7.

When posting or sending email requesting help with technology issues, whether to the Helpdesk, message board, or me use the following guidelines:

- Include a descriptive title for the subject field that includes 1) the name of course 2) the issue. Do NOT just simply type “Help” into the subject field or leave it blank.
- List the steps or describe the circumstance that preceded the technical issue or error. Include the exact wording of the error message.
- When possible, always include a screenshot(s) demonstrating the technical issue or error message.
- Also include what you have already tried to remedy the issue (rebooting, trying a different browser, etc.).

Course Policies, Expectations & Guidelines

Communication Policy

- Email course questions and personal concerns, including grading questions, to me privately using... Do NOT submit posts of a personal nature to the discussion board unless it is a private post on Ed Discussions.
- Email will be checked at least twice per day Monday through Friday; Saturday and Sunday, email is checked once per day. During the week, I will try to respond to all emails within 24 hours; on weekends and holidays, allow up to 48 hours. If there are special circumstances that will delay my response, I will make an announcement to the class.
- Student Forum/Q&A discussion boards will be checked twice per day Monday through Friday; Saturday and Sunday, these discussion boards will be checked once per day.
- For questions related to technology, the Digital Learning Support team at [Digital Learning Support Team Help](#) for assistance. You can also reach the Canvas Hotline by phone at 1(877) 259-8498 or by email at [Instructure Support](#).

Online Student Conduct and (N)etiquette

Although it is not expected to be a problem in a graduate-level class, students are asked to behave in the discussions and other class interactions professionally and civilly. If you are in doubt, do not post it! Instructors reserve the right to remove any postings deemed inappropriate, unprofessional, or otherwise distracting from the course.

Communicating appropriately in the online classroom can be challenging. To minimize this challenge, it is important to remember several points of “internet etiquette” that will smooth communication for both students and instructors:

1. Read first, Write later. Read the ENTIRE set of posts/comments on a discussion board before posting your reply to prevent repeating commentary or asking questions that have already been answered.
2. Avoid language that may come across as intense or offensive. Language can be easily misinterpreted in written, electronic communication: review email and discussion board posts BEFORE submitting. Humor and sarcasm may be easily misinterpreted by your reader(s). Try to be as matter-of-fact and professional as possible.

3. Follow the language rules of the Internet. Do not write using all capital letters because it will appear as shouting. Also, the use of emoticons can be helpful when used to convey nonverbal feelings.

4. Consider the privacy of others. Ask permission before giving out a classmate's email address or other information.

5. Keep attachments small. If it is necessary to send pictures, change the size to an acceptable 250kb or less (one free, web-based tool to try is picesize.com).

6. No inappropriate material. Do not forward virus warnings, chain letters, jokes, etc., to classmates or instructors. The sharing of pornographic material is forbidden. NOTE: The instructor reserves the right to remove posts that are not collegial and do not meet the Online Student Conduct and Etiquette guidelines (above).

University Use of Electronic Email

A university-assigned student e-mail account is the official university means of communication with all students at Georgia Institute of Technology. Students are responsible for all information sent to them via their university-assigned e-mail account. If a student chooses to forward information to their university e-mail account, he or she is responsible for all information, including attachments, sent to any other e-mail account. To stay current with university information, students are expected to check their official university e-mail account and other electronic communications on a frequent and consistent basis. Recognizing that some communications may be time-critical, the university recommends that electronic communications be checked minimally twice a week.

Plagiarism & 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. All students enrolled at Georgia Tech, and all its campuses, are to perform their academic work according to standards set by faculty members, departments, schools, and colleges of the university; and cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which appropriate sanctions are warranted and will be applied. For information on Georgia Tech's Academic Honor Code, please visit [GT Honor Code Guide](#).

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, which will investigate the incident and identify the appropriate penalty for violations. Unauthorized or authorized but undeclared use of AI tools are considered plagiarism.

Collaboration & Group Work

Collaboration is explicitly required in the group research project. Every student is expected to contribute an equal amount of time and effort to the group project though it is not required that they do equivalent work in terms of the same activities. It is the responsibility of the group first to make sure that all students are working together in a means that is satisfactory to all participants. If a student is not working well with others either in a manner that violates student code of conduct or in a manner in which they are contributing less than their allotted amount, please contact the TA who serves as the advisor to the group project. The earlier that this type of behavior can be identified and relayed to the staff, the better the chance for rectification. Student will be given the opportunity to evaluate their team members contributions at the end of

the course for the group project. In events where multiple team members agree with the assessment that a student underperformed drastically, an adjustment to the individual student's grade and the remaining set of students' grade on the group project may be made. The same procedure can happen for students who have been identified by their team as overperforming and doing particularly well (i.e. a higher individual grade) but there is no adjustment penalty to your group grade in recognizing the overperformance of one member of the group.

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 [GT 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 to set up a time to discuss your learning needs.

Copyright

Among the materials that may be protected by copyright law are the lectures, notes, and other material presented in class or as part of the course. Always assume the materials presented by an instructor are protected by copyright unless the instructor has stated otherwise.

Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgment, and responsibility between faculty members and the student body. See [GT Student-Faculty Expectations](#) for an articulation of some basic expectations 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.

Subject to Change Statement

The syllabus and course schedule may be subject to change. Changes will be communicated via the canvas notification tool and through email with enough time to allow students to be able to address changes in schedule. It is the responsibility of students to check email messages and course announcements to stay current in their online courses.