CS 3790-A Syllabus

Introduction to Cognitive Science, Section A, 3 Credits

Fall 2026

Instructor Information

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Teaching Assistants: TBD

General Course Information

Description

CS 3790 is a 3-credit introductory course on cognitive science. Cognitive science is an interdisciplinary study of mind and intelligence. The core question is how does the mind work? Cognitive science lies at the intersection of computer science (especially artificial intelligence), psychology, biology (especially neurobiology), education, linguistics, anthropology, and philosophy.

From the Georgia Tech course catalog: “Multidisciplinary perspectives on cognitive science. Interdisciplinary approaches to issues in cognition, including memory, language, problem-solving, learning, perception, and action.”

The course will consist of a series of lectures and reading assignments, a series of quizzes, an essay, explorations, and discussions.

Delivery Method: In-person

Pre- and/or Co-Requisites

An open and inquisitive mind! Willingness to attend the class and participate in the discussion. An aptitude for reading! This course requires substantial reading and writing. Some background in basic computer science and programming such as data structures and algorithms.

Course Learning Outcomes

Upon successful completion of this course, you should be able to:

- Understand and participate in scholarly conversations on cognitive science.
- Read and understand cognitive science papers and literature.
- Become conversant with the central topics, themes, and perspectives that drive the study of cognitive science, including their historical development and the state of the art.
- Understand the variety of methods used to explore cognitive science, including the capabilities and limitations of different cognitive science approaches.
- Analyze and address problems in computing from a cognitive science perspective, informing work in human-centered computing, information system design, digital media, educational technology, and related fields.

Required Course Materials

MIND, An Introduction to Cognitive Science, Paul Thagard, MIT Press, 2nd edition, 2005. (Available free online.)

Additional readings will be specified in the class schedule and provided digitally through Canvas.

Supplementary references: Cognitive Science by Freidenberg and Silverman (SAGE, 2016); The MIT Encyclopedia of the Cognitive Sciences, Wilson and Keil, eds. (MIT Press, 1999).

Grading Policy

Final grades will be calculated based on the weighted components below. The final grades will not be curved.

At Georgia Tech, final course grades are awarded on a scale of A–F with no +/- grades permitted.

Assignments

- Class note-taking and Ed participation: 15%
- Surveys: 5%
- Explorations: 10%
- Research paper: 35%
- Quizzes: 35%

Description of Graded Components

Class Note-Taking and Ed Participation: Students will take turns taking class notes and posting them to Canvas within a day. Active participation in class discussions and on Ed is expected.

Surveys: Course surveys throughout the semester.

Explorations: A special collection of assignments allowing you to explore new areas of AI through a cognitive science lens.

Research Paper: Each student will write a research paper on a topic of their choosing related to cognitive science. Three milestone assignments will guide students. Please use the APA style for references.

Quizzes: Approximately 12 quizzes via Canvas, about one per week. We will count the 11 best scores.

We will assign extra credit to exemplary quizzes, presentations, notes, and papers. It is possible to get a score higher than 100%.

Course Policies

Attendance and/or Participation

Class attendance and active participation in class and online discussions are mandatory. Each student is allowed two absences during the semester plus two excused absences upon notifying the TA.

All absences beyond these will need to be approved by the Georgia Tech Office of the Dean of Students.

This class is reading intensive. If a student is unable or unwilling to read and discuss papers, as well as take notes and post them, then this may not be the right course for them.

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 and the student Code of Conduct.

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.

On one hand, we strongly encourage collaboration in this class. On the other hand, we will respect Georgia Tech's honor code of academic conduct. This means that any work submitted by a student must be his or her own.

Students are encouraged to consult resources available on the web and elsewhere. However, any material taken from any resource must be properly attributed. The paper must reflect the student's own analysis, synthesis, and writing.

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 (404-894-2563) 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 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. The Student-Faculty Expectations articulate 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.

Collaboration, Group Work, and Use of Generative AI

If you wish, you are permitted to use ChatGPT and other LLMs to support your writing for any assignment. However, if you do so, you must do both of the following:

1. You must properly cite each and every section within which the tool was used, even if you have rephrased the generated information. See the APA guidelines for proper citation methods.

2. In each submission that used such a tool, you must include an appendix of no less than 500 words within which you reflect on the effect of using that tool on your writing (style, voice, emphasis, etc.).

Extensions, Late Assignments, and Re-Scheduled/Missed Exams

There are no examinations in this class. Quizzes are administered through Canvas on a weekly basis.

Please contact the TAs to schedule a makeup quiz if needed. For other assignments, extensions should be discussed with the instructor in advance.

For emergencies, please go through the Dean of Students' office: https://gatech-advocate.symplicity.com/care_report/

Official Course Communication

The Canvas site for the class will provide information about the course including a day-by-day class schedule, and reading and writing assignments.

Georgia Tech generally recommends students check their Georgia Tech email once every 24 hours.

Office Hours

TBD. Please check Canvas for updated office hours.

Campus Resources for Students

A list of resources for undergraduate students' academic success and information about advising can be found at Success at Tech.

Student Well-Being

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness-related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being.