

MGT & Leadership in Computing
CS 8803
3 Credits

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COURSE DESCRIPTION: Management & Leadership in Computing is a project-driven course in which Online Masters students in Computer Science (OMSCS) partner with the Human Augmented Analytics Group (HAAG) to manage research projects involving novel data, analytics, and computer science methods. Past projects have involved computer vision, Generative AI, and Natural Language Processing. No experience in these fields is necessary for success in this course.

Working in small teams, OMSCS students enrolled in the course will embed in the HAAG organizational structure and design and implement procedures that align with the [Georgia Tech strategic plan](#). Additionally, These OMSCS teams will be responsible for hands-on project management of research teams. Students will learn from each other across disciplines as they help manage the work of the research groups, which consist of faculty, researchers, and students from Georgia Tech as well as outside partners. OMSCS students enrolled in the course will be assessed based on two components: their contribution to the management of *research group operations* and their work on a particular *organizational leadership initiative* of their choosing, described further below.

The course model empowers students to take ownership over a research collaboration, offers students experience with data analytics and computer science research in a supportive active learning environment, and exposes students to management and leadership techniques. This course is ideal for students with some background or interest in computer science, data science, analytics, or computational methods, along with a management and leadership background and/or interest. Students may also use the course to amass project management certification hours.

LEARNING OBJECTIVES: After completing MGT 8803 / CS 8803, students should be able to:

1. Evaluate management methodologies and frameworks to determine their effectiveness in interdisciplinary, research-driven teams involving computer science, data science, and analytics;
2. Develop a structured plan that incorporates management and leadership concepts and frameworks and focuses on a particular initiative area to facilitate execution of a research project;
3. Synthesize project outcomes, team dynamics, risk management strategies, and related topics into a professional management report that critically reflects the challenges and successes of managing an interdisciplinary data-driven research initiative.

CLASS POLICIES:

1. Course community: Show respect for your fellow students and instructors by being punctual, courteous, and participating actively in course activities. The class norm is to turn your camera on in virtual meetings.
2. Communication: Students are responsible for all material and communications posted on Canvas, or sent via email, Slack, or other course communications channels. It is typically expected that students inform their teams of communication availability and periods of time where they will be unresponsive. Note, you are only being asked to disclose PERIODS of inactivity and NOT your reason for inactivity.
3. Late Policy: Students will be given a one-week grace period on two assignments in the course excluding the oral and written final which must be submitted on-time. Accommodations for the final should be requested by the student as soon as possible through communication with the instructional staff.
4. Attendance Policy: There will be several meetings that students are given access to during this course all are optional, but some meetings will request the student to review a meeting recording and complete a asynchronous

activity in the case that they are unable to attend. Course meetings will be once a week and are held for one hour. The time will be set based on availability of the students in the first week. It will not be possible to accommodate all availability; the best fit time will be chosen. Students who are unable to attend the weekly course meetings will need to complete an asynchronous activity which contributes to their attendance grade.

5. Academic honesty and plagiarism: You are required to familiarize yourself with and abide by the Georgia Institute of Technology's Academic Honor Code in all aspects of participation in this course, including the section establishing student responsibilities with respect to academic integrity. Compliance with the Academic Honor Code is a condition of enrollment in the College of Business. If the instructors suspect that any student has violated that Academic Honor Code or the Honor Agreement, we will refer the matter to the Office of Student Integrity for appropriate action.
6. Disability accommodation: The Georgia Institute of Technology has established policies with respect to disability accommodation through Office of Disability Services. These policies may be accessed at the Office of Disability Services website located at disabilityservices.gatech.edu. Students seeking disability accommodation should refer to the student guide and documentation pages on this website. Students must comply with the requirements set forth by the Office of Disability Services to receive accommodation.
7. Changes: This syllabus expresses the instructors' administrative policies and intentions for the subject matter for the course. However, the instructors reserve the right to change any policies and/or topics, assignments, and schedule. The instructors further reserve the right to make changes without notice and within their own discretion.

WEEKLY CLASS MEETINGS: This class will meet once per week. The meeting time will be decided through a When2Meet provided at the beginning of the semester. Those weekly research group meetings will allow students to gauge progress on the research and experiment with management techniques as applied to research operations.

GRADES AND ASSESSMENTS: Course assessment falls into two general categories: students' contribution to the management of *project management operations* and their work on a particular *leadership initiative* of their choosing. Students will document their work in both categories in a report, which is broken into stages: initial proposal, mid-term report, and final report. Students may complete these assignments individually or in teams. Members of teams will receive the same grade across the group. Attendance and participation will be graded on an individual basis, as explained below.

Grade component	Percentage of final grade
Mid-term report	20%
Final report	30%
Attendance and participation	50%

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

ATTENDANCE AND PARTICIPATION: One portion of this grade reflects attending and participating in weekly meeting activities. Asynchronous students will be responsible for completing their meeting reflections as well as any activities assigned in the class meeting. Aside from the weekly, meetings students also has weekly responsibilities within their assigned research project group. Project operations activities include the following: reviewing project Slack channel, recorded researcher progress and meeting with researchers, sending reminders for research reports, creating dashboards to visualize task distribution, summarize team meetings, and monitor GitHub activity.

MID-TERM REPORT (individual or in teams): At mid-semester, students will produce an in-progress project management report that covers two general topics: (1) *project management operations*: their role in managing the ongoing research project, and (2) *leadership initiative*: their progress on their chosen initiative. The mid-term report should include reflection on success, challenges, and plans for the remainder of the semester. Reports will be in written form and presented during a class meeting.

FINAL REPORT (individual or in teams): The final report will address the same two topics as the mid-term report (*project management operations* and *leadership initiative*) but will cover the students' work over the full semester. Reports will be in written form and also presented during a class meeting.

NOTE ON ASSESSMENT: Assessment will not depend on the success or completion of the ongoing substantive research work. Research projects sometimes (often?) fail to achieve their initial goals, and sometimes that failure is in itself a research finding. Students enrolled in this course will be solely assessed on their work as noted above.