

**EAS 6000: INTRODUCTION TO RESEARCH
AND RESPONSIBLE CONDUCT - Fall Semester 2026**

COURSE INFORMATION

Instructor: Greg Huey
Email: greg.huey@eas.gatech.edu
Meeting Days: Wednesday, 3:30-5:25 pm
Class Location: L1125
Office Hours: By appointment
Office Location: Room 3130

COURSE BACKGROUND

The primary aim of this course is to identify and discuss ethical challenges that EAS graduate students confront in their research and to give incoming graduate and master students an overview of the research areas covered in the School. Topics addressed include those recognized by NIH, NSF, and Georgia Tech as crucial to being a responsible researcher. This course satisfies Georgia Tech RCR policy's requirements for "in-person" training.

Note: Laboratory safety is not covered in this course and must be completed separately through EHS training.

Additional Requirement: You must also complete RCR online training. The website is: <http://rcr.gatech.edu/online-training>

COURSE FORMAT

The course will cover 11 core topics each consisting of approximately of 60 minutes of lecture and discussion. These periods will introduce students to key background concepts and issues in research ethics. Lectures must be attended in person (mandatory per GT rules). A goal of this course is to cover the core topics and other materials as well as student presentations in eight meetings. In the absence of delays, the last course period will be on October 21. Note that we will not meet on October 7 which is the week of fall break.

Required Resources: Presentation slides will be available on Canvas after each topic is discussed. Additional readings and case studies will be provided as needed.

RCR CORE TOPICS

- Authorship and Publication
- Collaborative Research
- Conflicts of Interest
- Data Management
- AI

- Human Subjects Research
- Humane Use and Care of Vertebrate Animals in Research
- Peer Review
- Research Misconduct
- Responsibilities of Mentors and Trainees
- Science and Engineering in Society

COURSE REQUIREMENTS

Attendance Policy: This course must be taken on a pass/fail basis only. To receive a passing grade, each student must attend in person the entire course. Students must be in attendance for at least 9 of the 11 hours devoted to RCR to receive a pass grade.

Absence Policy: If a student must miss a class, the student must contact the instructor prior to the day of the absence (unless the absence is due to illness). If an absence is considered excused by the instructor, and an RCR topic was discussed during that class, the student will have to write a make-up paper(s) for the missed time. No passing grade will be given if three or more RCR classes are missed.

Group Presentation: Students will work in small groups of 2-3 to research and deliver a 15-20 minute presentation on an RCR case study or ethical dilemma. Presentations will be scheduled throughout the semester. Each presentation should include: (1) clear explanation of the ethical issue(s), (2) analysis of stakeholder perspectives, and (3) discussion of potential solutions or preventive measures.

ACADEMIC INTEGRITY

Each student in this course is expected to uphold Georgia Tech's Academic Honor Code. This requires students to familiarize themselves with the rights and responsibilities contained within the policy. If you have any questions or concerns about the Academic Honor Code, please consult with the instructor or refer to: <http://www.honor.gatech.edu>

ACCESSIBILITY STATEMENT

If you have any learning disabilities, contact the ADAPTS office at (404) 894-2563, refer to <http://disabilityservices.gatech.edu>, and/or consult with the instructor as needed.

COURSE SCHEDULE AND TOPICS

Week 1-2: Foundations of Research Ethics Topics Covered:

- Presentation of the course and overview
- Introduction to ethical concepts and professionalism
- Historical context of research ethics
- Conflicts of Interest and Financial Disclosures
- Professional responsibilities and integrity – Faculty and Students

Week 3-4: Publication and Collaboration Topics Covered:

- Authorship standards and publication ethics
- Peer review process and responsibilities
- Mentoring relationships and collaborative research
- Credit and recognition in research

Week 5: Technology and Modern Research Challenges Topics Covered:

- Use of AI and machine learning in research
- Data integrity in computational research
- Conflict resolution in research teams

Week 6-7: Research Misconduct and Integrity Topics Covered:

- Research misconduct: fabrication, falsification, plagiarism
- Intellectual property and patent considerations
- Human subjects research ethics (IRB overview)
- Animal research ethics (IACUC overview)

Week 8: Data Management and Reproducibility Topics Covered:

- Research data management and sharing
- Reproducibility and replication in science (<https://www.nsf.gov/policies/gold-standard-science>)
- Open science practices

ASSESSMENT

Final Assessment: Group presentation on assigned RCR topics (groups of 2-3 students). Presentations should be 15-20 minutes followed by 5-10 minutes of discussion. Topics will be distributed at the beginning of the course, and students may propose alternative topics with instructor approval.

Presentation Requirements:

- Clear identification and explanation of the ethical issue
- Analysis from multiple stakeholder perspectives
- Evidence-based discussion of solutions or preventive measures
- Engagement with current best practices and guidelines
- Professional presentation style with appropriate visual aids

Participation: Active participation in class discussions and peer presentation Q&A sessions is expected and will be considered in final grade determination.

COURSE POLICIES

Flexibility: The syllabus provides a general framework for the course; re-ordering or re-scheduling of classes may be required based on guest speaker availability or current events.

Communication: Please use your Georgia Tech email address for all course-related communication. I will typically respond within 24 hours during weekdays.

Late Work: Since this is a discussion-based course with group presentations, timely participation is essential. Contact me immediately if circumstances arise that might affect your ability to participate or present on schedule.

This syllabus is subject to change. Any modifications will be announced in class and updated on Canvas.