

Orbital Mechanics

Last Updated: Tue, 03/17/2026

Course prefix: AE

Course number: 6353

Section: Q3

CRN

88739

Instructor first name: Edgar

Instructor last name: Lightsey

Semester: Fall

Course description: First graduate-level astrodynamics class that includes two-body orbital mechanics, orbit determination, orbit prediction, orbital maneuvers, lunar and interplanetary trajectories, orbital rendezvous and space navigation.

Academic 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. For information on Georgia Tech's Academic Honor Code, please visit <http://osi.gatech.edu/content/honor-code>Links to an external site.. Any student suspected of cheating or plagiarizing on any exam will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Any evidence of cheating or other violations of the Georgia Tech Honor Code will be submitted directly to the Dean of Students, resulting in a zero for the assignment and the forfeiture of any class bonus, and the zero can not be replaced with other points in the MQE category. Cheating includes, but is not limited to the following.

- Using a calculator, cell phone, books, or any form of notes on exams.
- Copying directly from **any** source during an exam, including friends, classmates, Reddit or another online forum, or a solutions manual.
- Allowing another person to copy your work, or posting your work to an online forum before grades are released/after everyone has taken the quiz/exam.

- Taking a test using someone else's name, or having someone else take a test in your name.
- Asking for a re-grade of a paper that has been altered from its original form.
- Using someone else's name to take tests for them, or asking someone else to use your identity for any graded or participation submission.

Core IMPACTS statement(s) (if applicable):

This is a Core IMPACTS course that is part of the Technology, Mathematics & Sciences area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I ask scientific questions or use data, mathematics or technology to understand the universe?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems and explain natural phenomena.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Inquiry and Analysis
- Problem-Solving
- Teamwork