Quantum Mechanics I

Course Information

- **Instructor:** Zeb Rocklin (zebrocklin@gatech.edu)
- **Course Prefix and Number:** PHYS 6105
- **Term:** Fall 2026

Course Description

An axiomatic development of quantum mechanics. Topics include linear vector spaces, linear operators, infinitesimal transformations, function space, representation and transformation groups.

Course Learning Outcomes

By enrolling and successfully participating in this course, students will:

1. apply mathematical formalism to interpret and predict quantum mechanical phenomena
2. learn to think critically and solve problems in quantum mechanics.
3. develop a base of knowledge and skills that will allow them to engage in original theoretical, computational and experimental research in quantum mechanics.

Required Course Materials

No textbooks or materials are required.

Grading Policy **

The course assignments consist of seven homework sets, collectively worth 40% of the final grade, two midterm exams, collectively worth 30% of the final grade and a final exam worth 30%. Final course grades ar or above 90.00% will be awarded an A, otherwise at or above 80.00% a B, otherwise at or above 70.00% a C, otherwise at or above 60.00% a D, and below 60.00% an F. No +/- grades (such as A-) are awarded at Georgia Tech), visit the Registrar's website for more information about Tech's grading system.

Attendance Policy

Attendance is required at exams. Students should attend class when able and inform the instructor by email when they are unable to attend class.

Academic and Research 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. Review the Student Code of Conduct and the Academic Honor Code, especially Appendix A: Graduate Addendum to the Academic Honor Code.

Allegations of scientific or scholarly misconduct are handled in accordance with the procedures outlined by the Policy for Responding to Allegations of Scientific or Other Scholarly Misconduct.

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 as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also email the instructor as soon as possible in order to set up a time to discuss your learning needs.