MATH 1553 Syllabus

Introduction to Linear Algebra, Section B/C/D/E/F/G/H/I/L/M/N, 2 credit hours

Summer 2026

Instructor Information

Instructor: Dr. Sal Barone (Course Coordinator)

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General Course Information

Description

Linear Algebra is very conceptual compared to most courses students have previously taken. This is a Core IMPACTS course part of the STEM area. It focuses on essential knowledge in foundational academic areas to support broad academic and career goals.

Course Learning Outcomes

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

- Solve systems of linear equations and eigenvalue problems.
- Analyze mathematical statements to assess accuracy and describe solutions.
- Write logical progressions of precise mathematical statements to justify reasoning.
- Apply linear algebra concepts to model and analyze real-world situations.
- Use mathematical and computational methods to analyze data and explain phenomena.

Prerequisites

Students must be registered for a lecture section, a linked studio section, and the common exam period to receive credit.

Required Course Materials

- **Textbook:** *Interactive Linear Algebra* by Dan Margalit and Joseph Rabinoff.
- **Optional Reference:** *Linear Algebra and its Applications*, 6th edition, by Lay-Lay-McDonald.
- **Technology:** Broadband internet, webcam, and microphone for potential online pivots.

Grading Policy

The standard grading cutoffs are: A [90%, 100%], B [80%, 90%), C [70%, 80%), D [60%, 70%), and F [0%, 60%). Cutoffs may be adjusted downward only.

Assignments

- Final Exam: 25%
- Midterm Exams (3 at 15% each): 45%
- Quizzes (lowest score capped): 15%
- Homework (two lowest scores capped): 10%
- Studio Participation (three lowest scores capped): 5%

Description of Graded Components

- **Exams:** Three in-person midterms and a cumulative final.
- **Quizzes:** 10-minute assessments held on most Fridays during studio.
- **Homework:** Online WeBWork assignments generally due Wednesdays at 11:59 PM.
- **Studio:** In-person attendance required; three absences are dropped to provide a buffer.

Course Policies

Attendance and Participation

Attendance is expected for all lectures. For studio participation, students must attend in person, arrive on time, and stay for the full duration.

Academic Integrity

Abide by the Georgia Tech Honor Code. Prohibited actions include using calculators or notes on exams, using AI/LLMs on assessments, and communicating with others during assessments.

Accommodations for Students with Disabilities

Georgia Tech offers accommodations to students with disabilities. Contact the Office of Disability Services and make an appointment with your instructor to discuss needs.

Core IMPACTS

This course is part of the STEM area.

- **Orienting Question:** How do I ask scientific questions or use data, mathematics or technology to understand the universe?
- **Learning Outcome:** Students will use mathematical and computational methods to analyze data, solve problems and explain natural phenomena.
- **Career-Ready Competencies:** Inquiry and Analysis, Problem-Solving, Teamwork.