

Syllabus, Math 1553 (Introduction to Linear Algebra), Spring 2022

Note: the syllabus and course schedule are tentative and subject to change. Any changes to the syllabus and/or course schedule after the semester begins will be relayed to the students in class and through e-mail.

Lecture and Studio Format

*** Note: Out of concern for the health of everyone, the in-person lectures or studios may move online for a period if necessary during the semester.

Instructors hold lectures in person on Mondays and Wednesdays, while TAs hold studios in person on Fridays. Office hours may be held in person or virtually, as specified by each instructor or TA (see the front page of our common Canvas site).

Textbook

The textbook for this course is *Interactive Linear Algebra* by Dan Margalit and Joseph Rabinoff. There is also an optional reference book: *Linear Algebra and its Applications*, 5th edition, by Lay-Lay-McDonald, which you can view online if you purchase access to MyMathLab. See the final page of the syllabus and [here](#) for details.

Common website

The [common website](#) for Math 1553 contains much of the information found in this PDF and links to resources.

Course-level learning goals

Linear Algebra is very conceptual compared to most courses that students have previously taken. By the end of this course, it is expected that students will be able to do the following.

- A) Solve systems of linear questions.
- B) Solve eigenvalue problems.
- C) Analyze mathematical statements and expressions (for example, to assess whether a particular statement is accurate, or to describe solutions of systems in terms of existence and uniqueness).
- D) Write logical progressions of precise mathematical statements to justify and communicate your reasoning.
- E) Apply linear algebra concepts to model, solve, and analyze real-world situations.

Students are expected, at a minimum, to be able to do all problems from lecture and homework (and similar problems) on quizzes and exams. For more, see the portion of the common website that discusses [how to succeed in this course](#).

Course information posted online, and Piazza

Materials will be posted on Canvas, and you are responsible for obtaining any announcements or materials on Canvas.

We have a common Piazza forum to facilitate discussion. You can access it by clicking the “Piazza” tab at the left side of our common Canvas site. It should ask you to register when you click the link the first time.

Homework

Homework will be done online through WeBWorK, accessed through Canvas. Homework will be due weekly. Often, more than one assignment will be due in a given week. The “warmup” assignment for the first week of class on Webwork is just for practice and will not be graded.

Homework will generally be due at **11:59 PM on Tuesdays**, but may occasionally be due on another day of the week in exceptional cases. See the [course calendar](#) for details.

Your **two lowest homework** scores will be dropped. *No late homework will be accepted.* Each assignment counts the same amount toward your grade.

Quizzes, Exams, and regrades

Starting the week of January 17, we will have a 15-minute **unproctored online** quiz on many Fridays (please see the [course calendar](#) for specific dates). Quizzes will **not** be administered in studio. Instead, the quiz will open in Canvas at 5:30 AM Atlanta time on its due date, and it must be submitted by 9:00 PM Atlanta time. Each student can take the quiz during any 15-minute period of their choice in that interval. However, once the student begins the quiz, the timer will start and it will not stop. Students with accommodations for extended time will receive them automatically.

Your **lowest quiz grade** will be dropped. No books, notes, calculators, cell phones, or other electronic devices are allowed during quizzes and exams.

We will have three in-person exams from 8:00-9:15 PM Atlanta time on the following dates:

1. Wednesday, February 9
2. Wednesday, March 9
3. Wednesday, April 13

Cumulative in-person Final exam: Tuesday, May 3, from 6:00 PM - 8:50 PM.

Some important notes regarding all midterms and the final exam:

1. Each midterm exam must be taken during the common exam period of 8:00-9:15 PM Atlanta time on its given date. The final exam must be taken during the period of 6:00-8:50 PM Atlanta time on Tuesday, May 3. As discussed above, all of our exams are scheduled to take place in person. However, if necessary, we may need to move the midterm exams online due to the ongoing pandemic.
2. Our midterm exams and final exam will be proctored in the rooms assigned by the Institute. If safety concerns require us to move any exam online, then it will be proctored by instructors and TAs through BlueJeans or MS Teams. Each instructor would give their students a link for this. We would not use HonorLock.
3. Students are required to have a broadband internet connection, a webcam, and a microphone in case any exam is moved online. If an exam is moved online, then students will be required to have video and audio on for the full duration of the exam.

For the full final exam schedule, see [the registrar's schedule](#).

Only under extreme extenuating circumstances will you be able to take the final exam at a different time or date. Early travel plans (including already-purchased tickets) are **not** an acceptable reason for this.

Students with Disabilities and/or in need of Special Accommodations

Georgia Tech complies with the regulations of the Americans with Disabilities Act of 1990 and offers accommodations to students with disabilities. If you are in need of classroom or testing accommodations, please make an appointment with the Office of Disability Services to discuss the appropriate procedures. More information is available on their [website](#). Please also make an appointment with your instructor to discuss your accommodation, if necessary.

The Honor Code and Academic Dishonesty

Do not cheat! Abide by the [honor code](#) at all times. See <https://honor.gatech.edu>.

Any evidence of cheating or other violations of the Georgia Tech Honor Code will be submitted directly to the Office of Student Integrity. Cheating includes, but is not limited to:

1. Using a calculator, books, or any form of notes on quizzes or tests.
2. Copying directly from any source, including friends, classmates, tutors, internet sources (including Wolfram Alpha), or a solutions manual.
3. Allowing another person to copy your work.
4. Taking a test or quiz in someone else's name, or having someone else take a test or quiz in your name.
5. Asking for a regrade of a paper that has been altered from its original form.
6. Communicating with another student in any manner regarding any quiz or exam during the time period when the assessment is available.

We catch many cheaters every year. Don't do it!

Missed work policy

You may only receive credit for missed quizzes or exams in the following circumstances.

- **University-approved absence:** Please give your instructor notice by Wednesday, January 19, or as soon as possible once your absence has been approved.
- **Religious holiday:** By the end of class on Wednesday, January 19, you must **notify your instructor** of any classes (including studio) you will miss due to religious holidays.
- **Illness:** Except under extenuating circumstances, you must **notify your instructor *in advance*** and notify the Office of the Dean of Students if you will miss a quiz, so that they can confirm it with your instructor.
- In case of a **family emergency**, please have your **academic advisor or the Dean's office** contact your instructor.

Otherwise, missed quizzes and missed exams result in a 0.

If you will miss an **exam**, then you must **notify your instructor *in advance*** and be prepared to provide any necessary documentation to the Dean's office so that they may contact your instructor with verification.

In the case of an excused absence for a quiz, you may take a makeup quiz within three days of the original quiz. If this is not possible, you may discuss an alternate possibility with your instructor.

If you have an excused absence for an exam, then you may take a makeup exam on the Monday immediately following the exam. If you cannot take the makeup exam due to an excused absence, then the weight for that exam will be shifted equally to your remaining exams (including the final exam).

Grade breakdown

The components of the class are weighted as follows:

- 15% Homework (two lowest scores dropped)
- 15% Quizzes (lowest score dropped)
- 15% Midterm 1
- 15% Midterm 2
- 15% Midterm 3
- 25% Final exam

If you score higher on your final exam than on one of the midterms, then your final exam will count for 32.5% of your grade and your lowest midterm will count for 7.5% of your grade. However, any student found guilty of academic dishonesty of any kind in Math 1553 is ineligible for this policy.

CIOS Incentive: If at least 85% of all Math 1553 students complete CIOS evaluations by Monday April 25 at 1:00 PM (Atlanta time), we will drop the 2 lowest quiz grades rather than just the lowest quiz grade.

Grade assignments

After *all* grades are in and all overall percentage scores for students have been computed using the weights described above, grades are assigned. The standard cutoffs are as follows.

A: [90%, 100%] B: [80%, 90%) C: [70%, 80%) D: [60%, 70%) F: [0%, 60%)

So, to guarantee an A, get 90% or better overall. (90 means 90, not 89.9)

To guarantee at least a B grade, get 80% or better overall, etc.

These cutoffs *might* be adjusted, but only in the downward direction (to make letter grades higher). In the event of a curve, only your final overall percentage grade for the course will be curved. Individual assessments *will not be* curved as we go along.

Extra credit, calculators, and entered grades on Canvas

1. There is **no extra credit**, and there are no quiz re-takes or exam re-takes.
2. You can use calculators to check your computations when doing homework. You are **NOT allowed to use a calculator** on quizzes or exams.
3. Once a quiz or exam has been graded, the grades will be entered on Canvas. Please check that the grade on your assessment matches the grade recorded on Canvas. If it does not, you must contact your instructor within two weeks of the assessment to correct the error.

Email policy

For questions relating to course structure, please check the syllabus first. Exam dates, policies, etc. are available on the syllabus.

Let's not discuss grades by email. Any questions about grades (including "the curve") should be asked during office hours or in an appointment scheduled outside of office hours.

Let's not discuss math by email. Let's discuss mathematics on Piazza instead! This will open the question to the entire class, including all TAs, instructors, and other students who may be able to provide insight. We can also discuss questions during office hours, or at a scheduled appointment outside of office hours.

Additional resources and tutoring

The [Math Lab](#) offers tutoring, and there is also free **1-to-1 tutoring**. If appointments are full when you are available, you may request additional tutoring. We also have **PLUS sessions**. A comprehensive list of tutoring resources is available at <https://tutoring.gatech.edu>.

Waitlists, Registration, Permits, etc.

Instructors are forbidden from doing anything regarding class registration. They cannot issue permits, remove students from waitlists, etc. For guidelines on such matters, please consult <https://math.gatech.edu/permits-and-waitlists>.

Lecture and Studio

In the event of an absence, you are responsible for all missed materials, assignments, and any additional announcements or schedule changes given in class. Class disruptions of any kind will not be tolerated. Please show courtesy to your fellow classmates and instructor. It is at the discretion of the instructor whether they wish to record their lecture or not.

Georgia Tech Resources for Personal Support

The Office of the Dean of Students: 404-894-6367; Smithgall Student Services Building 2nd floor. You also may request assistance [here](#).

Counseling Center: 404-894-2575; Smithgall Student Services Building 2nd floor
Services include short-term individual counseling, group counseling, couples counseling, testing and assessment, referral services, and crisis intervention. Their website also includes links to state and national resources. Students in crisis may walk in during business hours (8am-5pm, Monday through Friday) or contact the counselor on call after hours at 404-894-2204.

Students' Temporary Assistance and Resources (STAR) Can assist with interview clothing, food, and housing needs.

Stamps Health Services: 404-894-1420; Primary care, pharmacy, women's health, psychiatry, immunization and allergy, health promotion, and nutrition

OMED: Educational Services

Women's Resource Center: 404-385-0230

LGBTQIA Resource Center: 404-385-2679

Veteran's Resource Center: 404-385-2067

Georgia Tech Police: 404-894-2500

Statement for Inclusivity

As members of the Georgia Tech community, we are committed to creating a learning environment in which all of our students feel safe and included. Because we are individuals with varying needs, we are reliant on your feedback to achieve this goal. To that end, we invite you to enter into dialogue with us about the things we can stop, start, and continue doing to make the classroom an environment in which every student feels valued and can engage actively in our learning community.

Guidelines for Masks

At Georgia Tech, everyone is encouraged to wear a mask or face covering while inside campus facilities, and we highly encourage you to wear a mask in lecture and studio.

We will wear a mask during in-person office hours out of concern for your health and our own. If you attend office hours in person, the expectation is that you will also wear a mask for this same reason. If you are uncomfortable wearing a mask, please attend virtual office hours.

Note on class modes and the COVID-19 pandemic

The instructors and TAs hope to provide an in-class experience for students as much as possible this semester. However, at times, it may be necessary for classes to move online due to a rise in COVID-19 cases on campus, or illness/isolation of the instructor or TA. We will notify students as soon as possible if any classes will meet online. We also strongly encourage students who are sick to stay home, so that we can safely continue to offer as many in-person events as possible. Students are strongly encouraged to vaccinate, mask, and test regularly to keep our campus community safe.

MyMathLab: Those who wish to view our (optional) secondary textbook online may do so by enrolling in our MML course linked to Canvas. If you wish to get MML access, Please login to your Canvas account, then go to the “My Lab and Mastering” tool on the left-hand menu.

From the My Lab page, you can login to, or create, your MyMathLab account to access our course. You should not need to enter a course ID.

- If you already have an account on MyMathLab using this combined textbook within the past 18 months, then you do not need to purchase a new code.
- If you do not have a MyMathLab account using the Thomas or Lay textbooks, or if your account is over 18 months old, you will need to purchase a new code for our course. For this, please refer to the registration document located in the Files section of the MATH-1553-combined Canvas site.

When signing up for MyMathLab, it will be immensely helpful (for grading purposes) if you will set your STUDENT ID to your USERID for the GT system (i.e., your Canvas USERID, as in gburdell3, etc).

MyMathLab comes with an entire electronic version of the optional textbook, and is your choice if you would also like to own the textbook in print. You may purchase a MyMathLab code either from the bookstore or on-line while registering at <https://www.mymathlab.com>. If you prefer to own a hardcopy of the text, the bookstore offers packages of MyMathLab combined with a loose-leaf or hardcover version of the textbook that is less expensive than purchasing the text and code separately. PLEASE NOTE: GEORGIA TECH HAS A SPECIAL CODE PACKAGE THAT INCLUDES BOTH TEXTBOOKS. THIS CODE CAN ONLY BE PURCHASED THROUGH THE CAMPUS BOOKSTORES OR DIRECTLY FROM PEARSON. CODES PURCHASED BY OTHER VENDORS WILL NOT WORK! Possible ISBNs for this text are: 9781323835029, 132383768X, or 9781323837689.