

Syllabus, Math 1553 (Introduction to Linear Algebra), Spring 2026

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 through a Canvas announcement.

Course Number and Title: MATH 1553, Introduction to Linear Algebra

This is a Core IMPACTS course that is part of the STEM 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

Registration

Please note that in order to receive credit for completing this course, students must be registered for three sections: a lecture section, a linked studio section, and the common exam period. All three of these sections are mandatory to receive course credit. If a student is only registered for the exam period but not a lecture/studio pair, then credit cannot be earned from taking the course examinations. Likewise, all students registered for a lecture/studio pair must also be enrolled in the common exam section, as all exams will be administered during this time. Dropping the common exam section after registration ends WILL NOT allow a student to take exams at an alternate time.

Lecture and Studio Format

*** Note: If necessary, a lecture or studio may temporarily move online under extreme circumstances such as an extreme weather event or an emergency on the part of the instructor or teaching assistant.

Instructors hold lectures in person on Mondays and Wednesdays, while TAs hold studios in person on Fridays.

The Wednesday night meeting times of 6:30-7:45 PM are **only** held on weeks when we have midterm exams.

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 for a list of office hours.

Textbook

The textbook for this course is *Interactive Linear Algebra* by Dan Margalit and Joseph Rabinoff.

There is also an optional reference textbook (we do not use it at all anymore in 1553): *Linear Algebra and its Applications*, 6th edition, by Lay-Lay-McDonald, which you can view online if you purchase access to MyMathLab (see page 8 of the syllabus for details). To be clear, very few students purchase it, and we have not used it in many years.

Common website

The [common website](#) for Math 1553 contains a course calendar and much of the information in this PDF.

Summary of course policies

1. **Assessments and due dates.** The course grade is based on studio participation, Webwork, quizzes, and exams. The grade breakdown is discussed in the “Grade breakdown” and “Grade assignments” sections of the syllabus. All due dates for all assessments are on the course calendar.
2. **Missed work policy.** Excused absences require [advance notice](#) and [documentation](#). Details for this are in the “Missed work policy” section of the syllabus. Fairness to the rest of the class dictates that we must reject late requests unless they are due to extraordinary circumstances such as hospitalization.
3. **Makeup Quizzes and Exams.** Except for extraordinary circumstances, requests for a makeup must be made in advance (at least 12 hours in advance for exams) and follow the steps described in the missed work policy. Makeup quizzes are held the Wednesday immediately following the original quiz at 6:30 PM. Makeup exams are held the Monday immediately following the original exam at 5:00 PM or 6:30 PM. Please keep in mind that except for extreme circumstances, students are allowed only **one makeup exam** during the semester.
4. **Course materials.** The course calendar is where we will post and link all common materials for the course. This includes PDF slides, studio worksheets, and supplemental practice problems. The Math 1553 Exam Archive contains years’ worth of past exams, which serve as practice exams.
5. **Email policy.** Email is inefficient for discussing mathematics. Instead, we will use Piazza. Before sending an email, please read the syllabus and course calendar very carefully to ensure your question is not answered there. It will save your time and ours. Email is not appropriate for grade discussion, and this should be done only in person. In that regard, we do not speculate regarding “the curve” at any time in the course, and we do not discuss the curve (if there is one) at the end of the semester.
6. **Regrade requests.** After exams are graded, there will be a period of at least 72 hours where students can submit regrade requests through Gradescope. See the “Regrade requests” section for more details.
 - Course policy requires that students read the solutions key carefully before submitting regrade requests.
 - It is possible for a grade to decrease after a regrade request if the original grading is discovered to have been erroneous in the student’s favor.
 - Regrade requests are not for asking how to do the problem. We post a solutions keys that show how to do the problems. Inappropriate regrade requests may result in point deductions.
7. **Course letter grades.** Once all grades are complete for the semester, we compute a student’s numerical True Overall Score using the “Grade breakdown” section of the syllabus. If there is a curve, it would **not** be implemented by changing the True Overall Score, but instead it would be implemented by lowering the letter grade cutoffs (see the “Grade assignments” section).

Letter grades are non-negotiable. We cannot give extra credit or some other special arrangement to you if you believe you are near the cutoff for a letter grade. It would be unethical and unfair to the rest of the class for us to consider such an arrangement. [We receive many requests like this every year, and we must reject all of them.](#)

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](#). Also, please see Georgia Tech's [Student-Faculty Expectations](#).

Course information posted online, and Piazza

Students are responsible for information communicated in all announcements and materials on Canvas. You can find the office hours for instructors and TAs on the front page of Canvas, along with information about studio locations. See our [course calendar](#) for important dates and a general schedule.

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.

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. **For exam accommodations, please see point #2 in the "Quizzes, Exams, and regrades" section.**

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 Wednesdays**, but may occasionally be due on another day of the week in exceptional cases such as exam weeks. See the [course calendar](#) for details.

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

Quizzes, Exams, and regrades

Quizzes: Starting the week of January 19, we will have a 10-minute quiz on many Fridays. Quizzes will be administered during studio. See the [course calendar](#) for dates. Students with extended time accommodations for quizzes can either arrange with their TA to begin the quiz early, or they may take the quiz at the Testing Center at any time on the quiz date that fits their schedule.

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 6:30-7:45 PM Atlanta time on the following dates:

1. Wednesday, February 11
2. Wednesday, March 11
3. Wednesday, April 15

Cumulative in-person Final exam: Tuesday, May 5, from 6:00 PM - 8:50 PM.

Previous semesters' exams and their solutions are available at the [Math 1553 exam archive](#).

Some important notes regarding all midterms and the final exam:

1. Unless the student has ODS accommodations (see #2 below), each midterm exam must be taken during the common exam period of 6:30-7:45 PM Atlanta time on its given date, and the final exam must be taken during the Institute's designated period of 6:00-8:50 PM Atlanta time on Tuesday, May 5.
2. Students with accommodations: for midterms, the **Testing Center** does not stay open past 5 PM, so it **will not accommodate us**. Students with 1.5x extended time accommodations may take the exam in person starting at 6:07 PM and ending at 8:00 PM in Weber SST III room 2. Students with 2x extended time accommodations may take the exam in person starting at 5:30 PM and ending at 8:00 PM in that same room. If this option is not possible for you and you have testing accommodations that specify permission to take assessments at the Testing Center, please contact Prof. Jankowski at least two weeks before our first midterm exam to discuss this.
3. For the final exam, the Testing Center **does** accommodate Math 1553 students, and students with extended time **must** register for the latest time slot offered by the Testing Center **on the final exam date**. Any student who does not register appropriately for the final exam at the Testing Center by the deadline must take the exam at the Testing Center during the final Conflict Period date at 8:30 AM, and they may face a significant penalty on the final exam (failing to register on time is not a legitimate reason for taking the exam at a later date).
4. Our exams will be graded through Gradescope. Once the grading is complete, students will receive a period of time when they can submit regrade requests. Regrade requests for exams **must** be made through Gradescope and must be submitted during the regrade request period. See the "Regrade Requests" section at the end of the syllabus for more details.
5. 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 Zoom or MS Teams. Each instructor would give their students a link for this. We would not use HonorLock.
6. 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 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.

The Honor Code and Academic Dishonesty

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

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy. Any evidence of violations of the Georgia Tech Honor Code will be submitted directly to the Office of Student Integrity, including but not limited to:

1. Using a calculator, books, or any form of notes on quizzes or tests. **Use of cell phones is not allowed on quizzes or exams. Putting a cell phone on your desk, or on your lap, or in sight at all, will result in a zero.** Ear buds and headphones are also not allowed and can result in a zero.
2. Using Chat GPT (or any AI / LLM) on any assessment or 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!

Studio Participation

Starting in the second studio of the semester (Friday, January 23), we will take in-person attendance at each studio. Each participation score will be a grade of 0 or 1 (out of 1). **The 3 lowest participation scores will be dropped.** Students are expected to arrive on time to the studio for which they are registered, actively participate, and stay for the full duration. Any student who arrives more than five minutes late for studio or leaves before the TA ends studio may be given a 0. A TA may decide to stream or record their studios, but any student who wishes to receive credit for studio participation must attend that studio in person. Our quizzes are also given in studio, so it is a crucial component of the course.

We do not wish for students who are sick to attend studio, and we understand that it is not always prudent to seek medical attention just to get an excused studio absence. We also understand that a student who attends studio might receive a 0 because they forgot to sign the sign-in sheet, for example. This is partly why we drop 3 absences out of just 10 graded studios: it provides such a large buffer for absences that there is no excuse for any student to get less than 100% in the studio participation grade.

Missed work policy

A student **must** contact their instructor **in advance** and **provide documentation** as described below in order for an absence or missed assessment to be excused. **Otherwise, the student will receive a 0.** This applies to all assessments including Webworks, studios, quizzes, and exams. For exams, we require at least 12 hours of notice for an excused absence unless the circumstances are extraordinary, such as emergency hospitalization. You may only receive credit for missed assessments in the following circumstances.

- **University-approved absence:** Please give your instructor notice by Wednesday, January 21, or as soon as possible once your absence has been approved.
- **Accommodations:** Students with accommodations for flexibility with attendance, extended deadlines, or a similar accommodation, must discuss these with Prof. Jankowski in advance.
- **Religious holiday:** By the end of class on Wednesday, January 21, you must **notify your instructor** of all classes and studios that you will miss due to religious holidays.
- **Illness, medical appointment, etc.:** You must **notify your instructor in advance** and be prepared to provide official documentation to the Dean's office or other appropriate Georgia Tech contact that will stay in accordance with privacy laws.
- In case of an **emergency leading to an extended absence**, please have your **academic advisor or the Dean's office** contact your instructor.

Makeup quizzes and exams

In the case of an excused absence for a quiz, you may take a makeup quiz at 6:30 PM on the Wednesday immediately following the original quiz. If that Wednesday is an exam date, then the makeup will instead occur at 7:20 AM in Prof. Jankowski's office (Skiles 261).

If you have an excused absence for an exam, then you may take a makeup exam on the Monday immediately following the exam, either at 5:00 PM or 6:30 PM (in either case, finishing no later than 7:45 PM) in Skiles 005. No makeup exams will be given after the Monday immediately following an exam. If you cannot take the exam on the makeup exam date due to an excused absence (this includes students with accommodations who are scheduled to take it at the Testing Center on the makeup date), then the weight for that exam will be shifted equally to your remaining exams, including the final exam. **Early makeups for quizzes and exams will not be given under any circumstances.**

If a student has an excused absence for the final exam, then they may take the makeup final exam, which will take place on Friday, May 8, at 8:00 AM.

Grade breakdown

The components of the class are weighted as follows:

- 5% Studio participation (three lowest scores dropped)
- 10% 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 Tuesday April 28 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 any electronic device** on quizzes or exams.
3. Once a quiz or exam has been graded (or studio participation has been recorded), the grades will be entered on Canvas. Please check that the grade on your assessment is not blank and that it matches the grade recorded on Canvas. If it does not, please contact your instructor within two weeks of the assessment to correct the error. With this in mind, if you participated in a studio but have a blank score listed more than a week later, you need to contact your TA to resolve the issue or this blank will become a 0.

Email policy

Before sending an email, please check the syllabus closely! Exam dates, policies, etc. are available on the syllabus.

Excused absence requests. These must be made in accordance with the guidelines in the “Excused Absences” section of the syllabus.

No grade discussion by email. Any questions about letter grades (including “the curve”) should be asked during office hours or in an appointment outside of office hours, but never by email. Do not send an email asking for a higher letter grade. The only reason for sending a grade-related email is an incorrect score in Canvas. In that case, please email Prof. Jankowski detailed computations for what you believe is your correct score.

No mathematics 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 [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

Students are expected to come to lecture. 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.

Snow Days and Other Class Cancellations

If Georgia Tech closes campus or decides to cancel in-person classes for a day due to weather or analogous circumstances, we plan to hold lecture remotely on that date through MS Teams or Zoom. Your instructor will give details if such an event occurs.

Recorded Lectures

Prof. Jankowski recorded his lectures during the Spring 2022 semester and has posted them at his website [here](#). Of course, if you view the recordings, please keep in mind that the beginning of each of these recorded lectures discusses course logistics, due dates, etc. from the Spring 2022 semester.

Georgia Tech Resources for Personal Support

[The Office of the Dean of Students.](#)

[Counseling Center](#): 404-894-2575; Suite 238 Smithgall Student Services Building

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' 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

[Belonging and Student Support](#)

[Veteran's Resource Center](#): 404-385-2067

[Academic advisors](#) for your major

[Academic coaching](#)

[Georgia Tech Police](#): 404-894-2500

Statement for Belonging

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.

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.

[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 "Access Pearson" tool on the left-hand menu. From that page, you can log in to, or create, your MyMathLab account to access our course. You should not need to enter a course ID.

- If you purchased a MyMathLab code for the book in the past 18 months, then you might not need to purchase or request a new code. Login to your MyMathLab account through Canvas to add to our course.
- Otherwise, you will need to purchase a new code for our course if you wish to access the optional textbook. For this, please refer to the registration document [here](#).

Missing grades and hard copies of exams

On Canvas, if your grade is not reported, that means we do not have a submission from you for that assignment. It is every student's obligation to check Canvas regularly and report grading errors promptly to their instructor.

This is especially important with regard to our midterm exams. Once the regrade request period for a midterm exam has passed, we may discard the physical copies of the midterms, so all that will remain is the digital copy on Gradescope. With this in mind, it is the student's responsibility to take a close look **before the regrade request deadline** to ensure that their exam is present in Gradescope and to check that there was not a scanning issue that affected how a problem was graded.

Regrade requests

Exam grading is an important component of the course, and we take it very seriously. However, we are human and may make mistakes during exam grading. After each midterm is released on Gradescope, we have a regrade request period of at least 72 hours, in order to ensure every student has the opportunity to take a close look at their graded exam. Please keep in mind the following about regrade requests.

1. Regrade requests must be made through the appropriate form in Gradescope. Requests that are frivolous or late are a violation of course policy and will result in point deductions on the exam.
2. When making a regrade request, the student must state specifically what they believe was misgraded in the problem. Students are responsible for reading the solutions key very carefully before sending a regrade request. Do not submit a regrade request to ask how to do the problem or what was wrong with your answer (that is what the solution key is for). We give some examples of inappropriate regrade requests below.
 - “i feel like the answer key is wrong”
 - “howww”
 - “I am confused on this one”
 - “how did I get 2/4” (the rubric stated the reason for each of the two 1-point deductions)
 - “I lost 1 point but I think my answer is correct” (student did not view solutions key to see their answer was incorrect)
3. **It is possible for a student's grade to decrease** if the grader had originally made an error in the student's favor. This has happened on the final exam for students who were near a letter grade cutoff.
4. Regrade requests may lead the grader to regrade the full problem in question, not just a specific part. We give examples below.
 - A regrade request made for part (a) of may lead the grader to realize that they had accidentally hit the wrong rubric button and had meant to subtract points in part (b).
 - A student had a legitimate regrade request for part (a) of a problem, but the request led us to notice that the grader had made an egregious error in the student's favor in part (b) of the problem. The end result was a net decrease in the student's score.

Name, GT ID, and Instructor / Section on Quizzes and Exams

Students are required to write their full name (as listed on Canvas) and GT ID clearly on every quiz and exam, and also to circle the name of their instructor and lecture on exams. Failing to do any of these may be penalized with a points deduction on the assessment.

Excused Absences

Math 1553 is one of the largest on-campus courses (if not the largest) at Georgia Tech, so it is important for us to have clear policies and communication. Just to give an idea of the scale: spending 10 minutes on email with each student in the course would amount to over 350 hours of email for the course coordinator each year.

In order to have a studio absence excused, an extension on Webwork, or a makeup for a quiz or exam, students must send a request to their professor through email with all of the information listed below. Incomplete or late requests will be rejected. Even if the student has an Institute-approved absence, it is still the student's responsibility to send this email in order to confirm the details of the makeup.

1. Date of the absence. If this is a quiz / studio absence, the student must list the studio section and time. Advance notice is required, so the date and time cannot be in the past unless the circumstances were extraordinary. In that case, an explanation is required.
2. Reason for absence, and a description. The reason must be one of the following.
 - Illness
 - Religious observation
 - Institute-approved travel
 - Other type of Institute-approved absence, with details provided
3. Documentation for the absence. This is a required component. You may either:
 - Provide documentation directly, with any confidential info redacted as necessary so that we do not violate any laws or GT policies.
 - Describe what documentation you will provide and how you will provide it. (upcoming email, Dean of Students, etc.).
4. Specify whether the request is for a Webwork, for a studio / quiz, or for an exam.
 - For a studio absence on a quiz date, please confirm you are available to take the makeup quiz the following Wednesday at 6:30 PM (or 7:20 AM if that Wednesday is an exam date), or indicate you have an excused absence for the makeup and explain. If you also have an Institute-approved absence for the makeup quiz time slot, then the next quiz will count double.
 - For a midterm exam absence, please specify the time slot (5:00-6:15 PM or 6:30-7:45 PM) you will take the makeup exam in Skiles 005 on the Monday immediately after the regular exam date. If you will also miss this date due to an excused absence, then please explain why, and if approved then the weight for the exam will be shifted to future exams as described earlier in the syllabus.
 - The makeup final exam is on Friday, May 8, at 8:00 AM. Students with accommodations who take the makeup final at the Testing Center will need to take it at the earliest available time there on that date, which is likely 8:30 AM.