

Course Syllabus



MATH 2551 Syllabus, Spring 2025

Welcome to Multivariable Calculus! All of our students play an important role in our educational mission. We hope that students taking this course will find this to be a useful, fundamental course for their future studies.

This course is part of the Distance Mathematics program, which offers advanced mathematics courses to advanced high school students in Georgia through distance education.

Items on the syllabus are subject to change. Any significant changes to the syllabus are unlikely but if any are made they will be relayed to students through Canvas announcements.

1. Course Information

Course Title: Multivariable Calculus

Course Number: MATH 2551

Credit Hours: 4.0

Semester: Spring 2025

Sections: QH, QHS

Prerequisites: MATH 1502 OR MATH 1512 OR MATH 1555 OR MATH 1504 ((MATH 1552 OR MATH 15X2 OR MATH 1X52) AND (MATH 1522 OR MATH 1553 OR MATH 1554 OR MATH 1564 OR MATH 1X53))

2. Instructional Team

Instructors

Dr. Greg Mayer

- greg.mayer@gatech.edu (<mailto:greg.mayer@gatech.edu>)
- Office Hours: Tuesdays from 7:00 pm to 8:00 pm from Jan 7 to Apr 22 (inclusive) in MS Teams
- Can also meet by appointment.

Teaching Assistants

- Yaghoub Rahimi

Lecture Assistants

- Melissa Leng
- Sri Julapally
- Neil Dave
- Robert Deaton
- Jasper Seabold
- Rithu Hegde

Graders

- Our class has a team of graders who assist with grading student work.
- Students shouldn't need to reach out to them.
- Information on how to submit a regrade request or ask questions regarding the way something was graded is described later in the syllabus.

Technical Support

Students can receive technical support by completing the following online form: <https://gatech.service-now.com/technology>  (<https://gatech.service-now.com/technology>)

Office Hours

All office hours are held in the MS Teams site that we use for studios and run until Friday, April 18, 2025.

3. Course Goals, Learning Objectives, Topics Covered

Goals

The primary goal of Math 2551 is to prepare students to succeed in upper-level courses that require this course as a pre-requisite.

To this end our course is designed to reach two goals:

1. prepare students to apply fundamental concepts of multivariable calculus that arise in more advanced courses and projects, and
2. help students refine their learning strategies to help them succeed in college level courses.

This course helps students make a **transition** between high school and college.

- We achieve our course goals through course activities that ask students to reflect on their learning strategies, and review course and institute policies and procedures.
- Students are also supported through this transition by encouraging them to ask questions our online forum, during studio sessions, during office hours, and with their peers.
- All of these strategies are valuable methods that are transferable to higher-level courses.

Learning Objectives

Learning objectives articulate what students are expected to do in a course.

Upon successful completion of the course, students will be able to do the following.

1. Describe three-dimensional vectors, surfaces, and multivariable functions geometrically.
2. Analyze vector-valued functions using calculus to characterize motion and paths in two and three dimensions.
3. Calculate and interpret derivatives of multivariable functions to describe and estimate how such functions change.
4. Analyze and solve multivariable optimization problems.
5. Construct and evaluate integrals of multivariable functions using Cartesian and other coordinate systems.
6. Construct and evaluate integrals of scalar and vector functions over curves and surfaces using the theorems of Green, Gauss, and Stokes, and apply these theorems to model physical quantities such as flux and circulation.
7. Contextualize mathematical quantities involving multivariable functions to interpret their meaning within problems that arise in everyday life or to give a geometric interpretation of them.
8. Write logical progressions of abstract mathematical statements and justify them using theorems and definitions from multivariable calculus.
9. Reflect on study strategies and engagement in course materials to individual learning processes.

Topics

Topics indicate what material is covered in a course. Math 2551 is an introduction to multivariable calculus.

A few of the topics explored in this course are as follows.

1. Vectors and the Geometry of space, vector calculus, parametric curves, and motion.
2. Functions of several variables, visualization, and partial differentiation, gradients, optimization, Lagrange multipliers, linear approximation, tangent planes, differentials.
3. Double and triple integrals and their applications.
4. Vector analysis including the theorems of Green, Gauss, and Stokes.

The topics that are covered are aligned with those that are stated on the School of Math website:

<https://math.gatech.edu/courses/math/2551> (<https://math.gatech.edu/courses/math/2551>)

5. Lectures and Studio

Lectures

- All lectures are pre-recorded and are available for the duration of the semester.

- Additional lecture video, if added, will be announced through Canvas so that students are aware of them.
- If your high school administrators have placed a block on the website where the lecture videos are hosted, they may need a URL to unblock the website. In that situation you can ask that the administrators unblock the URL <https://knowledge.kaltura.com/help/what-urls-does-the-kes-access> (<https://knowledge.kaltura.com/help/what-urls-does-the-kes-access>). If that does not resolve the issue, please contact your instructor.

Studio

- Studio sessions are facilitated by the instructor and TAs and are held Mondays and Wednesdays, 8:25 am to 9:15 am.
- All sessions are recorded and links to recordings typically appear in Canvas within 48 hours after the session is held.
- Studio session attendance is not mandatory.
- We expect all students to either attend the sessions or view their recordings.

Annoto

- Recordings of lecture and studios feature the Annoto tool.
- The Annoto tool allows students to post questions and comments that other students and the instructional team can see and respond to.
- Comments are associated with a particular video and a particular time stamp within the video.
- Students are encouraged to use the Annoto tool.
- Students can also use Piazza to discuss the course.

6. Expectations

Students

Students are expected to

- view lecture recordings
- either attend the live studio sessions led by TAs or view their recordings
- complete all assignments in a timely and professional manner
- study course materials to prepare for exams
- review the course syllabus
- uphold the GT Honor Code
- review their graded work in a timely manner for potential marking errors and to review where mistakes were made (if any)
- ask questions and seek help when needed in a timely manner
- read announcements placed on our course website (Canvas)

- alert their instructors of any conflicts with exam dates as soon as possible so that appropriate accommodations can be made

Teaching Assistants (TAs), Lecture Assistants, and Graders

- TAs are responsible for facilitating learning activities during studio, holding office hours, marking, and responding to questions from students via email. They may contribute to the discussion forum.
- Lecture Assistants (LAs) are responsible for holding office hours, marking, and responding to questions from students via email and the course discussion forum.
- Graders are only responsible for grading student work.

Instructors

Instructors provide learning objectives that define what students are expected to be able to learn, coordinate with teaching assistants to grade student work and facilitate learning activities, provide students with assessments that both develop and measure their understanding and knowledge of the subject matter, provide feedback on your performance, provide solutions to tests, and be available for assistance when requested.

7. MyMathLab and Course Textbook

Textbook: Thomas, Calculus: Early Transcendentals 14th edition by Addison-Wesley (Pearson).

Online homework: MyMathLab through Canvas

We will be utilizing MyMathLab (MML) for homework through a joint code for the Thomas *Calculus* text and the Lay *Linear Algebra* text.

How to Access MML

Our MML course is accessible from Canvas. To access MML.

1. Login to your Canvas account.
2. Navigate to our class.
3. Go to the “Access Pearson” tab on the left-hand menu.
4. From the My Lab page, you can login to, or create, your MyMathLab account to access our course.

You will not need to enter a course ID, and if you do, your instructor may not be able to see the work you do in MyMathLab! Please do not use a course ID!

Do Not Purchase a Textbook Code

- This particular course is for students enrolled in the Distance Mathematics Program.
- Dual Enrollment students (unless the student is a self pay student) do not purchase a code to access their textbook and online homework.

Self-Pay Students

- Most dual enrollment students have their tuition and textbook paid for by the State of Georgia.
- A self pay student will have to buy the textbook.
- There is a special package from the publisher to cover linear algebra and vector calculus.
- Self-pay students need to purchase the textbook themselves from the GT Bookstore.

Textbook Hardcopies

MyMathLab comes with an entire electronic version of the textbook; it is your choice if you would also like to own the textbook in print, but students will not be reimbursed for purchasing a hard copy of the book. If you prefer to own a hard copy of the text, the bookstore offers packages of MyMathLab combined with loose-leaf version of the Thomas and/or Lay textbooks that is less expensive than purchasing the text and code separately.

8. Grades

Grade Weights

Final grades are calculated using the following grade weightings.

Weight	Assessment
2%	Participation
3%	Written Assignments
30%	Homework
15%	Exam 1
15%	Exam 2
15%	Exam 3
10%	Final Exam Part 1
10%	Final Exam Part 2

Georgia Tech Only Distributes Letter Grades

The only official Georgia Tech grades are letter grades that are stated on the student transcript after the course is complete.

Numerical grades are converted to letter grades based on the standard intervals: A: [90%, 100%], B: [80%, 90%), C: [70%, 80%), D: [60%, 70%), F: [0%, 60%).

Final numerical grades that are higher than 100% (because of, for example, extra credit) also convert to an A.

Students can not expect any changes to these intervals and any changes made to them could only be made after the final exam is held. Percentage grades are not rounded to the nearest integer before conversion to letter grades. For example, 89.99999% is converted to a B, and 79.99999% is converted to a C, and so on.

FERPA And Grades

- Instructors and teaching assistants are NOT ALLOWED to share ANY grade data for a particular student with anyone other than the student whose grades pertain to.
- There are no exceptions to this policy.

Grade Curves

- No grades on any assessment will be curved.
- Boundaries between letter grades may be lowered.
- The extent to which boundaries could be lowered can only be determined after all final exams has been graded.

CIOS Incentive

Please take a few moments towards the end of the semester to complete the CIOS survey. The School of Math is currently discussing how we might better offer courses in the Distance Math Program, how to better support our students, teaching assistants, and instructors, as well as a range of other items related to this course.

CIOS survey results have informed many improvements to this course in recent years, and your results will help the School of Math decide how to allocate resources to this course and what directions we should take in the near future. Your instructors also use CIOS data to help improve their teaching from course to course.

To help encourage students to complete the CIOS survey, if the completion rate is at least 85% for the entire class, for both the QH and QHS sections, by the Friday at noon before final grades are due to the GT Registrar (May 4 2025), then

- the letter grade intervals will be lowered by 1%, and

- the lowest three webwork homework sets will be dropped (instead of one).

In other words,

- A final grade of 89.0% would be an A, but 88.999% would be a B.
- A final grade of 79.0% would be a B, but 78.999% would be a C.

And so on for the remaining letter grades.

A response rate of over 85% is unlikely to be met before the final exam. If the response rate goes above 85%, it usually does so after the final exam is returned.

While the CIOS survey is open, the instructor will announce the current CIOS response rate to the class in weekly announcements.

Please do not ask for updates on the CIOS completion rate on Piazza, during office hours, or over email. Instructors do not check the CIOS completion rate every day. In the last few weeks of the semester should focus on final exams, and instructors are busy coordinating their grading so that we can process grades before grade submission deadline that the Registrar has for all GT courses.

More About CIOS

- Generally the CIOS survey is released by the Office of Academic Effectiveness at the end of the semester.
- Students will receive several announcements from the OAE asking you to complete the CIOS in their GT email.
- More information about the CIOS is available at: <https://academiceffectiveness.gatech.edu/surveys/cios> (<https://academiceffectiveness.gatech.edu/surveys/cios>).

9. General Advice on How to Succeed in MATH 2551

Your instructors, teaching and lecture assistants want all students to succeed in reaching their learning goals as they participate in this course.

While the pathways that students may need to take to reach learning goals can differ from student to student, there are general guidelines that can be recommended.

1. Do not wait until the last minute to complete any course activity! Unanticipated issues can get in the way of your learning progress and make it harder for you to stay on top of your course. Some activities may require more time than you might realize, and we want you to give every activity the time it needs.
2. Learning mathematics can take time. Pace yourself so that you are giving yourself enough time to understand the material you are learning.

3. Schedule time in a digital and/or physical calendar for learning course content and completing course activities. This can help you stay on top of the course, and spend more time learning instead of deciding how to spend your time.
4. Ask for help throughout the semester using our online discussion forum, office hours, and during our live sessions.
5. Let your instructor know of any scheduling conflicts and/or accommodations you might need to succeed in this class as soon as you can. This can help you spend more time learning instead of dealing with scheduling issues.
6. This course requires that students be able to read and comprehend mathematical terminology. To approach this requirement it is recommended that students read the course textbook and refer to it throughout the entire semester.
7. Take care of yourself: do what you can to place your own physical and mental health at a high priority so that you can bring your best to this course.

10a. Policies and Procedures for Participation Activities

The purpose of Participation Activities are to:

- offer feedback to the instructor on student engagement with course activities,
- help students define their learning goals for this course and general strategies for reaching them,
- help students further develop their study strategies for exams, and
- help students familiarize themselves with course policies and GT policies.

All participation activities can be accessed through the Quizzes tab in Canvas.

Participation activities are as follows.

- Participation 1: Start of Semester Survey
- Participation 2: Syllabus Quiz
- Participation 3: Exam Procedures
- Participation 4: GT Honor Code Quiz
- Participation 5: Mid-Semester Survey
- Participation 6: Final Exam Procedures Quiz
- Participation 7: Distance Math Program Feedback Survey

Policies for participation activities are listed below.

- The lowest participation activity grade is dropped.
- Students can submit these activities as many times as they like until they are due.
- All questions on these activities are automatically graded.
- Students are responsible for ensuring that their work is submitted through Canvas.
- Students can check whether their work was submitted by checking the Canvas grade book.
- Extensions and make-up activities will not be available for participation activities. For example, accommodations for internships, work, school events and school activities will not be accommodated.

These activities can be completed well in advance of the deadline and should only require a few minutes to complete.

- The only accommodations that will be made for Participation Activities are for illnesses, unexpected technical issues, and unexpected family and personal issues. In such situations, the activity will be dropped so that it does not count towards the final grade.

Students are encouraged to complete these activities well in advance of when they are due to minimize unexpected issues that might prevent them from submitting work on time.

10b. Policies and Procedures for Homework

General Policies

- Homework (HW) sets are assigned on-line and consist of exercises in Webwork.
- Homework is not proctored.
- Homework are open book and open notes. In other words, students can use any resources while taking these assessments including the textbook, online calculators such as WolframAlpha, and Mathematica.
- There may be homework and/or Tests due the final week of class.
- Each student gets individual problems, that is, the numbers differ but the problems are similar.
- Students have an unlimited number of attempts on each problem.

Dropped Scores

- The lowest homework set is dropped.
- Canvas drops the lowest scores automatically after at least two assessments are completed. If, for example, you have only completed one homework set, Canvas will not drop your HW score. You would need to have completed two HW sets before the lowest is dropped.
- If multiple HW sets share the lowest grade, then canvas chooses one of the items that has the lowest grade and drops that score.

Late Policy, Emergencies, Scheduling Conflicts

- Work on HW cannot be submitted after they are due.
- Students who encounter last-minute technical issues or other emergencies can request an accommodation from their instructor via email.
- Students are responsible for informing their instructor **as soon as possible** if they cannot take a test on the date that it is scheduled.
- Accommodations for part-time jobs, full-time jobs, school events and activities (eg - band rehearsal, FBLA leadership conferences, high school athletics, college applications, etc) will not be made.
- Homework can be completed well in advance of their respective deadlines.
- The only accommodations that will be made for homework are for illnesses, unexpected technical issues, and unexpected family and personal issues (eg - death in the family). In such situations, the activity will likely be dropped so that it does not count towards the final grade so that students can

focus on recovering from their illness or the issue that prevented them from submitting their work on time.

- Generally it is recommended that students complete these activities well in advance of when they are due to minimize unexpected issues that might prevent them from submitting work on time.

Academic Integrity

- It is ok to share answers with other students.
- However, when submitting your own work do not copy directly from **any** source, including friends, classmates, or a solutions manual.
- Any work that you submit for a grade must be your own work.
- You are expected to understand all homework problems before taking exams.

Webwork the Canvas Gradebook

- Grades are pushed from webwork to canvas automatically.
- After one or two days (probably a lot sooner) webwork grades should sync with the Canvas grade book.
- If you open a webwork assessment, webwork counts it as an attempt whether you answered any questions or not, and webwork will pass your grade over to Canvas on that attempt, even if you did not answer any questions.
- Don't forget that you have unlimited attempts on HW up until when they are due.
- If you receive a grade of zero because you opened a homework or test before it is due, it's ok because you can go back and answer questions to improve your grade.
- Just don't wait until the last minute to finish your work!

Submitting Your Work in Webwork

- There is no "Submit" button in webwork.
- As you are finishing the HW and Module Tests, your score in webwork should update.

10c. Policies and Procedures for Written Assignments

The primary purpose of these activities are to give students an opportunity to complete and receive feedback on their mathematical writing.

Students are expected to write logical progressions of mathematical statements on exams, and the written assignments give students an opportunity to receive feedback on their ability to do so throughout the semester.

Access and Submission Instructions

- Students will submit their written assignments in Gradescope.
- Students can access Gradescope from Canvas (left navigation menu).
- Student work must be submitted as a single PDF file.

- Students can submit their work as many times as they like before it is due.
- Please ensure that:
 - Each question is answered on its own page (or pages).
 - Questions are answered in the order in which they were given.
 - During the upload process you have indicated which pages correspond to which question.
 - During the upload process you made sure that none of your pages are upside down or sideways.

Note that you can change the orientation of the pages when you upload in Gradescope.
- Student work can be typed or hand written.
- It is ok to submit work that was written on a tablet or iPad.

Due Dates for Spring 2025 and Topics Covered

- WA1: Mon Jan 27 11 pm ET, covers topics from Module 1
- WA2: Mon Feb 17 11 pm ET, covers topics from Module 2
- WA3: Mon Mar 10 11 pm ET, covers topics from Module 3
- WA4: Mon Apr 14 11 pm ET, covers topics from Module 4

Late Policies

- Written assignments can be submitted late any time before up to three days (72 hours) after the assignment is due, but with a 20% late penalty. After that, late submissions cannot be accepted because we will need to grade work and post solutions to the entire assignment.
- If the due date gets extended by a day or two because of a technical issue or weather related event:
 - We typically DO NOT extend the late deadline as well because the instructional team grades the assessment manually.
 - Please do not ask if the late deadline will be extended in such cases.
 - Please do not assume the late deadline is extended in such cases.
- Students who encounter last-minute technical issues, illnesses, or family emergencies can request an extension from their instructor via GT email.
- Accommodations for part-time jobs, full-time jobs, school events and club activities (eg - band rehearsal, robotics club competitions, FBLA leadership conferences, debate club competitions, etc), and high school athletics will not be made.
- These assignments can be completed well in advance of their respective deadlines.

Dropped Scores

- The lowest written assignment grade will be dropped.

Grading

- The instructional team (ie - graders, LAs, TAs, instructors) will aim to grade and return written assignments on the afternoon of the Monday of the week after the assignment is due.
- Solutions will also be posted when the assignments are returned.

Allowed Resources

- Written Assignments are open book and open notes.

- In other words, students can use any resources while completing these assessments, including the textbook, online calculators such as WolframAlpha, and Mathematica.
- It is ok to discuss and share your answers with other students.
- When submitting your own work do not copy directly from **any** source, including friends, classmates, or a solutions manual.
- Your work must be your own.

Typing Your Work

- It is likely easier and faster for most students to write their work out on paper and scan their work, but students can type their work if they prefer to do so. Some students prefer using Microsoft Word, which is ok.
- If you prefer, you can type your work is to use [LaTeX](https://en.wikipedia.org/wiki/LaTeX) (<https://en.wikipedia.org/wiki/LaTeX>). A free and popular platform for developing LaTeX documents is [Overleaf](https://www.overleaf.com/edu/gatech) (<https://www.overleaf.com/edu/gatech>). Georgia Tech provides free Overleaf Professional accounts for all students, faculty and staff who would like to use an online LaTeX editor for their projects. Overleaf Professional accounts provide real-time track changes and full document history. Post a question on Piazza if you have any questions about getting started with LaTeX.

Showing Work

- For full credit, please show your work for all exercises unless specified otherwise.
- This means that you should write down intermediate steps so that others reading your work can clearly see how you obtained your results.
- It is ok to use a calculator to check that the calculations that you made while completing your assignments by hand were correct. But your submitted work should show enough detail so that it is clear how you obtained each step without the use of a calculator.

How Written Assignments are Returned

- After the work is graded and returned, students will receive a link to their graded work in their Georgia Tech email account.
- The email will contain:
 - a link to your graded work in Gradescope
 - a few statistics that describe how well students did on the homework set (average, median, and standard deviation).
- Solutions will be provided on the Written Assignments page under the Canvas Modules tab.

10d. Policies and Procedures for Exams

Exam Policies and Procedures

- Exams are proctored in-person by a facilitator who is a high school staff member.
- Georgia Tech Professional Education will work with facilitators to distribute exams and communicate exam policies.

- Students cannot take exams on the Georgia Tech campus.

Exam Dates

- Students should take Exam 1 under supervision of their facilitator any time on Wednesday Feb 5, 2025.
- Students should take Exam 2 under supervision of their facilitator any time on Wednesday Feb 26, 2025.
- Students should take Exam 3 under supervision of their facilitator any time on Wednesday Mar 26, 2025.
- Students must take both parts of the Final Exam any time on April 24 and/or April 25, 2025.
- Students can take both parts of the final exam on Thursday Apr 24, or both parts of the final exam on Friday Apr 25, or take one part on Thursday and the other part on the Friday.

Exam Times and Locations

- High school facilitators are responsible for scheduling the exact time and location of the exams at their respective schools. But exam dates should coincide with the dates given above.
- Students are responsible for reaching out to their facilitator to determine the exact time and location of each exam. Students who do not do so can receive a zero on their exam.

Take Exams Together

Please take the exam with the other students at your school at the same time.

- All students at the same high school should take Exam 1 at the same time.
- All students at the same high school should take Exam 2 at the same time.
- All students at the same high school should take Exam 3 at the same time.
- All students at the same high school should take Final Exam Part 1 at the same time.
- All students at the same high school should take Final Exam Part 2 at the same time.

Timing

- Students should have 50 minutes to take Exam 1, but they can leave early if they finish early.
- Students should have 50 minutes to take Exam 2, but they can leave early if they finish early.
- Students should have 50 minutes to take Exam 3, but they can leave early if they finish early.
- Students should have 50 minutes to take Final Exam Part 1, but they can leave early if they finish early.
- Students should have 50 minutes to take Final Exam Part 2, but they can leave early if they finish early.

In the interest of fairness, the final exam should be taken in two separate parts. If for example a school decides to set aside a 100 min exam window on a Thursday morning for the final exam, then Part 1 should be administered, collected after 50 min, and then the second part can be administered. Students should not be able to work on both parts of the final exam at the same time.

Exam Structure

- Exams 1, 2, and 3 are exactly 3 pages (each). For example, Exam 1 is exactly 3 pages.
- Each part of the final exam is also exactly 3 pages. In other words: Part 1 is 3 pages, and Part 2 is another 3 pages.
- There will be true/false questions on exams that will be similar to the questions on the weekly homework and sample exams.

Multiple Exam Versions

- In the interest of academic integrity, there will be different versions of each exam.
- Each facilitator will follow instructions from GT Professional Education as to which versions to use for each exam.

Topics

- Exam 1 only covers Module 1.
- Exam 2 covers Module 2. Every question on Exam 2 covers Module 2 material, but questions will also require an understanding of the material covered in previous modules.
- Exam 3 covers Module 3. Every question on Exam 3 covers Module 3 material, but questions will also require an understanding of the material covered in previous modules.
- Both parts of the two-part final exam are comprehensive and will require an understanding of the entire course.
 - Roughly 5% to 20% of the questions and points on each part of the final exam focuses on Module 1.
 - Roughly 10% to 30% of the questions and points on each part of the final exam focuses on Module 2.
 - Roughly 10% to 30% of the questions and points on each part of the final exam focuses on Module 3.
 - Roughly 30% to 45% of the questions and points on each part of the final exam focuses on Module 4.
- Sample exams will give the structure of the exams students take (number of pages, total points, question types, etc).


While Taking Exams

- All exams are proctored in-person.
- You will need to know your GTID number. Your proctor/facilitator should be able to tell you your GTID number if you do not remember it.
- Students will need to write their names, GTID number, and the name of their high school on every page in the space provided.
- Students should not have their facilitator or anyone else complete their name and GTID on their behalf. To be consistent with the GT Honor code, students should write this information in themselves.

- All exams are closed book: notes, books, calculators, cell phones and other electronic devices are not allowed.
- Each exam is three (single sided) pages and should be printed on 8.5" x 11" paper.
- Use dark and clear writing: your exam will be scanned.
- It is ok to use pen or pencil. Pencil can be used if the writing is dark because the instructional team is grading a scanned copy of the exam.
- Please answer all questions on the exam papers that your facilitator gives you.
- **Any work done on the reverse side of the exam or on scratch paper will not be graded.**
- One additional page of scratch paper is allowed for rough work but should not be scanned or submitted for grading.
- Scratch paper (if any) must be given to the facilitator after the exam is over.

Make-up Exam Policies

- Students are responsible for informing their instructor **as soon as possible** if they cannot take an exam on the date that it is scheduled.
- Any student who misses an exam, with reasonable explanation, might have an opportunity to take a make-up.
 - Accommodations are usually only given for illness, personal or family issues, and religious or school events.
 - Students who do not show up to take their exam because of a conflict with a school activity, volunteer activity, internship, or work related commitment, and do not inform their instructor in advance of the exam, usually receive a grade of zero on the exam.
 - Situations for scheduling conflicts will be handled on a case-by-case basis.
- If a student cannot take an exam on the day it is scheduled, or at the same time that the other students at their school are taking the exam, then they should do the following.
 - Students should contact the primary instructor as soon as they can, and at least one week before the exam is scheduled using their GT email account to let them know why they cannot take the exam on the day it is scheduled.
 - The email that students are writing to their instructor should include the high school they attend, the name of their facilitator, and the email address of their facilitator
- In regards to when a make-up exam can be administered:
 - Any make-up tests should be taken by 7 business days after the exam is held. For example, if an exam is held on a Wednesday, students needing a make-up should take the make-up some time before or on the following Thursday.
 - Make-up exams cannot be taken before the date of the exam. For example, if an exam is scheduled for a Wednesday, then students cannot take a make-up for that exam on the day before the exam (Tuesday).
 - All make-up final exams must be taken on or before the Thursday before final grades are due to the GT Registrar.

- Students who cannot complete an exam because of a scheduling conflict must contact their instructor **at least one week in advance of the exam** so that appropriate accommodations can be made. Failure to do so may result in the student receiving a grade of zero on that exam. Situations are handled on a case-by-case basis. Please note that due dates for exams were stated at the beginning of the semester and are in the syllabus. This is done so that students can schedule their time accordingly and so that scheduling conflicts can be resolved in a timely manner.
- Students who miss the final exam might qualify for an **Incomplete**. However, an Incomplete can only be assigned under specific circumstances that are defined on the Office of the Registrar's website: <https://registrar.gatech.edu/info/incomplete-grades> 
(<https://registrar.gatech.edu/info/incomplete-grades>)

Timeline for Returning Exams

- It takes four or five business days for exams to be collected, scanned, uploaded to Gradescope, exams to be aligned with the roster, and to resolve any technical issues (if any) that were encountered in scanning/uploading. If for example an exam were held on a Wednesday, grading usually starts the following Tuesday or Wednesday.
- After the process of uploading exams is complete and any issues that were encountered are resolved, the instructional team grades exams.
- Grading exams usually requires an additional three or four business days.
- The goal is to grade and return exams in around two weeks, or 8 to 9 business days after the exam is held.

11. General Policies and Procedures for Assessments

Regrade Requests

- If any of your work on any learning activity has been graded in error, you can submit a regrade request.
- A re-grade request can only be submitted if you did something correct that was marked as incorrect.
- You must check your answers with the solutions before submitting such a request.
- Regrade requests for any assessment returned through Gradescope should be submitted using Gradescope.
- Regrade requests for any assessment returned through Gradescope should not be submitted through email or through Canvas messaging.
- Re-grade requests can be requested any time before noon on Friday May 3 2024, which is the Friday before final grades have to be submitted to the GT Registrar.
- Any re-grade requests submitted after the final exam will only be considered if they might result in a letter grade change.

Forgetting to Complete Course Activities

- Students requesting an extension on homework, module tests, and participation activities that they forgot to complete will be reminded that:
 - the only accommodations that will be made are for illnesses, unexpected technical issues, and unexpected family and personal issues, and in those situations, the activity will be dropped so that it does not count towards the final grade.
 - there are no accommodations for forgetting to complete homework, module tests, and participation activities.

Unanticipated Illness and Doctors Notes

- Please do not send your instructors any doctors notes or medical records unless your instructors request them.

12. Email and Piazza Communication Guidelines

Please Use Piazza When Possible

- Generally for questions that pertain to course concepts it is best to use the Piazza forum instead of email. That way, others can benefit from the conversation and will have an opportunity to add to it, which makes for better support and strengthens our online community.
- Don't forget that you can make your Piazza posts anonymous to other students if you prefer.
- If there is a personal issue that needs to be worked out (illness, conflict with an upcoming exam time, etc) then please use email instead of Piazza.

When Contacting the Instructors, TAs, LAs via Email

- To be consistent with FERPA, please use your GT email account when sending email to your instructor or TA or an LA.
- When emailing an instructor, TA, LA:
 - please indicate which class you are taking with them (they sometimes teach/support more than one course per semester), and
 - keep your email messages succinct, but give your them enough information as they need to process your request.
- If you are requesting an accommodation for a course activity, please briefly indicate why you need an accommodation.

When Using Piazza

- Unless your question involves a personal issue, please consider making your Piazza posts public so that other students can benefit from the discussion.
- If you prefer you can make yourself anonymous to other students.
- Students can use mathematical notation in Piazza by surrounding latex commands with \$\$ symbols.
- Please use Piazza in a positive, constructive manner.

Please Answer Questions on Piazza Too!

- Students are encouraged to answer each other's questions on Piazza.

- Helping other students on Piazza contributes to our classroom community and can help solidify each others understanding of course concepts.
- Students are also encouraged to respond to any questions that are posted on Piazza that can be answered by reading the course syllabus (eg - what topics are covered on an exam) by directly quoting the syllabus. Copy-and-paste is often helpful for these situations.

13. After the Final Exam

Returning The Final Exam

- Final exams are usually not returned to students in GT courses.
- In this course we will return the final exam and post its' solutions to Canvas.
- The instructional team (graders, LAs, TAs, the instructor) will aim to grade and return exams in 7 to 8 business days, or by the afternoon of the Friday following the date the exam is held.
- Student scores on the final exam will be posted to Canvas.
- Please only submit questions about your exam and regrade requests to your instructor if it could change a letter grade.

Course Grades

- Student final exam grades will be posted on Canvas. Students can calculate what their final course grade is based on the grade weights in this syllabus.
- Any changes made to final grades after the date final grades are submitted to the registrar must be made in accordance with GT Policies. See: <https://registrar.gatech.edu/info/grade-changes> (<https://registrar.gatech.edu/info/grade-changes>).
- The value of a Georgia Tech degree is in some measure determined by upholding reasonably rigorous grading procedures: please respect the grading policies set out in this syllabus and by Georgia Tech.
- Instructors and teaching assistants are NOT ALLOWED to share ANY grade data for a particular student with anyone other than the student whose grades pertain to. There are no exceptions to this policy.

Incomplete Grades

- Students who miss the final exam might qualify for a final grade of **incomplete**.
- An Incomplete can only be assigned under specific circumstances that are defined on the Office of the Registrar's website: <https://registrar.gatech.edu/info/incomplete-grades> (<https://registrar.gatech.edu/info/incomplete-grades>).

Questions After the Course is Over

- Our forum will be closed a week or two after final grades are posted.
- You may contact instructors by email after that date for anything related to the course.

Access to Course Sites After the Course is Over

- As long as you are a GT student you can access the canvas site for this class. We won't be maintaining the canvas site (so links to external sites might not work eventually) but you should be able to access the resources on it.
- The Piazza site for our course will be moved over to a read-only mode a few weeks after the semester is over. You can still read the posts but you won't be able to make new posts.
- You may want to save a PDF version of the syllabus. Occasionally we receive requests from students a few years after they finish the course for a copy of the syllabus. This happens sometimes when students enroll at a college that isn't Georgia Tech and the student wants to apply for transfer credit at that college.


14. Academic Integrity

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 <https://policylibrary.gatech.edu/student-life/academic-honor-code> (<https://policylibrary.gatech.edu/student-life/academic-honor-code>).

Cheating includes, but is not limited to the following.

- Copying directly from **any** source during a closed-book exam, including friends, classmates, or a solutions manual.
- Allowing another person to format the work that you submitted for course credit.
- 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.

Incident Referrals

- Students who would like to report an incident can at any time fill out an Academic Incident Referral form at: <https://osi.gatech.edu>  (<https://osi.gatech.edu>).
- Teaching assistants, instructors, staff, or **any** member of the GT community can also at any time fill out an Academic Incident Referral form.
- For example, if a student witnesses an academic integrity violation, then that student can report it using the Academic Incident Referral form, but they are not obligated to do so.
- Questions that anyone may have about the referral form can be directed to OSI (their contact info is in the instructions at the top of the form).

How Incidents are Processed

Any student suspected of cheating or plagiarizing on any course activity will be either

- reported to the Office of Student Integrity (OSI), who will investigate the incident and identify the appropriate penalty for violations, and/or
- addressed in a Faculty Conference Resolution between the course instructor and the student.

In either case, evidence of cheating or other violations of the Georgia Tech Honor Code may be submitted directly to the OSI.

Evidence of cheating or other violations of the Georgia Tech Honor Code may be submitted directly to the student's designated facilitator at their high school.

Details on the Faculty Conference Resolution process are here: <https://osi.gatech.edu/content/faculty-conference-resolution>
(<https://osi.gatech.edu/faculty/faculty-conference-resolution>)_.

15. GT Campus Policies, Statements, and Resources

Students with Disabilities and/or in Need of Accommodations

- The Office of Disability Services (ODS) can be reached at (404) 894-2563 or online at <https://disabilityservices.gatech.edu> (<https://disabilityservices.gatech.edu/>)_.
- Students are encouraged to make an appointment with the GT ODS to discuss any needs they may have and to obtain an accommodations letter.
- Students who can work with the staff at their high school to have their accommodations met without going through ODS are welcome to do so.
- Be aware however that school staff can require documentation from the GT ODS before making any exam (or other) accommodations.
- If a student obtains an accommodation letter from GT ODS then they should send a copy of the letter to the GT Professional Education Dual Enrollment coordinators at dualenrollment@pe.gatech.edu (<mailto:dualenrollment@pe.gatech.edu>)_. They need the letter to coordinate exams with facilitators at your school to help them proctor and administer exams.
- Students are also welcome to e-mail their instructor to discuss learning needs and accommodations they may have.
- Students are also encouraged to work with the staff at their school to have their accommodations they have for exams.


Withdrawing from the Course

- Students are encouraged to reach out to an academic advisor at their high school before they consider withdrawing to ask questions about what the process might be, if the process is allowed, and how doing so may impact their high school transcript. Individual high schools may have policies and procedures in place that impact the withdraw process.
- Students who wish to withdraw from this course before the morning of the Friday of the first week of classes can do so by contacting the GT Director of Dual Enrollment Programs, whose contact information is here: <https://admission.gatech.edu/school-counselors/dual-enrollment> (<https://admission.gatech.edu/school-counselors/dual-enrollment>)_.
- Georgia Tech also has a campus-wide Withdrawal Deadline that is typically in the 9th or 10th week of the semester. Students who wish to withdraw from this course after the first week of the class but

before the institute Withdrawal Deadline would do so by contacting the GT Director of Dual Enrollment Programs. Withdrawing from the course before the GT institute Withdrawal Deadline would have a letter grade of W on their GT transcript. And students should also reach out to their high school advisors in regards to the withdrawal, as described above.

- Students who wish to withdraw from this course after the GT Withdrawal Deadline would do so by contacting the GT Director of Dual Enrollment Programs and their Instructor. Students would need to complete a Petition to the Faculty that their instructor or the Director of Online Learning would need to sign. After that the letter needs to be sent by the student to the GT Registrar for approval. Procedures for this process are stated here: <https://registrar.gatech.edu/info/petition-faculty> (<https://registrar.gatech.edu/info/petition-faculty>). The institute does not typically allow this process for cases where students are only unhappy with their grade. This process is intended for cases where students were facing a situation where they were unable to complete course work because of unanticipated events. And students should also reach out to their high school advisors in regards to the withdrawal, as described above.

Student-Faculty Expectations Agreement

- At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body.
- See [GT Student-Faculty Expectations](https://catalog.gatech.edu/rules/21)  (<https://catalog.gatech.edu/rules/21>) for an articulation of some basic expectation that you can have of your instructors and that they have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, we encourage you to remain committed to the ideals of Georgia Tech while in this class.



Statement of Intent for Inclusivity










As a member of the Georgia Tech community, your instructor is committed to creating a learning environment in which all of their students feel safe and included. Because we are individuals with varying needs, your instructor is reliant on your feedback to achieve this goal.

To that end, GT instructors invite you to enter into dialogue with us about the things that we can stop, start, and continue doing to make our classroom an environment in which every student feels valued and can engage actively in our learning community.

Campus Resources for Students

In your time at Georgia Tech, you may find yourself in need of support. Below you will find some resources to support you both as a student and as a person.

- Center for Academic Success <http://success.gatech.edu>  (<http://success.gatech.edu/>)
- Communication Center (<http://www.communicationcenter.gatech.edu>  (<http://www.communicationcenter.gatech.edu/>))

- The Office of the Dean of Students: <https://studentlife.gatech.edu/content/get-help-now>  (<https://studentlife.gatech.edu/content/get-help-now>); 404-894-6367; Smithgall Student Services Building 2nd floor
- Counseling Center: <http://counseling.gatech.edu>  (<http://counseling.gatech.edu/>); 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): <https://studentlife.gatech.edu/content/star-services>  (<https://studentlife.gatech.edu/content/star-services>)
 - Can assist with interview clothing, food, and housing needs.
- Stamps Health Services: <https://health.gatech.edu>  (<https://health.gatech.edu/>); 404-894-1420
 - Primary care, pharmacy, women's health, psychiatry, immunization and allergy, health promotion, and nutrition
- **OMED: Educational Services**  (<http://www.omed.gatech.edu>)
- **Women's Resource Center**  (<https://womenscenter.gatech.edu/>); 404-385-0230
- **LGBTQIA Resource Center**  (<http://lgbtqia.gatech.edu/>); 404-385-2679
- **Veteran's Resource Center**  (<http://veterans.gatech.edu/>); 404-385-2067
- **Georgia Tech Police**  (<https://police.gatech.edu/>); 404-894-2500

16. Course Schedules

Lecture Schedule

Week	Dates	Module	Lectures
1	01/05-01/11	1	12.1, 12.2, 12.3, 12.4
2	01/12-01/18	1	12.5, 12.6, 13.1, 13.2
3	01/19-01/25	1	13.3, 13.4
4	01/26-02/01	2	14.1, 14.2, 14.3, 14.4
5	02/02-02/08	2	14.5, 14.6
6	02/09-02/15	2	14.7, 14.8
7	02/16-02/22	3	15.1, 15.2, 15.3
8	02/23-03/01	3	15.4, 15.5, 15.6
9	03/02-03/08	3	15.7, 15.8
10	03/09-03/15	4	16.1, 16.2

11	03/16-03/22	Spring Break	
12	03/23-03/29	4	16.3, 16.4
13	03/30-04/05	4	16.5, 16.6
14	04/06-04/12	4	16.7, 16.8

Assessment Schedule

All release dates and due dates are set to 11:00 pm ET with the exception of the in-person proctored exams.

Week	Assessment	Where to Submit	Release Dates	Due Dates
1	Participation 1: Survey	Canvas	Mon Jan 6	Wed Jan 8
1	HW1	Webwork	Mon Jan 6	Thu Jan 9
2	Participation 2: Syllabus Quiz	Canvas	Mon Jan 6	Wed Jan 15
2	HW2	Webwork	Mon Jan 6	Thu Jan 16
3	Participation 3: Exam Procedures	Canvas	Mon Jan 6	Wed Jan 22
3	HW3	Webwork	Mon Jan 6	Thu Jan 23
4	WA1	Gradescope	Mon Jan 6	Mon Jan 27
4	Participation 4: Honor Code	Canvas	Mon Jan 6	Wed Jan 29
4	HW4	Webwork	Mon Jan 6	Thu Jan 30
5	Exam 1	Proctored in person	Wed Feb 5	Wed Feb 5
5	HW5	Webwork	Mon Jan 6	Fri Feb 7
6	HW6	Webwork	Mon Jan 6	Thu Feb 13
7	WA2	Gradescope	Mon Jan 27	Mon Feb 17
7	HW7	Webwork	Mon Jan 6	Thu Feb 20
8	Exam 2	Proctored in person	Wed Feb 26	Wed Feb 26
8	HW8	Webwork	Mon Jan 6	Fri Feb 28
9	HW9	Webwork	Mon Jan 6	Thu Mar 6
10	WA3	Gradescope	Mon Feb 17	Mon Mar 10
10	Participation 5: Mid-Semester Survey	Canvas	Wed Feb 26	Wed Mar 12
10	HW10	Webwork	Mon Jan 6	Thu Mar 13
11	<i>Spring Break, no assessments are due this week</i>			
12	Exam 3	Proctored	Wed Mar 26	Wed Mar 26
12	HW11	Webwork	Mon Jan 6	Fri Mar 28

Week	Assessment	Where to Submit	Release Dates	Due Dates
13	HW12	Webwork	Mon Jan 6	Thu Apr 3
14	Participation 6	Canvas	Sun Mar 24	Wed Apr 9
14	HW13	Webwork	Mon Jan 6	Thu Apr 10
15	WA4	Gradescope	Mon Mar 24	Mon Apr 14
15	Participation 7	Canvas	Sun Mar 24	Wed Apr 16
16	Final Exam Part 1	Proctored	Thu Apr 24	Fri Apr 25
16	Final Exam Part 2	Proctored	Thu Apr 24	Fri Apr 25

17. Institute Dates

- 01 06 2025: First day of classes
- 01 20 2025: Holiday (MLK)
- 03 13 2025: Withdrawal deadline
- 03 17 2025: Break (from March 17 to March 21)
- 04 21 2025: Final instructional day
- 04 22 2025: Final instructional day
- 05 05 2025: Grade submission deadline (noon)
- 05 06 2025: Final grades available

For further information on campus-wide dates see <http://www.registrar.gatech.edu/calendar>

18. Extra Credit

MML Extra Credit Exercises

- The School of Math is moving away from the Pearson system for MATH 1554, MATH 2551, and other courses.
- MATH 2551 used to offer weekly homework in MyMathLab.
- A set of MyMathLab homework sets will be available as extra credit that can add at most 1% to the final grade before it is converted to a letter.
- Students will be able to access the homework sets from the **MyLabAndMastering** tab in Canvas when they become available.
- Completion of the webwork homework sets will be entirely optional and will only be used for extra credit.
- Access dates, due dates, and further details will be given on a page within Canvas.

Other Extra Credit Activities

- There may be other extra credit activities this semester.
- Thank you everyone who completed MATLAB Grader exercises last semester! We are hoping to build some MATLAB grader exercises for extra credit this semester and make them available in early February.

19. Morley Awards

- The GT School of Mathematics recognizes distance students who receive final grades in the top 2% in Math 2551.
- Any extra credit activities that are part of the course will be included in the calculations used to determine who is awarded a Morley Award.
- The award is a congratulations certificate sent via email.
- Students who receive a Morley Award are typically sent the award three to four weeks after the deadline to submit final grades to the GT Registrar.
- Award acknowledges Dr. Tom Morley's contribution to the Distance Math program. Dr. Morley helped create this program and taught courses within it from 2005 – 2015. He is now retired.