## MATH 2551 MULTIVARIABLE CALCULUS

GEORGIA TECH LORRAINE

# COURSE SYLLABUS

(Updated April 18, 2026)

*Welcome to Multivariable Calculus! We hope that you will find this to be a useful, fundamental course for your future studies.*

## 1. Course Description

**Course Title**: Multivariable calculus

**Course Meeting Times**: Mondays & Wednesdays, 9:30 - 10:45, Green room

**Recitation Meeting times:** Tuesdays & Thursdays, 2:00 - 2:50

## 2. Instructor and TA Contact Information

**Instructor**: Dr. S. MEHDI

**Office**: TBA

**Office Hours** : Mondays & Wednesdays, 11:00 - 12:00 or by appointment

**E-mails:** salah.mehdi@univ-lorraine.fr & smehdi32@gatech.edu

**Teaching Assistant**: TBA

**Office**: TBA

**Office Hours:** TBA

**E-mail**: TBA

## 3. Textbook

Thomas' Calculus, Early Transcendentals, 13rd edition, by Pearson. ISBN-10: 0-321-88407-8
(The 14th edition is already available. The TA will provide you with a list of problems labeled as in 14th edition.)

## 4. Course Websites

**Course Website**: canvas.gatech.edu

Canvas will be used for course grades, announcements, and course-related documents.
Information on the class may be communicated by email.

**Assessments**: Except the final exam, tests will be returned in class.

## 5. Grades

| Assessment | Weight 1 | Weight 2 |
|---|---|---|
| Participation | 4% | 4% |
| Quizzes | 16% | 16% |
| Midterms | 45% | 35% |
| Final Exam | 35% | 45% |

Letter grades will be determined based on the usual intervals. **A**: 90% and higher, **B**: [80%, 90%), **C**: [70%, 80%), **D**: [60%, 70%), **F**: [0%, 60%). For example, a final grade of 89.99% is converted into a B, a final grade of 79.99% is converted into a C, and so on. You will be guaranteed a minimum of the following grading scale, but do not expect any adjustments. Any changes to these intervals would only be made after the final exam.

**Midterm grades** : a satisfactory grade will be assigned to all students with a midterm average of 70% or higher.

## 6. Topics outline

- Vectors and Geometry of Space 12.2-12.6
- Vector Valued Functions, Vector Calculus, Tangents, Arc-length, Motion in Space 13.1-13.6
- Functions of several variables, Partial Derivatives, Gradients, Extreme Values, Lagrange Multipliers, Taylor's theorem in several variables 14.1-14.10
- Double and triple integrals 15.1-15.8
- Vector analysis, line integrals, surface integrals, and the theorems of Green, Gauss, and Stokes 16.1-16.8

## 7. Expectations

### 7.1 Students

Students are expected to attend lectures and recitations and behave at all times in a respectful manner to their instructor, teaching assistants, and fellow students. Students are expected to study the subject matter outside of class time, review this syllabus, review their graded work in a timely manner for potential marking errors and to review where mistakes were made (if any), and ask for help when needed. Students are responsible for obtaining any announcements or materials placed on the course website.

### 7.2 Teaching Assistants (TAs)

TAs are responsible for facilitating learning activities during recitations, holding office hours, marking, and responding to questions from students via email and during office hours and recitations.

### 7.3 Instructor

As your instructor, my role is to facilitate interactive lectures, 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 their performance, provide solutions to midterms, and be available for assistance when requested.

# 8. Preparing for Test and the Final Exam

Practice materials and additional office hours will be offered prior to tests and the final exam. Depending on your goals, you may need to complete additional work beyond homework, worksheets, and practice materials to adequately prepare for them.

# 9. Homework, Tests, Final Exam Policies

## 9.1 Homework

A list of problems from the textbook will be suggested. Some of these problems will be solved in class either with your instructor or with the your TA. Homework will not be collected. You are expected to understand all homework problems for all tests and the exam. In order to increase the effectiveness of lectures, you should attempt problems before lectures.

## 9.3 Tests Schedule and Topics

We will have at least four 50-minute tests. Tentative dates are on the last page of the syllabus. The material covered by each test will be specified in class at the appropriate time.

## 9.4 Tests and Final Exam Procedures

### 9.4.1 Tests and Final Exam Procedures

- Books, notes, cell phones, and calculators are not allowed during tests and the final exam.
- Students may have something to write with and an eraser when taking tests and the final.
- Unless students are asked to use a particular method or theorem, they are allowed to use any approach to solve any problem they are given on any test and the final exam.
- Unless indicated otherwise, students must adequately justify their reasoning for full marks.
- Marks can be taken off in a test or final exam for not using the correct notation.
- The tests and the final exam are comprehensive.
- Students who are unable to take any test or the final exam for any reason are responsible for notifying their instructor prior to the exam and as soon as possible.
- Tests will be returned to students through in class.

### 9.4.2 Additional Final Exam Procedures

Students take their final exam in the room where they have lectures (as per institute policy). The duration, date, and time of the final exam for local students is listed on the registrar website: http://www.registrar.gatech.edu/registration/exams.php

### 9.4.3 Re-grade Requests for Tests

1) If any of your work has been graded in error, you should contact your **instructor** as soon as possible.
2) Teaching assistants are not permitted to handle re-grade requests.
3) Should you wish to have your work re-graded, do not change or add to the work on your paper.
4) A re-grade request can only be submitted if you did something correct that was marked as incorrect.
5) Re-grade requests **must be requested within two weeks** after the work has been returned to you.
6) You must check your answers with the solutions before submitting such a request.
7) To submit a re-grade request, you must send your instructor an email from your GT email account that contains your first and last name, the test you are referring to, the question(s) you are referring to, and a description of what was graded incorrectly.

## 10. Illnesses, Emergencies, Absences

Students who will miss a test or final exam due to a university-sponsored event or athletics should provide their instructor with the official documentation in advance. Any student who misses a test, with reasonable explanation, can write a make-up. Students must notify their instructor as soon as they can to make necessary arrangements.

## 11. Re-Scheduled/Missed Exams

NO MAKE-UP EXAMS! In general, no make-up tests will be given and any missed test results in a "0" score.

- If you have a valid reason to request a make-up exam, please contact your instructor as early as possible. Only extraordinary cases will be considered.
- In the case of illness and emergency, please contact the Office of Dean of Students immediately. The Dean's office will verify the case, determine the severity of the problem, and then interact with the instructor if necessary.
- Requests for student organization excused absences must be made no later than two weeks prior to the date of the event. No late requests will be honored. Please have your advisor send me a written notice or an e-mail.
- Students who are absent because of participation in a particular religious observance will be permitted to make up the work missed during their absence with no late penalty, provided the student informs the instructor of the upcoming absence, in writing, within the first two weeks of class, and provided the student makes up the missed material within the timeframe established by the course instructor.
- If you have off campus interviews for jobs or graduate/professional schools on the test dates, please contact me as early as possible with a supporting document.

## 12. Class Policies

### 12.1 Attendance

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 and may result in your removal from the classroom. Please show courtesy to your fellow classmates and instructor by adhering to the following class rules.

Come to class on time and stay for the entire class period.

Refrain from conversing with your fellow students while the instructor is lecturing.

Put away any reading materials unrelated to the course.

Please, refrain from using laptops/cell phones, they are a distraction to others.

Please do not bring food to eat during lectures, eating is a distraction to others.

### 12.2 Academic Dishonesty

All students are expected to comply with the Georgia Tech Honor Code (the honor code can be found at http://www.policylibrary.gatech.edu/student-affairs/code-conduct). Any evidence of cheating or other violations of the Georgia Tech Honor Code will be submitted directly to the Dean of Students. Cheating includes, but is not limited to the following.

Using a calculator, cell phone, books, or any form of notes on exams.

Copying directly from **any** source during an exam, including friends, classmates, or a solutions manual.

Allowing another person to copy your work.

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.

Using someone else's name to gain participation points (if applicable) for them, or to take tests for them, or asking someone else to use your identity for any graded or participation submission.

### 12.3 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 ADAPTS office to discuss the appropriate procedures. More information is available on their website, http://www.adapts.gatech.edu.

## 13. Campus-Wide Dates

1st day of class: August 25 (1st lecture on August 26)

Fall break: October 23 - November 1

November 11: Bank holiday

Last lecture: December 7

Last recitation: December 8

Reading period: December 9 & 10

Final exams period: December 10 - 17

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

The date and time of the final exam is scheduled by the registrar.

For **final exam schedules**, see http://www.registrar.gatech.edu/students/exams.php.

## 14. TENTAVIVE SCHEDULE

All dates in the table below are tentative, but please use this as an approximate class schedule. Section coverage and order may change depending on the flow of the course.

| Week and Dates | Section Coverage in Lecture | Tests | Registrar |
|---|---|---|---|
| Week 1<br>Aug 24 - 28 | 12.2, 12.3 | | Course registration deadline |
| Week 2<br>Aug 31 - Sep 3 | 12.4, 12.5, 12.6 | | |
| Week 3<br>Sep 7 - 10 | 13.1, 13.2 | Quiz 1 | |
| Week 4<br>Sep 14 - 17 | 13.3, 13.4, 13.5 | | |
| Week 5<br>Sep 21 - 24 | 13.6, 14.1 | | |
| Week 6<br>Sep 28 - Oct 1 | 14.2, 14.3, 14.4 | Quiz 2 | |
| Week 7<br>Oct 5 - 8 | 14.5, 14.6 | | |
| Week 8<br>Oct 12 - 15 | 14.7, 14.8, 14.9 | | |
| Week 9<br>Oct 19 - 22 | 14.10, 15.1, 15.2 | Midterm | |
| FALL BREAK | | | |
| Week 10<br>Nov 2 - 5 | 15.2, 15.3, 15.4 | | |
| Week 11<br>Nov 9 - 13 | 15.5, 15.6, 15.7 | Quiz 3 | |
| Week 12<br>Nov 16 - 19 | 15.8, 16.1, 16.2 | | |
| Week 13<br>Nov 23 - 26 | 16.3, 16.4, 16.5 | | |
| Week 14<br>Nov 30 - Dec 3 | 16.6, 16.7, 16.8 | Quiz 4 | |
| Week 15<br>Dec 7 - 8 | Review for final exam | | |