MATH 213-001, Fall 2019

Multivariable Calculus

Logistics
Class location: Robinson B105
Class Meeting Times: Mon/Wed 12:00-1:15pm
Instructor: Dr. Rebecca Goldin
Office: Exploratory Hall, Room 4214
Office Hours:
    Tuesdays 2pm-3pm (please let me know if you are coming),
    Wednesdays 11:00-12pm (no need to tell me in advance), and
    By appointment, especially if you need to talk privately.
    You are always welcome to email me.

Phone: Nope! The best way to reach me is by email.
Email: rgoldin@gmu.edu

Your TA: Wafa Mahzari
Office-Hours: TBD
Office Location: Exploratory Hall 4311
wmahzari@masonlive.gmu.edu

Learning Assistants:
Michael Belete
mbelete@gmu.edu

Grace Loonan
gloonam@masonlive.gmu.edu

Shrunal Pothagoni
spothago@gmu.edu

Office Hours & Location for LAs:
Grace: Wednesdays 3-5pm, Exploratory Hall 4208
Michael & Shrunal: TBD

Prerequisite
C or better in Math 114 or equivalent. If you earned a C in previous calculus classes, you will find this course extremely difficult. Earning a B or better from prerequisite courses is recommended. A good understanding of Calc I (Math 113, AB Calculus) is even more important than Calc 2.

Text
Calculus: Early Transcendentals, by Thomas

Course Content
We will roughly cover material from Chapters 12-16 in this text. I will alert you to more details or skipped sections as we go forward.

Philosophy
A teacher in college is more like a coach, and will not "cover" everything you need to know in order to do well in a course like this. You are in charge of your own learning. I will guide you, but there will be topics that you are responsible to learn without time in class to discuss it. Learning is truly done by the student, not the teacher. Think of me as your expert learner or learning coach. I am not only an expert at the math; I am an expert in the art of learning mathematics.

The best way to learn is to: read the text; engage with hard ideas about what mathematical tools you should use and when; do the assigned homework and a few extras if you don't feel comfortable; complete any materials that are passed out in class and during recitation; explain the math to someone else; come to office hours to discuss the math; and test yourself by doing problems with your book closed.

Successful students work approximately 8-10 hours each week outside of class on the material related to this course, so be prepared to work hard if you want to master the material!

Schedule changes and Important Dates
Drop Date: September 9 (no tuition penalty) and September 30 (self-withdrawal)

Exams and Quizzes:
Quizzes will occur most weeks either online or during recitation. You may drop the two lowest quizzes. There are no makeups for quizzes, even under extreme circumstances. If you have extraordinary circumstances that result in your missing three or more quizzes, please see me to discuss your situation.

Midterm 1: TBD

Midterm 2: TBD

Final Exam: Mon 12/16, 10:30am-1:15pm

There are no make up tests allowed unless you have an extremely serious and well-documented excuse. You must see me in advance if at all possible, such as a religious reason. If this is not possible due to the nature of the event, you must provide written documentation, such as a dated and timed letter from a doctor/hospital in the case of medical excuse, a death certificate in the case of a family death, etc. A flat tire or car

trouble is NOT a valid excuse. Oversleeping is not an excuse. Minor medical difficulties such as a headache or flu that does not require being in the doctor's office is not an excuse. A court date to dispute a ticket is not an excuse. If you are not sure if your reason is excusable, and/ or if you can possibly make it to the exam but it's inconvenient, then it is not an excuse.

Homework

Homework problems will be assigned regularly through the online system associated with your textbook. You may ask questions about homework either during recitation or during class. Homework is graded by the computer, and generally there is a 20% penalty for doing it late.

The best way to do online homework is to have paper, pencil, and a calculator with you while you go online. You should be reading the question from the computer, but doing the calculations by hand (not in your head) and using the calculator only to manage the parts that are complicated (like sin(21.7 degrees)). You should not rely on calculators as part of your basic algebra, as they are not allowed on exams.

Mastery Points

Back by popular demand! Mastery Points are an extra credit program to boost exam scores. These extra credit points are generally earned during the LA and TA office hours. More details will be provided in class. Mastery points will begin in Week 2 of the course.

Worksheets

I have created a number of in-depth worksheets that I will share with the class at appropriate times and often during recitation. These are guided learning tools. They are not graded, and they are not "due", however you will find they reveal much more about how to think about multivariable calculus. That will greatly aid you in getting comfortable with unexpected problems.

Grading

Your grade for the course will be calculated based on Homework (10%), Quizzes after two drops (15% total), Midterms 1 and 2 (20% each), and a final exam (35%).

The grading scale is as follows:

92.5-100 A
89.5-92.499 A-
86.5-89.499 B+
82.5-86.499 B
79.5-82.499 B-
76.5-79.499 C+
69.5-76.499 C

60-69.499 D
<60 F

There is no change of scale on homework or quizzes, however exams will generally have an additional curve. You will be notified of any change in this scale after each exam. I do not curve to meet the class average; I curve because the exams are challenging.

I reserve the right at my discretion to increase your grade slightly. I will not decrease your score unless I find a violation of class policy or honor code. However, there is no sympathy for students who do not come to class, do not read in advance, or do not do the homework! Make-up tests are given only in extraordinary situations that require written proof.

Disability statement
If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703.993.2474. All academic accommodations must be arranged through that office.

Honor Code
The University Honor Code is to be followed at all times. Sharing information of any kind about exams or quizzes is prohibited. Any violations will be sent to the Honor Committee and will result in a grade of zero. See the University Honor Code.

Getting Extra Help
There are a few options to get additional help. The key is to recognize early when you need support and to seek it actively.

Go to office hours with worked problems. Don't waste your time -- if you haven't read the problem, you will go slowly when you come to see me. Instead, try the problems aggressively, and come with semi-worked problems to get answers.

The Math Tutoring Center is located in the Johnson Center Room 344. Help is available on a walk-in basis. For hours of operation see http://math.gmu.edu/tutor-center.php Use your LA and TA. Go to the office hours even if you're not sure what you don't know. Reach out and ask a question by email even if you think you should know something.

Come to class with questions! Come to office hours with questions! If you're not sure what you don't get, try a homework problem, and then come to office hours!

General Remarks
Please be considerate of other students and of your beleaguered professor. Arrive on time, avoid cell-phone use, participate in class activities.

LAPTOPS ARE ALLOWED IN BACK ROW OF THE LECTURE HALL ONLY. If you have a specific need, please see me to discuss. I will call you out in class if you have a laptop or

a cell phone which you are using during class time. Please turn off your cell phone before class. Please close your tablets unless you are using them to take notes.

Please get to class on time. If you must arrive late or leave early sit in the back or near the door to minimize the distraction.