Math 213: Multivariable Calculus
George Mason University, Fall 2019, Section 003

Lecture:
131 Planetary Hall
MW 1:30-2:45

Discussion Sections:
213 Aquia Hall
Th 9:30-10:20/10:30-11:20/11:30-12:20

Professor:
Anton Lukyanenko
alukyane@gmu.edu

Office Hours:
MW 3-4pm & by appointment
4113 Exploratory Hall (or nearby)

Graduate Teaching Assistant:
Heath Camphire
hcamphir@gmu.edu

Office Hours:
W 4-6pm & by appointment
4311 Exploratory Hall (or nearby)

Textbook: *Calculus: Early Transcendentals*, Thomas, 14th edition with Pearson Math Lab.

Homework: Assigned on Fridays, due every Wednesday at 11:59pm. Access via `https://mymasonportal.gmu.edu`.

Grade components:

- Homework (online, due Wednesday nights): 5% — Lowest 3 dropped.
- Quick Quizzes (in lecture): 10% — Lowest 3 dropped.
- Written Quizzes (in discussion section): 15% — Lowest 3 dropped.
- Midterm 1 (September 25): 20%
- Midterm 2 (October 30): 20%
- Final Exam (December 11): 30%

Letter grades will be based on the usual breakdown:

- 90-93.3 for A-, 93.4-96.6 for A, 96.7-100 for A+
- 80-83.3 for B-, 83.4-86.6 for B, 86.7-89.9 for B+
- 70-73.3 for C-, 73.4-76.6 for C, 76.7-79.9 for C+
- 60-69.9 for D
- 0-59.9 for F

There will probably not be a curve.

Attendance: Lecture and discussion are designed to help you learn, so you should be present if at all possible. To minimize distraction to yourself and others, electronics, snoring, and food should be avoided. If you must arrive late or leave early, sit in the back or near the door.

No extensions or make-ups will be provided for homeworks, quizzes, or midterms. In extreme cases, the final exam grade may replace a missed midterm grade, or a make-up final exam may be provided. Requests for this exception must be well-documented and communicated to the professor in a timely manner.

Support: Scheduled office hours are intended to provide additional instruction and homework assistance. You are encouraged to go to office hours early and often. Additional office hours may be scheduled, by request. See more below.

Groupwork vs Cheating: You should study and work on homework with friends (make friends with some classmates!). But make sure you aren't just watching *them* learn. Cheating or disruptions to other students' ability to study will be reported to the university. Confiscated cheat sheets will be added to my collection.

Quick Quizzes will be taken during the first 5 minutes of most lectures, and will consist of 3 quick questions. Questions will include topics from prerequisites (e.g. "what is $\cos(\pi/2)$?"), terminology and notation from previous lectures (e.g. "what is the notation for the gradient?"), or general questions about **upcoming topics** (e.g. "which of the following topics is featured in the next section in the book?"). To do well on quick quizzes, review pre-requisites for the class (trig, calculus 1 and 2, and geometry), review your notes from previous lectures, and skim through the next section before coming to class.

Homework will be assigned every Friday and due every Wednesday at 11:59pm (including the first Wednesday of the month). MyMathLab provides immediate scoring of homework problems and several chances to get the right answer.

Written Quizzes will be taken on paper during the last 10 minutes of every Thursday discussion, and will consist of a single problem randomly selected from the homework that was due the previous day. During the first 40 minutes of discussion, students will work in groups to reinforce their understanding of the homework. To do well on written quizzes, make sure that you know how to do all of the homework problems, and are proactive during both office hours and the discussion section in learning to solve the problems quickly.

Exams There will be two in-class mid-term exams and a final. The second mid-term is not cumulative (although the class does build on itself, so reviewing earlier content is helpful). The final is fully cumulative, with a bit more emphasis on material covered after the second midterm. Exams will *primarily* consist of questions from homework, quizzes, and examples given in class. To do well on exams, make sure you know how to do all of these. Understanding the surrounding theory will make these questions easier, so make sure you're *learning*, not just memorizing solutions.

Resources: The following groups exist to support student learning, with both academic and non-academic issues, so don't hesitate to contact them:

- Mathematics Tutoring Center: `http://math.gmu.edu/tutor-center.php`
- General Advising: `http://advising.gmu.edu/`
- Student Services Center: `https://www.gmu.edu/resources/students/`
- Disability Services: `http://ds.gmu.edu/`
- Counseling and Psychological Services: `https://caps.gmu.edu/`
- Compliance Diversity and Ethics Office: `https://diversity.gmu.edu`

Issues affecting learning may also be discussed with the professor. In certain cases, the professor is required to report such issues to appropriate university units.

Want more math?

- Talk to both the professor and TA during office hours.
- Take Math175, an advanced math course for freshmen and sophomores.
- Sign up to be a Learning Assistant or Tutoring Center Assistant.
- Do research with the Mason Experimental Geometry Lab (MEGL).
- Take Advanced Calculus, where we focus on *why* calculus works.
- Become a math major or minor!