Math 408M: Multivariable Calculus (Fall 2019)

Unique Numbers 52615 and 52620

MWF 3:00-3:50pm in RLP 0.130

Instructor: Nicolas Reyes (Nicky)
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Email: nreyes@math.utexas.edu
Office Hours: Mon. 1:30-2:30, Tues. 12:00-1:00, Wed. 4:30-5:30 (subject to change with notice)
Teaching Assistant: Rok Gregoric (Office hours and location TBA)

Textbook: *Calculus: Early Transcendentals* (8th Edition) by James Stewart.

All course materials and grades will appear on **Canvas**. Visit canvas.utexas.edu and log in with your EID.

Important dates

Tuesday September 3: Last day to add/drop without permission of the student's dean. (For the procedure for dropping a course, visit the UT Registrar's webpage.)
Thursday, October 31: Last day a student may switch class registration to or from pass/fail basis

Midterm 1: Friday, September 27 (in class)
Midterm 2: Friday, October 25 (in class)
Midterm 3: Friday, November 22 (in class)
Final Exam: Thursday, December 12, 9:00 am-12:00 pm (Location TBA)

Course content

Multivariable calculus is the natural generalization of the topics we learn in our first two semesters of calculus to higher dimensions. So while we might have been interested before in maximizing a function that takes in one real number as an input, now we will be maximizing functions which take in two or three real numbers as input. While before we might have studied the area under a

curve, now we will study the volume under a surface. More specifically this course covers most of chapters 10, 12, 13, 14, and 15 in *Stewart*. Subjects include graphing functions of multiple inputs, parameterizing curves and surfaces, operations with vectors, partial derivatives, maximization and minimization (including Lagrange multipliers), and multiple integrals.

Grading

As a percentage, your grade will be calculated according to the following rubric (note the lowest of the three midterm scores will be dropped):

20% Homework (via quest, lowest score dropped)
25% Highest of three midterm scores
25% Second highest of three midterm scores
30% Final exam (cumulative, with emphasis on late semester material)

Your letter grade will be determined by your percentage grade. The course may be scaled in students favor if necessary, but as a letter grade, you will receive NO LOWER than:

A for 90% and above
B for 79%-89%
C for 68%-78%
D for 57%-67%
grades below 57% will be considered failing

"Plus/minus" grades will not be given.

Exams and make-up policies

Graphing calculators, cell phones, tablets, and computers will not be allowed on any exams. Any request for a make up exam must go through the Dean of Students' office.

Homework and Quest

Homework will be assigned via Quest and typically (but not always) be due on Fridays. Be sure to check Quest at the beginning of each week for assignments. Weekly readings and extra ungraded practice problems will be assigned each week via Canvas as well.

Quest

Quest: This course makes use of the web-based Quest content delivery and homework server system maintained by the College of Natural Sciences. This homework service will require a $ 30 charge per student per class for its use, with no student being charged more than $ 60 a semester. This goes toward the maintenance and operation of the resource. Please go to http://quest.cns.utexas.edu to log in to the Quest system for this class. After the 12th day of class, when you log into Quest you will be asked to pay via credit card on a secure payment site. Quest provides mandatory instructional material for this course, just as is your textbook, etc. For payment questions, email quest.billing@cns.utexas.edu.

Prerequisites and degree relevance

In order to take this course, students must have completed M408L or M408S with a grade of at least C-. Only one of the following may be counted: Mathematics 403L, 408D, 408M (or 308M).

Calculus is offered in two equivalent sequences: a two-semester sequence, M 408C/D, or either of two three-semester sequences, M 408N/S/M (for College of Natural Science Students) or M 408K/L/M. Completion of one of these sequences is required for mathematics majors, with a C- or better in each course.

For some degrees, M 408N/S or M 408K/L satisfy the calculus requirement. This sequence is also a valid prerequisite for some upper-division mathematics courses, including M 325K, M 427K, M 340L, and M 362K.

Refreshers and additional resources

The Sanger Learning and Career Center in Jester A115 has many re- sources available taped lectures, sample exams, drills, counseling, test anxiety support, tutors, a Math/Science Lab, and review sessions. The Center may be ac- cessed on the web at http://www.utexas.edu/ugs/slc. If you cant make the sessions offered, they often have the handouts from these sessions available on the web.

CalcLab: The Mathematics Department offers assistance to all students taking Calculus courses in our new Calc Lab. Here's the department's web page about this: https://www.ma.utexas.edu/academics/undergraduate/calculus-lab/

Academic Accommodations for students with disabilities

Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Services for Students with Disabilities area of the Office of the Dean of Students at 512-471-6259 (voice) or

512-471-4641 (TTY for users who are deaf or hard of hearing) or by fax at 512-475-7730 as soon as possible to request an official letter outlining authorized accommodations.

Mental health resources

Counseling and Mental Health Center
Student Services Bldg (SSB), 5th Floor
Hours: M–F 8am–5pm
Website: http://www.cmhc.utexas.edu/
512 471 3515 (appointments)
512 471 CALL (crisis line)

Religious holidays

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Evacuation Policy

Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside. Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building. Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class. In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
Behavior Concerns Advice Line BCAL: 512-232-5050
Emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency

Academic integrity

Read the University's standard on academic integrity found on the Student Judicial Services website. We will adhere strictly to those policies in this class. You are welcome to work on Quest assignments in groups, but the answers you give are expected to be your own.