Math 32A, Lecture 1: Calculus of Several Variables

Instructor: Kristen Hendricks
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Office Hours: M 10-11, W 11-12, R 4-5

This class has three TAs, Julian Gold, David Hemminger, and Andrew Krieger. Their e-mail and office hours can be found on ccle.

Course Webpage: www.math.ucla.edu/~hendricks/Math32A.html . Most course materials will also appear on ccle. We will use the myUCLA gradebook facility to record grades throughout the quarter.

Location and Time: MWF 9-9:50, Rolfe 1200. There are six sections, meeting Tuesdays and Thursdays, see times and places online.

Content: This is a standard course in differential multivariable calculus. We will study curves in the plane, curves and surfaces in three-space, partial differentiation, tangent planes to surfaces, and directional derivatives. The culmination of the course is learning how to solve optimization problems using Lagrange multipliers.

Textbook: J. Rogawski and C. Adams, *Multivariable Calculus,* 3rd edition.

Prerequisites: 31A or equivalent.

Homework & Quizzes: Homework will be assigned weekly and not collected. Instead, there will be a quiz in section every week (excluding the first) consisting of two problems from the previous week's homework. The first quiz will be on 10/6 for the Tuesday sections and 10/8 for the Thursday sections. You must take the quizzes with your assigned section. There will not be any quizzes the week of Thanksgiving (even though the Tuesday sections will meet). No make-up quizzes will be given, but to allow for one illness or other legitimate conflict, your lowest quiz score will be dropped in computing your grade.

Exams: There will be two in-class midterms on **Monday, October 19** and **Monday, November 16**. There will also be a final exam **Wednesday, December 9, 11:30 a.m – 2:30 p.m**. Alternate testing arrangements will be made only in the following circumstances: religious holidays, participation in university athletics, and serious and <u>documented</u> illness or emergency on the day of the test. Please note that, as a matter of department policy, an undocumented absence from the final exam will automatically result in a failing grade for the course.

This course is 27 lectures long, excluding exams. The first midterm will cover the material of approximately Lectures 1-9, the second midterm will cover the material of approximately Lectures 10-19. The final exam will be roughly sixty percent from the material of Lectures 20-27 and forty percent from the preceding lectures. More specific guidance will be given as we approach the exams.

Exams will take place in multiple rooms. The class will be divided up alphabetically by surname according to the registrar listing and told (either in lecture or by e-mail) in which room to take the test. Please pay close attention to these announcements; exams taken in the wrong room will not be graded.

Regrades: Requests for regrades of quizzes and midterms will be considered up to fourteen days after the quiz or midterm is returned, and should be turned in to me in writing (preferably typed) and signed. Please make sure to look over your graded work carefully before the time limit passes.

Grading: Your grade will be computed as follows:

(10% Quiz grades) + (25% Midterm 1) + (25% Midterm 2) + (40% Final Exam)

Letter grades will not be assigned until the end of the quarter, at which point your composite numerical score will be converted into a letter grade based on class ranking, using the department guidelines for this course. Approximately 25% of the class will receive grades in the A/A- range, and approximately 30-35% of the class will receive grades in the B+/B/B- range (unless something very surprising happens).

Enrollment: On the Friday of Week 2, students on the waitlist will be enrolled in the course. All other enrollment requests should be addressed to the Mathematics Department Undergraduate Advising Office. You can find them in MS 6356, or contact them at ugrad@math.ucla.edu . They will try to help if you are having scheduling trouble.

Questions and Getting Help: For mathematical questions, you are encouraged to come to my or your TA's office hours. You may also find the Student Math Center in MS 3974 helpful. Their hours are here: http://www.math.ucla.edu/ugrad/smc.

Because this is a very large course, if you have a logistical question, the best thing to do is to check the syllabus/website, then e-mail or talk to your TA, and then get in contact with me if you still have questions. This helps ensure that at such time as you have an issue that really needs to be dealt with by me, I'll have the attention and time to handle it for you.

Please make sure that any e-mails you send me or the TAs have a signature – because of student privacy concerns, we are very reluctant to answer e-mails if we can't tell who sent them.

Schedule: We will approximately follow the standard outline for this course, available at http://www.math.ucla.edu/ugrad/courses/math/32A . Specific reading will be assigned for each lecture.