

MATH 427L
ADVANCED CALCULUS FOR APPLICATIONS II
UNIQUE #56015
FALL 2012

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Office Hours: MTWTh, 1:00 - 2:00pm

Lectures: MWF, 2:00pm - 3:00pm, UTC 4.134
Discussion sessions: TTh, 5:00pm - 6:00pm, UTC 4.122

Course webpage: www.ma.utexas.edu/users/bfroese/M427L

Required text: Marsden and Tromba, Vector Calculus (Sixth Edition)

Prerequisite: A grade of at least C- in M408D or M408M or the equivalent.

Course description. Topics include matrices, elements of vector analysis and calculus, functions of several variables including gradient, divergence, and curl of a vector field, multiple integrals and chain rules, length and area, line and surface integrals, Green's theorem in the plane and space. If time permits, topics in complex analysis may be included.

Grading. You will be graded out of 100 points according to the following breakdown:

Homework assignments: 15 points
Quizzes: 5 points
Midterm exams: 40 points
Final exam: 40 points

Note that there will be three midterm exams worth 20 points each. The midterm portion of the final grade will only count your two best midterm scores.

Your final score will be rounded to the nearest integer and assigned a letter grade using a scheme at least as generous as the following:

A: 92-100, A-: 90-91, B+: 88-89, B: 82-87, B-: 80-81,
C+: 78-79, C: 72-77, C-: 70-71, D+: 68-69, D: 62-67, D-: 60-61, F: <60.

Homework. Homework will be due each Tuesday at the beginning of the session. Assignments will be posted on the course webpage. No late assignments will be accepted. However, your lowest homework score will not be used to compute your final grade. To receive credit for homework solutions, you must show all your work, not merely the final answers.

Quizzes. Periodically, there will be short quizzes in the lectures or discussion sessions. Quizzes will be based on material from the lectures, discussion sessions, and homework assignments. The quiz mark will be based 50% on completion and 50% on your solutions. Missed quizzes cannot be made up. However, your lowest quiz score will not be used to compute your final grade.

Exams. There will be three midterm exams held during the class time. These will take place on Friday September 28, Friday October 26, and Monday November 19. Missed midterms cannot be made up, and will count as the dropped portion of your midterm grade. The final exam will be held on Saturday December 15 from 2:00pm - 5:00pm.

A valid photo ID must be available to present upon request at all exams. No books, notes, calculators, phones, or other electronic devices are permitted during exams.

Special needs. Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone).

Academic dishonesty. Each student in this course is expected to abide by the University of Texas Honor Code. All work you submit in this course, whether homework or exams, must be your own. Working together on assignments is allowed and encouraged. However, the assignment you turn in must be your own work; simply copying someone else's solutions is not acceptable. Instances of cheating will be dealt with severely.

Religious holy days. 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, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

Deadlines for dropping a course.

- September 4: Last day of the official add/drop period.
- September 14: Last day to drop a class for a possible refund.
- November 6: Last day an undergraduate student may, with the deans approval, drop a class except for urgent and substantiated, nonacademic reasons.

Tentative course schedule. We will cover most of the material in the textbook. Tentatively, we will proceed according to the following schedule. However, as the semester progresses, this timeline may be altered to improve the learning experience.

Week of	Monday	Wednesday	Friday
Aug. 27	no class	1.1	1.2
Sept. 3	no class	1.3	1.4
Sept. 10	1.5	2.1	2.2
Sept. 17	2.3	2.4	2.5
Sept. 24	2.6	3.1, 3.2	Midterm #1
Oct. 1	3.3	3.4, 3.5	4.1
Oct. 8	4.2	4.3	4.4
Oct. 15	4.4	5.1, 5.2, 5.3	5.4
Oct. 22	5.5	6.1	Midterm #2
Oct. 29	6.2	6.3	7.1
Nov. 5	7.2	7.3	7.4
Nov. 12	7.5	7.6	8.1
Nov. 19	Midterm #3	8.1	no class
Nov. 26	8.2	8.3	8.4
Dec. 3	extra/review	extra/review	review
Final exam: Saturday December 15, 2:00pm - 5:00pm			