

Instructor: Niloufer Mackey

Class: MW 4:00–5:40pm, RH 3309

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Office Hours: MTWR 2 – 3pm. Other times by arrangement. Right before class is definitely not a good time to see me.

Web Page: <http://homepages.wmich.edu/~mackey/Teaching/272/index.html>

Check it regularly for announcements and homework assignments.

Text: Thomas Barr, *Vector Calculus*, Second Edition, 2001, Prentice-Hall.

Supplemental Online Resources:

Multivariable Calculus Online by Jeff Knisley, <http://math.etsu.edu/Multicalc/Calculus> by Gilbert Strang, MIT Open Courseware

<http://ocw.mit.edu/ans7870/resources/Strang/strangtext.htm>

For a quick review of single variable calculus spiced with humor: *How to Ace Calculus: A Streetwise Guide* by Adams, Hass, and Thompson. Extended excerpts available at

<http://www.math.ucdavis.edu/~hass//Calculus/HTAC/excerpts/excerpts.html>

Syllabus: We will cover the first five chapters of Barr, including the study of vectors and geometry in \mathbb{R}^3 , linear algebra in \mathbb{R}^n , derivatives of multivariable functions and some applications, and multiple integration. If time permits we will conclude with path integrals and Green's theorem from chapter 6.

Prerequisite: Completion of Math 1230 or Math 1710 with a grade of C or better, or equivalent transfer or AP credit.

Homework: Regularly assigned but not collected. It is *essential* to do all the assigned homework problems on a regular basis. Working together in study groups is highly recommended. Assignments using MAPLE will also be given from time to time.

Exams, Quizzes and Grading: There will be **10-minute quizzes every Wednesday** at the end of the class period. Two in-class **50-minute exams** will be held on **Wed 11 Feb** and **Wed 25 Mar** (these dates are tentative). A **comprehensive final exam** will be held during Finals Week on **Mon 20 Apr from 5 – 7pm**. Exams and quizzes will be closed books and closed notes; calculators are permitted. Makeup exams will be permitted only in those cases when a student submits a documented excuse based on a genuine medical or personal emergency. The lowest quiz score will be dropped, and so no make-up quizzes will be given for any reason.

Quizzes	23%	Exams (2@23 each)	46%
MAPLE Assignments	6%	Final Exam	25%

Your grade will be determined by the scale:

A	93 – 100	B	81 – 86	C	68 – 75	D	56 – 62
BA	87 – 92	CB	76 – 80	DC	63 – 67	E	≤ 55

Important Dates:

Jan 9: Last Day to Drop/Add

Jan 19: MLK Day, No classes

Feb 27 through Mar 8: Spirit Day, Spring Break, No classes

Mar 16: Last Day to Withdraw

Apr 15: Last Day of Instruction (for this class)

Academic Integrity: You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate and Graduate Catalogs that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. [The policies can be found at <http://www.wmich.edu/catalog> under Academic Policies, Student Rights and Responsibilities.] If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct.

Incompletes: Departmental rules will be followed regarding “I” (Incomplete) grades. An “I” grade may be assigned only when circumstances beyond the student’s control prevent completion of a small segment of the course. Incompletes may not be granted under any circumstances when a student is doing unsatisfactory work; such students are advised to withdraw from the course.

Staying on Course

1. Make regular use of the recommended on-line resources.
2. Do the homework exercises regularly. Maintain a separate notebook of solutions.
3. Watching your professor solve a problem is very, very different from being able to solve it yourself (especially on an exam). There is no substitute for practice.
4. Writing is important. Your solutions must contain complete sentences and reasoning, whether the problem asks for this explicitly or not. Writing sentences forces you to organize your ideas.
5. Use the time right before class to review material covered in the previous class.
6. Take good notes in class. Make a note of all problems that were discussed in class.
7. Come to office hours! Don’t put off getting your questions answered.
8. READ THE TEXT. Reading technical material is difficult. *Expect to re-read; use the index; make your own notes.* Over the course of the semester you *will* learn to read better, it usually takes time. Start by setting modest, achievable goals (i.e., read half a section and do a few related problems).
9. Talk to each other about mathematics. Discuss your ideas and your problems. Form study groups.
10. You must be willing to put in two to three hours outside the classroom for each hour of class.
11. Always bring the textbook to class.