

Mw427L Fall 2011

Unique Nos. 55205, 55210

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Rules: Don't miss class. Don't be late. Don't buy plane tickets which conflict with exams. Don't pack up early. Staple homework. Don't be rude.

Text: (Required) *Vector Calculus* 5th Ed., Marsden and Tromba. Suggested additional resources: 1. Your old calculus text. 2. *How to Ace the Rest of Calculus* by Colin Adams, et. al.

Students with disabilities: The University of Texas at Austin provides, upon request, appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

Grading: Quest homework:	10%
10 Quizzes:	30%
2 Midterm s	30%
<u>Final Exam:</u>	<u>30%</u>
Total:	100%

We will be using the +/- grading system: 90% is at least an A, 86.7% is at least an A-, 83.3% is at least a B+, 80% is at least a B, etc.

Exams and Quiz Dates: Nearly chiseled in stone, the dates for the midterm exams are Wednesday, Oct. 5 and Wednesday Nov. 16. Quizzes are almost every Tuesday in the discussion session. *There are no make-up quizzes.* Exams and quizzes will be closed-book, closed-notes, and no-calculator.

Homework/Quest Homework in this course is done on the Quest system. Here's the canned paragraph: *"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 \$22 charge per student for its use, which goes towards the maintenance and operation of the resource. After the 12th day of class, when you log into Quest you will be asked to pay by credit card on a secure payment site. You have the option to wait up to 30 days to pay while still continuing to use Quest for your assignments. If you are taking more than one course using Quest, you will not have to pay more than \$50 per semester. Quest provides mandatory instructional material for this course. For payment questions, email: questfees@cns.utexas.edu."* The current plan is to have the Quest assignments due each Thursday at midnight. This plan may be tweaked. On the next page are exercises from the text and from Stewart's Calculus 6th ed. These exercises are not to be handed in. Don't bother doing them, unless you want to learn the material.

Overview In this course we will study differentiation of multivariable and vector-valued functions and applications thereof. Then we will study integration over higher-dimensional regions, and over paths and surfaces. The course culminates in Stokes' Theorem, which is the multi-dimensional version of the fundamental theorem of calculus. Prerequisite: A grade of C or better in M408D or the equivalent.

Day	Section	Warm-up Exercises
1	1.1	3, 6, 9, 11, 21, 8, 14, 16, 18, 22
2	1.2	2, 6, 8, 12, 13, 3, 11, 14, 17, 18
3	1.3	2, 3, 5, 8, 10, 13, 18, 25, 27, 31, 4, 6, 16c, 24, 28
4	1.4	1, 3, 4, 8, 6, 12, 15 S16.7 / 1, 3, 6, 7, 9; S16.8 / 2, 3, 5, 7, 10
5	1.5	2a, 5, 7, 13, 2c, 8, 12
	1.R	1, 4–7, 12, 14, 16, 23, 25, 26, 44, 47
6	2.1	1, 2b, 6, 16, 19, 23, 28, 9, 12, 18, 32
8	2.2	8, 9
9	2.3	1c, 3e, 5, 6c, 7b, 8a, 13a, 14a, 16, 3c, 4d, 7c, 9, 12c, 13b, 14b
10	2.4	2, 5, 6, 10, 14, 15, 17, 4, 8, 12, 16, 18, 20
11	2.5	2abd, 3ab, 5a, 13, 2eg, 8, 9, 11, 15 S15.5 / 3, 4, 8, 11, 19, 21
12	2.6	2, 4b, 6, 7, 3, 5ab, 8, 13a, 14, 24
	2.R	3, 5, 6, 7d, 8d, 10, 12c, 17, 18a, 25, 32, 35, 36
13	3.1	4, 7a, 10a, 19, 8a, 13, 20def
14	3.2	2, 3, 4
15	3.3	4, 5, 25, 32, 9, 12, 22, 27
16	3.4	1, 4, 10, 15, 25, 5, 9, 16, 29 S15.8 / 3, 5, 9, 17, 19
	3.R	2c, 3, 4, 10, 12, 19
17	4.1	2, 6, 9, 4, 7, 11, 17
18		Midterm Exam I
19	4.2	1, 2, 13d, 15c, 4, 8, 16 S9.1 / 7, 9, 15; S11.2 / 39, 43, 53; S14.3 / 1, 9, 14
20	4.3	1, 4, 10, 11, 13, 8, 14, 15, 20 S17.1 / 1–18, 35a
21	4.4	2, 3, 11, 14, 18, 21, 33a, 4, 7, 8, 16, 26, 32 S17.5 / 5, 7, 25
	4.R	4, 6, 9, 10, 14, 22, 26, 27, 28

Day	Section	Warm-up Exercises
22	5.1	1d, 2d, 5, 9
23	5.2	3, 4, 6, 7
24	5.3	2de, 6, 11, 3, 7, 9
25	5.4	1ac, 2ab, 11, 2cd, 5, 7, 12
26	5.5	3, 14, 17, 10, 12, 22 S16.6 / 9, 11, 13, 17
	5.R	3, 4, 7, 8, 11, 18, 22, 30, 37
27	6.1	1, 3, 6, 8
28	6.2	1, 3, 8, 13, 16, 25, 26, 31, 2, 6, 12, 14, 15, 23, 30 S16.4 / 9, 13, 17, 27, 31; S16.7 / 17, 21, 27; S16.8 / 23, 27, 29, 39; S16.9 / 7, 9, 11, 15, 19, 23
29	6.3	3, 4, 7, 13, 5, 8, 10, 14
	6.R	1, 3, 4, 6, 7, 15, 17, 21, 23, 25
30	7.1	2, 3, 6b, 4, 7, 10, 13
31	7.2	1cd, 2a, 3, 11, 16, 2d, 6, 12, 14, 15 S17.2 / 5, 7, 9, 15, 19, 21
32	7.3	1, 2, 10, 14, 6, 8, 12, 15
33	7.4	1, 3, 9, 15, 5, 6, 8, 20 S17.6 / 21, 25, 35, 39, 41, 57
34	7.5	1, 3, 7, 11, 12b, 4, 5, 10, 13
35	7.6	2, 3, 5, 7, 4, 6, 10, 15, 16 S17.7 / 5, 9, 11, 20, 23, 25
	7.R	1c, 2a, 3b, 5, 7c, 8, 11, 12c, 13, 14, 16, 18, 19, 23
36		Midterm Exam II
37	8.1	1, 2, 3a, 13, 4, 5, 7, 15 S17.4 / 3, 5, 7, 13, 19
38	8.2	1, 2, 3, 9, 5, 7, 10, 11, 23 S17.8 / 3, 5, 7, 9
39	8.3	2, 13, 17, 3, 4, 9, 10, 15, 18, 20 S17.3 / 7, 9, 13, 15, 17, 28
40	8.4	1, 3, 7, 8, 2, 5b, 9, 10 S17.9 / 5, 7, 9, 11
	8.R	1, 3, 5, 5, 7, 9, 10, 14, 15, 17, 18, 19, 20