### MATH 234-Section 60 Class Syllabus Spring Semester 2006

Professor: Vera Zeidan.

Office: D-312 Wells Hall, 353-0857.

Lecture: C-113 Wells Hall, MWF 10:20 am -11:10 am.

Office Hours: MWF 9:30-10:00 am, 11:30 am -12:00 pm, or by appointment.

Email: zeidan@math.msu.edu

Textbook: "Thomas' Calculus", 9th Edition, Part II, Material from Ch. 10-14.

URL: http://www.math.msu.edu/~zeidan/MATH234/Syll06.pdf or more simply: http://www.mth.msu.edu and follow the links under 'Class Pages'.

Recitation Section: Tu 10:20 - 11:10, in WH- C112. Instructor: Lindsay Willett

**Recitation Instructor Information**: Lindsay Willett, lindsay@divinesymphony.net, A128 Wells Hall.

General Course Description: The topic of this course is vector calculus. We will study the differential and integral calculus of functions of several variables. This includes the topics of partial differentiation, multiple integrals, line and surface integrals, and the theorems of Green and Stokes. See the detailed course outline below.

Prerequisites: Math 133

### **Important Dates:**

- Jan 20: Last day to change sections
- Jan 20: Last day to change to an approved lower level course or prerequisite
- Jan 31: Hourly test #1
- Feb 3: End of tuition refund period
- Feb 21: Hourly test #2
- Mar 01: Last day to drop the course with no grade reported
- Mar 28: Hourly test #3
- Apr 25: Hourly test #4
- May 2: Final Examination 10:00 am 12:00 noon

**Exams' Rule:** All tests and final exam are closed book and closed notes and without the aid of any calculator.

**Homework:** These are listed on the Tentative Schedule below. They will not be collected or graded. However, solving these problems is essential for keeping up with this class. You should work out these problems and as many of the other problems from each section of the text that is covered in this course in order to be prepared for examinations. In solving these problems, you should strive for clearly written solutions. Being able to demonstrate your understanding in this fashion will be required on all examinations.

**Tests:** There will be four in-class tests (see syllabus). The tests will be worth 100 points apiece. Each of these tests will cover only the material since the previous test. The tentative dates

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Quizzes: A quiz will be given in each recitation section except those where an hourly test is given.

**Final Exam:** There will be a uniform comprehensive final on May 2, 10:00-12:00 noon. The final will be worth 200 points. The room locations will be announced when they become available.

Make-Up Test Policy: Make-up hourly tests will only be given in case of a medical or emergency absence, and only with a written excuse from a doctor or other appropriate individual. Such exams are only given in extreme cases - which I consider to be sufficiently convincing and serious. If at all possible, you should contact Dr. Zeidan before the missed test. A missed test or final exam will receive the score 0. There will be no make-up quizzes. Your lowest quiz will be dropped.

**Help:** In addition to seeing Dr. Zeidan in office hours, by appointment, or via email which works well for short questions, you can get help in the Mathematics Learning Center.

The Mathematics Learning Center (MLC) is located in the A-wing lobby of Wells Hall and will open on January 11. Please come to the MLC for free, friendly, courteous help with your mathematics class. For more information about the location of the MLC, please go to http://www.math.msu.edu/~mlc/

The MLC hours are given below:

day	time
Monday, Wednesday	10:20 am–4:00 pm, and 6–10 pm
Tuesday, Thursday	$10{:}20$ am– $2{:}50$ pm, and $6{-}10$ pm
Friday	$10:20 \text{ am}{-}1:40 \text{ pm}$
Sunday	5 pm–8 pm.

**Grades:** Your course grade will be based on a total of 700 points - each hourly test will count 100 points, the final exam will count 200 points, and your quiz percentage will count 100 points. The grading scale is no worse than what is shown in the table below:

$$90 - 100\%$$
 4.0,  $79 - 84\%$  3.0,  $65 - 72\%$  2.0,  $55 - 59\%$  1.0,  $85 - 89\%$  3.5,  $73 - 78\%$  2.5,  $60 - 64\%$  1.5,  $0 - 54\%$  0.0.

**Handouts:** Tests that are not picked up on the day they are distributed in class will be put in my office. You can pick them up during my office hours.

**Supplemental materials:** All supplemental materials needed for this course and some assignments will be distributed in class and will be posted on my web page:

http://www.math.msu.edu/~zeidan/math234

**Attendance**: Students are expected to attend all class meetings. Any changes in this syllabus or in the scheduling of tests or quizzes will be announced during class meetings.

Integrity of Scholarship and Grades: All students are expected to adhere to the University's policy concerning academic integrity. This is covered in the Spartan Life booklet. According to the handbook

"...no student shall claim or submit the work of another as one's own."

# Detailed Outline and Homework Assignments

Date	Sections	Exercises
Jan 9	10.1	1-7(odd),8,9,11,13-15,18,23,25-27,33,36,40,41.
Jan 11	10.2	7,9-11,15-17,21,23,24,27-31  (odd), $32,34,35,38,42,47,50,51,53,67,69$ .
Jan 13	10.3	3-11(odd), 15, 16, 21, 23, 26, 27, 29, 31, 34, 37, 40, 57, 59.
Jan 16		Martin Luther King Jr. Day. No classes
Jan 18	10.4	1, 3, 8, 11-21(odd), 25, 27, 28, 29-33(odd), 37, 39, 42.
Jan 20	10.5	1-9(odd), 10 17, 20, 21-27(odd), 28, 35-37(odd).
5an 20	10.0	1 5(odd), 10 11, 20, 21 21(odd), 20, 60 61(odd).
T 00	10 5	20.41.40.45.45.50.50(.11).60.61.65.66.60.60
Jan 23	10.5	39,41, 42, 45, 47, 53-59(odd), 60, 61, 65, 66, 68, 69.
Jan 25	10.6	1-11(all), 15,17,18,21,23-25,27,28,31,33,37,39.
Jan 27	$10.6\&\ 10.7$	For 10.6: 47,50,51,59,61,63,68,79.
		For 10.7: 3-9(odd),10,15-27(odd),30,33,41,49
Jan 30	Review	Page 848 to 851: 7,9,13,15,19,21,25,31,37,43,45,53,
	Ch.10	57,59,73,75,81,83,87,89,91,101,105,107,109.
Jan 31	Test #1	Covering Chapter 10 in Recitation Section
Feb 1	Solution	for Test #1
Feb 3	11.1	1-9(odd), 14, 17, 23, 26, 29, 32, 33, 35, 39, 41, 45.
Feb 6	11.3	1 9 5 0 11 19 15
Feb 8	12.1	1, 3, 5, 8, 11, 13, 15. 2, 3,7, 9, 12, 13-18, 19, 22, 23,26, 29,31, 32, 35, 37, 38, 41, 42, 45.
Feb 10	$12.1 \\ 12.2$	
reb 10	12.2	7, 8, 9, 15, 17, 18, 24, 29, 30, 31, 32, 35, 37, 45, 50.
Feb 13	12.3	7, 8, 11, 12, 13, 15, 16, 17, 19, 27, 29, 32, 37, 43, 45, 46, 47, 49.
Feb 15	12.4	3, 5, 6, 7, 8, 10, 13, 15, 17, 25, 26, 29, 31, 37
Feb 17	12.5	1, 3, 6, 7, 9, 11, 12, 25, 27, 28, 29, 31, 32, 33, 35, 37, 41, 47.
Feb 20	Review	Page 902-904: 3,4,21,22, find T in 23,25.
100 20	100 / 10 W	Pages 995-996: 7,12,15,17,20,27,31,39,44,45.
Feb 21	Test #2	Covering Ch. 11 Sec. 1,3 & Ch. 12 Sec. 1-5 in Recitation Section
Feb 21	12.7	1, 2, 5,6, 9, 11,12, 15,17,20, 21,23,27,28,30,31,33, 35, 36.
Feb 24	12.7	39, 40, 43, 47, 49, 51, 53.
1.60 74	14.1	00, 10, 11, 10, 01, 00.

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Date	Sections	Exercises
Feb 27	12.8	1, 3, 6, 17, 19, 22, 26, 31, 36, 37, 42, 47.
Mar 1	13.1	1-9(odd), 10, 11, 13, 16, 17-23(odd), 28, 30, 31, 33, 36, 39.
Mar 3	13.1	41, 43, 46, 47, 48, 59.
Mar 6-10		Spring Break, No classes.
Mar 13	13.2	1-11(odd), 21, 23, 24, 27, 32, 33, 35, 38.
Mar 15	13.3	1, 3, 7, 8, 10, 13, 17, 19, 22, Find just the center of mass in 23, 25, 27, 35, 36.
Mar 17	13.4	1, 3, 5, 6, 9, 13, 15, 16, 21, 23, 24.
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Mar 20	13.4	27, 28, 29, 31, 33, 34, 39, 41, 43.
Mar 22	13.6	5, 7, 10, 13, 15, 16, 17.
Mar 24	13.6	21, 23, 26, 29, 34, 35, 45, 49, 51, 52, 55, 56, 58, 61, 62.
With 24	10.0	21, 20, 20, 20, 01, 00, 10, 10, 01, 02, 00, 00, 01, 02.
Mar 27	Review	Page 996; 54,59,61,63,71,79. Page 1056; 7, 9,11, 13, 19, 25,27, 29,45,49.
Mar 28	Test #3	Covering Ch.12 Sec. 7,8; &Ch. 13 Sec. 1-6 in Recitation Section
Mar 29	14.1	1-8(all), 9, 11, 14, 19, 22, 23, 26.
Mar 31	14.2	1, 3, 9, 10, 11, 13, 14.
Apr 3	14.2	19, 21, 24, 29(a)&(b), 37, 39.
Apr 5	14.3	1, 3, 5, 6, 9, 13, 15, 17, 18, 29, 31.
Apr 7	14.4	3, 5, 7, 8, 13, 14.
Apr 10	14.4	15, 17, 19, 20, 21, 23, 26, 29.
Apr 12	14.5	51, 3, 5, 8, 9, 10, 11, 15, 17, 18.
Apr 14	14.5	19, 21, 24, 25, 26, 29, 31, 33, 43.
r		-0,,, -0, -0, -0, -0.
Apr 17	14.7	1-7(odd), 8, 11, 12, 19, 21, 22.
Apr 19	14.8	5-11(odd), 14, 16, 17, 21, 22, 23, 25, 26.
. =	Review	·
Apr 21	neview	Page 1134; 1, 3, 9, 11, 13, 17, 35, 43, 51, 55, 57, 59.
4 24	ъ .	
Apr 24	Review	
Apr 25	Test #4	Covering Ch.14 Sec. 1-5 & 7-8 in Recitation Section
Apr 26	Review	
Apr 28	Review	

TUESDAY, MAY 2, 10:00 am–12:00 noon, FINAL EXAM