

MA 213-003,004 SYLLABUS
FALL 2007

Text: Calculus
by James Stewart
5th edition

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Office Hours: MWF 1:00-1:50, TR 10:00-10:50 and by appointment

The material to be covered in this course includes Chapters 13, 14, 15, 16 and part of 17 in the text. This course is intended to be an introduction to the calculus of several real variables. Applications of this subject are found in physics and engineering as well as other subjects. The topics covered include three-dimensional analytic geometry and vectors, partial derivatives, multiple integrals and vector calculus.

Many problems in nature can best be expressed and studied in the language of vectors. Therefore, this is an important subject, especially for science and engineering applications. However, time and effort are required to gain an understanding of the important concepts involved. Also, an important part of any mathematics course is learning the technical language used. The terminology is precise and a part of the course is learning to understand and use the terms correctly.

Homework will be assigned essentially every class meeting and should be completed accurately and legibly. One problem on each assignment will be graded to determine your homework grade. Feel free to discuss homework problems with other students. However, what you turn in should be your own work. You gain nothing permanent by copying problems from someone else.

There will be three hour exams, tentatively scheduled for September 21, October 19, and November 16. The final exam will be given on Monday, December 10, 10:30 - 12:30, as scheduled by the University. Your grade in the course will be determined according to the following weights.

Homework	10%		
Recitation	10%		
Hour Exams	20% each	60% total	
Final Exam	20%		

There are certain things that are essential for success in this course (and any other math course). Here are some of them.

1. Attend class every day. Your instructor attempts to find a way to present and illustrate the material to make it understandable. You will have the opportunity to ask questions about points that are not clear and to hear responses to questions raised by other students. Remember that your instructor has been through this before and he/she has perspective about what is important and what is difficult.
2. Do the homework. You should not expect to pass this course without understanding and solving completely and accurately many problems. It is no more possible to pass this course with a vague understanding of the material than it is to pass a driving test without ever having previously driven an automobile.
3. Don't get behind. If you find you are not understanding a concept, make an appointment immediately to clarify it. Mathematics builds on previously learned material and gaps in understanding soon get out of hand.
4. There are two steps in solving problems. First, figure out how to do the problem. This may require lots of scratch paper as well as time. When you have discovered how to solve the problem, the next step-which is not a minor unimportant matter-is to write it up in a logical way that could be understood by a friend with the appropriate background.

I will do all that I can to help you provided you do your part. What you should not do is decide to sleep in and come to office hours and ask me to repeat the lecture. If you do poorly on an exam or homework assignment, try to find the reasons and remedy them.

Here are some things to avoid.

1. Don't ask for something to do for extra credit if you do poorly on an exam or homework exercise. Instead, as mentioned above, determine why you did poorly and remedy the situation.
2. Don't cheat. Cheating will be dealt with severely
3. Don't assume that a vague understanding of a problem is sufficient. There is no substitute for writing out a complete and detailed solution of problems.

FALL 2007
MA 213 003, 004 Assignments

Assignment #1, Due Friday, August 24.
P.833, Problems 8, 9, 10, 11, 15, 16, 20, 23-34.
Turn in only #20. (Do not just write down an equation but show how you arrived at your answer.)

Assignment #2, Due Monday, August 27.
Pp 841-842, Problems 3, 7, 13, 16, 20, 24, 26, 40.
Turn in only #26.

Assignment #3, Due Wednesday, August 29.
Pp 848-849, Problems 1, 2, 7, 9, 14, 18, 29, 37, 41, 42.
Turn in only #37.

Assignment #4, Due Friday, August 31.
Pp 856-857, Problems 1, 4, 9, 15, 16, 26, 29, 33, 45 .
Turn in only #26.

Assignment #5, Due Wednesday, September 5.
Pp 865-867, Problems 1, 2, 5, 6, 20, 23, 24, 33, 34, 53, 55.
Turn in only #33..

Assignment #6, Due Friday, September 7.
Pp 866-867, Problems 39-52.
Turn in only #52.

Assignment #7, Due Monday, September 10.
Pp 873-874. Problems 3, 4, 8, 9, 21-28, 41, 42,43.
Turn in only #9.

Assignment #8, Due Wednesday, September 12.
Pp 878-879, Problems 3, 9, 13, 19, 23, 27, 31-36, 37-44.
Turn in only #40.

Assignment #9, Due Friday, September 14.
Pp 891-892, Problems 3, 4, 7-14, 15, 19-24, 34.
Turn in only #14.

Assignment #10, Due Monday, September 17.
P. 897. Problems 3, 9, 10, 17, 19, 32.
Turn in only #19.

Assignment #11, Due Wednesday, September 19.
Pp 904-905. Problems 1, 7, 13, 16, 25.
Turn in only #16.

Hour Exam, Friday, September 21.

Assignment #12, Due Monday, September 24.
Pp 914-915. Problems 3, 8, 14, 15, 23.
Turn in only #23.