MATH 241 - CALCULUS III

SPRING 2006

Lecturer: Dr. Melda Y. Oruç

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Office Hours: 1-3 p.m. on Monday & Wednesday, 11 a.m-12 p.m. Tuesday (or by appointment) .

Lecture: MWF 9:00a.m.-9:50 a.m. in ARM 0135.

Discussion sections: meet on Tuesday and Thursday in the Mathematics Building.

Section	Time	Room	Assistant
0111	8 - 8:50 a. m.-	0201	Elisha Peterson
0121	9 - 9:50 a. m.	0201	Elisha Petrson
0122	9 - 9:50 a. m.	0104	Juliana Belding
0131	10 - 10:50 a. m.	0201	Jeffrey Heath
0132	10 - 10:50 a. m.	0104	Ziliang Li
0141	11 – 11:50 a. m.	0201	Edward Clifford
0142	11 – 11:50 a. m.	0104	Ziliang Li

Goals of the Course: , The goal of MATH 241 is to learn multivariable calculus. The culmination of the course is chapter 15 which deals with the integral theorems which are essential for the derivation of the fundamental equations of classical physics (the heat equation, Maxwell's equations, the equations of elasticity and fluid dynamics). We therefore will try to move fairly quickly through chapters 11, 12 and 13 in order to spend more time on the more difficult chapters 14 (multiple integration) and 15.

Texts: Ellis & Gulick, ***CALCULUS*, 6th ed.**, Thomson 2003 ; (Required)

Cooper, ***A MATLAB Companion for Multivariable Calculus*** , Harcourt/ AcademicPress; (Recommended)

Daily Schedule

Date	Section	Assignment
1. Wed. January 25	11.1-11.2	p.708:2,9,11,13,19; p.720:2,5,9,14,23,27.
2. Fri. January 27	11-3	p.728:1,5,7,10,11,15,19,28,33.
3. Mon. January 30	11.4	p.735:1,5,10,11,13.
4. Wed. February 1	11.5-11.6	p.741:1,5,8,9,12,13,17,18; p.747:1,5-9,27,31.
5. Fri. February 3	11.6-12.1-12.2	p.747:13,17,21; p.759:15,21,23,32; p.764:4,6,9.
6. Mon. February 6	12.3	p.776:1,5,17,19,23,31,33,39.
7. Wed. February 8	12.4	p.786:7,11,14,21,25,28,31.
8. Fri. February 10	12.5	p.794:2,5,9,11,14,19,22,30.
9. Mon. February 13	12.6	p.800:2,5,9,11,18,21,27.
10. Wed. February 15	REVIEW	
11. Fri. February 17	FIRST HOUR EXAM.	Covers Chapters 11 & 12.
12. Mon. February 20	13.1	p.823:4,9,15,17,19,27,31,37,43,45,55,61,68.
13. Wed. February 22	13.2-13.3	p.833:11.13.14.16.29;p.844:4,5,7,11,19,23,29,33,34,45,5
14. Fri. February 24	13.4	p.856:1,7,11,15,23,25,35.
15. Mon. February 27	13.5	p.861:1,3,7,9,13,16.
16. Wed. March 1	13.6-13.7	p.867:1,5,7,11,15,21,24,39; p.873:1,4,9,11,13,21,24.
17. Fri. March 3	13.8	p.882:1,3,7,12,17,29,40.
18. Mon. March 6	13.9	p.890:1,5,7,9,11,13,15,24,28.
19. Wed. March 8	REVIEW	
20. Fri. March 10.	SECOND HOUR EXAM	Covers Chapter 13.
21. Mon. March 13	14.1	p.910:5,7,9,15,21,23.
22. Wed. March 15	14.1	p.910:24,30,34,37,39,47,54,58,62.
23. Fri. March 17	14.2	p.921:3,4,9,12,15,25.
24. Mon. March 27	14.3	p.925:1,3,7,10.
25. Wed. March 29	14.4	p.936:1,5,11,15,23,29
26. Fri. March 31	14.5	p.943:5,7,9,15,16,19,23,29,33.
27. Mon. April 3	14.6	p.951:1,2,5,9,11,16,19,25.
28. Wed. April 5	14.7	p.957:1,6,9,11,14,17,19,20.
29. Fri. April 7	14.8	p.968:1,3,4,8,11,13,15.
30. Mon. April 10	14.8	p.968:17,19,21,26.
31. Wed. April 12	14.9	p.984:1,3,5,9,13,21,23.
32. Fri. April 14	REVIEW	
33. Mon. April 17	THIRD HOUR EXAM	Covers Chapter 14.
34. Wed. April 19	15.1	p.1003:3,7,15,17,19,24,25,27.
35. Fri. April 21	15.2	p.1014:1,3,8,9,11,19,25.
36. Mon. April 24	15.3	p.1021:1,3,7,10,12.
37.Wed. April 26	15.4	p.1028:4,7,9,13,16,20.
38. Fri. April 28	15.5	p.1035:2,3,5,7,12,14
39. Mon. May 1	15.6	p.1046:5,7,10,12,13,15
40.Wed. May 3	15.7	p.1054:5,7,9,11,15,19.
41. Fri. May 5	15.8	p.1060:11,13,15,17,19,21,23.
42. Mon. May 8	FOURTH HOUR EXAM	Covers Chapter 15.
43. Wed. May 10	REVIEW	

Final Exam: Saturday **May 13**, 1:30-3:30 p.m. Room: will be announced.

Exams: There will be four hour exams; on February 17, March 10, April 17 and May 8 and a Final Exam on May 13. In addition there will be graded work in the discussion sections as well as quizes.
Make-ups for hour exams will be given only upon presentation of an acceptable excuse.

Computer Work: We will be using the software system **MATLAB** .

Introduction to MATLAB: Here is a short introduction to MATLAB that can be downloaded in either pdf or postscript format. Go to www.math.umd.edu/~jec/matlabintro.ps .

Homework: Students are responsible for all homework problems listed on the syllabus. These problems will not be collected unless it is requested by your TA. There also will be several MATLAB assignments to be handed in.

Grading:
Your grades can be accessed at **WebCT** . Go to www.courses.umd.edu and follow the directions to login. The discussion section work will count 100 pts. The final will count 150 points. The MATLAB assignments will count 50 points. Therefore the final grade will be based on 700 points. Grading is on the scale 90-100 = A, 80-89=B, 70-79 = C, 60-69 = D, < 60 = F. However, grades may be adjusted upwards on the basis of (a) improvement over the semester, or (b) an exceptionally good final examination.

Room assignments for the Final Exam will be announced when available

MATLAB assignments will be posted here.

FIRST HOUR EXAM, Friday February 17 in room ARM 0135
SECOND HOUR EXAM, Friday March 10 in room ARM 0135
THIRD HOUR EXAM, Monday April 17 in room ARM 0135
FOURTH HOUR EXAM, Monday May 8 in room ARM 0135

Sample Exams can be accessed at http://db.math.umd.edu/testbank/