MAT 296, Calculus II
Spring 2007
Tuesdays recitations

Course Description: MAT 296 is the second course in a three-semester sequence in Calculus. This sequence is designed for mathematics, science and engineering majors and for those students in other majors who intend to take more advanced courses in mathematics. This course covers techniques of integration, applications of integration in a variety of contexts, exponential growth and decay, improper integrals, parametric curves in the plane, polar coordinates, sequences and series (including power series, Taylor and Maclaurin series).

Course Supervisor: Professor Dan Zacharia, 229C Physics, 443-1580, zacharia@syr.edu

Text: **Calculus: Early Transcendentals**, by James Stewart, Edition 5e, Thomson, Brooks/Cole.

Prerequisites: MAT 295 (Calculus I) or its equivalent must be completed with a grade of C- or better before taking MAT 296 (Calculus II). Students whose grade was in the C range in MAT 295 are at great risk in MAT 296. These students should see their instructor for advice on strategies for re-learning and reviewing the content of Calculus I.

Calculators: The TI83+ is the recommended graphics calculator for this course. Students who already own and know how to use another equivalent calculator are free to use on all assignments, quizzes and exams (including the final). Symbolic calculators (such as the TI89 or the TI92) may not be used on quizzes or exams (including the final). Calculators may not be shared during exams.

Course Format: The course meets four times per week. Your primary instructor will meet with the entire class for three of these periods and your recitation instructor will meet with you for the other session. New material will be introduced in the lectures by your primary instructor. Your recitation instructor will answer questions on the course material and on assigned homework problems. The recitation instructor will work with you in solving additional problems related to the lecture material. Exams and quizzes will be given in the recitation section. A short quiz will be given in most recitation sessions other than those in which an exam is given.

Class Attendance and Participation: You are expected to attend and participate in class. Your success will be limited without your full attendance and participation. If you miss a class, you are responsible for obtaining notes for that class from a student who attended. It is your responsibility to find out about any announcements concerning homework, quizzes or exams that were made during the class.

Homework: Homework assignments are listed on the Syllabus and Homework Sheet for the entire semester. This work is to be completed for the next class meeting. Homework may be collected occasionally at the discretion of the instructor. Some variations from the list of homework exercises may be announced in class. Your instructor may elect to grade some homework assignments and to use the homework grade in determining your final grade. It is essential to do all the homework in a timely fashion! In addition, your instructor may use WEBWORK for collecting and grading additional homework and for review problems for the final exam.

Help: Your instructors will be available regularly during their office hours. You can seek help at the Calculus Help Center in the Reading Room of Carnegie Hall. The Help Center hours are posted by 215 Carnegie Hall and you can obtain a copy of the schedule in the Math Department Office.

Examinations: There will be three in-class examinations. Unless otherwise announced by your instructor, each of these exams will be given in the next recitation meeting after the review for the exam listed in the

Homework sheet. There will be **NO MAKE-UP** quizzes or exams, even in the case of an emergency. A missed quiz or examination counts as a zero unless you present a valid excuse from a physician or the Dean's Office. With the written excuse, you may use your score on the relevant portion of the final exam to replace the missed exam.

Final Examination: The final examination covers the entire course. Final examination

Period 12, 8:00 AM to 2:30 PM on Monday 5/7, 2007

is reserved for mathematics courses numbered below 400. Your MAT 296 final examination will take place during a two-hour block within the above time interval. The time and location will be announced in class near the end of the semester. Students must take the final examination during the appointed examination block and, in the absence of a conflict, at the scheduled time. **You should not make plans to leave campus until you know the time of the final examination. It will not be given at any other time.**

Grades: Your final grade will be computed approximately as follows:

Exams	60%
Final	25%
Quizzes and homework	15%

Your course grade will be assigned based on the following percentages:

93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
60-69	D
00-59	F

Students with Disabilities: Students who need special consideration should contact the instructor at the beginning of the semester, so that accommodations can be made.

Course related Problems or Questions: Please inform your instructor of any problems you have with this course. Problems not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor (listed on the first page) without delay.

How to Succeed:

(1) It is absolutely essential that you understand how to solve all the assigned problems. Since quiz and exam questions will be similar to these problems, it is crucial that you know how to solve every one of them. Once you understand how to solve a problem, write your solution down neatly and in full detail with explanations that would make your reasoning clear to a friend who sees the problem for the first time. Save these solutions in a three ring binder for review when you prepare for the exams.

(2) Ask questions in lecture, in recitation or at the clinic about anything that is not completely clear. Don't hesitate to bring questions to your course instructor or recitation instructor during office hours.

(3) Every day, read and study the sections in the textbook covered in the lecture. Reading mathematics takes time! Read carefully and work through all the examples in complete detail. It can be helpful to try to work through an example on your own before reading the solution.

(4) Stay caught up! Calculus concepts build on each other cumulatively and you need to stay on top of the material at every stage. If you are having difficulty, don't expect that the problem will take care of itself and disappear later. Contact your course instructor or your recitation instructor immediately and discuss the problem!

(5) Form a study group! Many students benefit from a study group to work through challenging problems and to review for exams. You should attempt the problems ahead of time by yourself and then work through any difficulties with your study partners. Explaining your reasoning to another student can help to clarify your own understanding!

(6) We believe you can be successful in this course! Your should expect to work hard. Don't get discouraged if you find some of the material difficult. Be persistent and patient! If you follow the above suggestions, your experience in this course will be a rewarding one.

Syllabus and Homework
Tuesday Recitations

W	1/17	Cl	6.1	1,2,3,4,5,11,13,17,19,21
F	1/19	C2	6.1-2	6.1(23,27,29,44), 6.2(3,5,11,13,15,17)
M	1/22	C3	6.2	19,21,23,34,47,49,55,57
W	1/24	C4	6.3	3,5,9,11,13,19,21,39
F	1/26	C5	6.5	5,7,9,13
M	1/29	C6	7.1	1,3,5,7,9,11,13,15,19,20,21
W	1/31	C7	7.1-2	7.1(29,33,34,55,61), 7.2(1,3,5,7)
F	2/2	C8	7.2	13-29(odd), 41,43
M	2/5	C9	7.3	1,3,5,6,7,9
W	2/7	C10	7.3	13,15,17,21,22,23,25,31(a)
F	2/9	Cl1	7.4	1,2,5,9,11
M	2/12	C12		**Review**
Tu	2/13			**Test #1**
W	2/14	C13	7.4	15,17,21,23,25,37
F	2/16	C14	7.5	1,2,5,17,18,31,45,49,63,69
M	2/19	C15	7.8	1,5,7,11,13,21
W	2/21	C16	7.8	30,31,35,39,49,51
F	2/23	C17	8.1	2,5,7,9,11
M	2/26	C18	8.2	5,7,13,15
W	2/28	C19	9.4	2,3,9,12
F	3/2	C20	10.1-2	10.1(6,8,9,12,13,15,16), 10.2(4,5,11,12)
M	3/5	C21	10.2-3	10.2(17,18,41), 10.3(3,5,7,11,12)
W	3/7	C22	10.3	16,17,23,33,35,37,61
F	3/9	C23	10.4	3,5,6,17,23,27,30,47

M	3/12			**Spring Break!**
W	3/14			**Spring Break!!**
F	3/16			**Spring Break!!!**
M	3/19	C24	10.5	1,2,12,13,19,20
W	3/21	C25	11.1	3,5,11,13,15,17,19,21,22
F	3/23	C26	11.1	31,32,33,41,46,53,55
M	3/26	C27		**Review**
Tu	3/27			**Test #2**
W	3/28	C28	11.2	3,4,9,11,17,19
F	3/30	C29	11.2	23,25,27,37,39,49,53
M	4/2	C30	11.3	3,4,7,12,15,20,25
W	4/4	C31	11.4	3,5,9,11,13,15,25,30,31
F	4/6			**Good Friday (no classes)**
M	4/9	C32	11.5	2,3,5,11,15,23,27,32
W	4/11	C33	11.6	1,3,4,5,7,15,19,23,31,33
F	4/13	C34	11.7	1,4,7,9,13,15,21,23,24,25,35
M	4/16	C35	11.8	3,5,7,9,15,18,19,22
W	4/18	C36	11.8-9	11.8(23,24,27,28), 11.9(2,3,4,7,9)
F	4/20	C37	11.9	12,13,15,23,24,25,27,28
M	4/23	C38		**Review**
Tu	4/24			**Test #3**
W	4/25	C39	11.10	4,5,6,7,11,13,15
F	4/27	C40	11.10	27,28,29,31,39,43,46,48,55
M	4/30	C41		**Review**

Monday, May 7 FINAL EXAM