

Prerequisites MA 112 and a grade \geq "C" in MA 113. Enforcing prerequisites is the responsibility of the Instructor; there is no automatic enforcement by the Registrar.

Textbook "Calculus" 5th ed. James Stewart

Syllabus/Calendar A course Calendar is attached. Each instructor should also give every student an individual syllabus giving their name, contact information and office hours, as well as additional information about grading policy. See *University Rules* below.

University Rules The University Ombud has made several requests concerning syllabi and other requirements of University Rules:

1. The syllabus should describe curving policy. This is apparently in response to instructors who used "negative curves".
2. Describe carefully what is meant by an excused absence, if attendance will be used in grading. You may have any student who misses both the first two class meetings dropped from the course. Just take a list of names to Cindy Iten, in POT 257.
3. All teachers must provide undergraduate students with a Midterm Evaluation of their course performance by a date set by Dean Hoch, TBA
4. No examinations (except make-ups) are to be given the last week preceding Final Examinations.
5. Please see the ombud's memo for the full story.

Math resource center The mathematics resource center or Mathskeller is in room 65 in the basement of the Classroom Building. Tutorial help is available for all 100-level MA courses. All teaching assistants for MA 114 are asked to schedule at least one of their office hours in this facility (and a total of three office hours). After this week, Mathskeller hours are 8-8 MTWR, 8-5 F. There will probably be additional hours just before Midterm Examinations.

Exams There will be three exams and a final. These exams are scheduled in the evening at the times shown in the course syllabus. If you don't want to write your own, feel free to join other lecturers to write a common exam. Note that there is a uniform time for the Final Examination in MA 113, *but not for MA 114*.

Please emphasize to your students that they should try to clear their schedule for these exams. Students are allowed to register for a course that meets at the same time as a common exam. Students are required to give their instructor two weeks' notice, in writing, of any conflict of a Common-Hour Exam with a class, and the instructor is required to give an alternate exam. With this much notice, it should be

Calendar A course calendar for Spring 2006, using Stewart 5, is attached. The sequence of topics is unchanged from Fall 2005. If you last taught MA 114 from Stewart 3, the changes are described below.

Changes from Stewart 3 The chapter on Series has been moved to much earlier in the term. The reason for this is that it's the hardest topic for students, and at the end of the semester one frequently runs short of time. (I have heard no complaints about this new ordering. More generally, there is the question of how much we should be covering on series. My personal preference is to omit the Integral, Comparison and Root tests, and devote the time to Power Series.)

Chap. 7 Inverse Functions In recent semesters, I have followed 7.2*, 7.3*, 7.4* (ln via integral first, then exp as $\ln(-1)$). However, many students could not use the properties of ln correctly. This time, I will do 7.2, 7.3 and 7.4. Exponential Growth and Decay has been removed from this Chapter and put in a new (and longer) Chap. 10 on Differential Equations. Two sections from Chap. 10 are at the end of the semester.

Chap 11 Parametric Eq'ns & Polar Coord's Arc Length has been dropped (it is covered in Calc III). Conic Sections has been added, to prepare for Multiple Integrals in Calculus III.

Corrections Please send me your comments and corrections; I hope that we can make further refinements. I am including a few recommended assignments; I will add to this list as the semester progresses.

Suggestions on Teaching

What follows describes my most recent experience teaching MA 114. Feel free to use or ignore any of it.

Format Three lectures/week to 70-100 students; Two 75-min recitations, lead by TA's; no paper graders; three mid-term examinations on Tuesday nights, written by individual lecturers. No uniform time for the Final Examination.

Homework Assignments: I assigned 9-12 problems at each lecture. Each assignment had to be submitted at the following lecture; each recitation section in a separate stack. Homework was returned at the next lecture, sorted by section and alphabetically within section. There was a three-point maximum on each assignment, 1 for submitting it in the correct format, with some of the problems attempted, 1 more if they attempted most of the assigned problems, a third point if they made a serious attempt at the problem that I told the TA's to examine. One TA would assign a score to all students, and record it on an Excel spreadsheet. The problems were not checked for correctness. The TA's said that they could do this very quickly. Homework scores were 15% of the course grade. I use

Day	Date	Sec	Topic	Comments
Wed	11-Jan	5.5	Review Substitution rule	
Fri	13-Jan	7.1	Inverse functions	
Mon	16-Jan		M.L. King Birthday	No Classes
Wed	18-Jan	7.2	Exponential Fcns & Derivatives	An alternative is 7.2, 7.3, 7.4.
Fri	20-Jan	7.3	Logarithmic Fcns	
Mon	23-Jan	7.4	Derivatives of Logarithmic Fcns	
Wed	25-Jan	7.5	Inverse trigonometric functions	
Fri	27-Jan	7.7	Indeterminate forms and L'Hopital's rule	
Mon	30-Jan	7.7	Cont'd	
Wed	1-Feb	8.1	Integration by parts	Last day to drop without a grade
Fri	3-Feb		Review	
Mon	6-Feb		Review	
Tues	7-Feb		Examination 1, 7:30-9:30PM	CB 102, 106, 118, 122
Wed	8-Feb	8.2	Trigonometric integrals	
Fri	10-Feb	8.3	Trigonometric substitution	
Mon	13-Feb	8.4	Integration by partial fractions	
Wed	15-Feb	8.5	Strategy for integration	
Fri	17-Feb	8.6	Tables of Integrals	
Mon	20-Feb	8.7	Approximate integration	
Wed	22-Feb	8.8	Improper integrals	
Fri	24-Feb	12.1	Sequences	
Mon	27-Feb	12.2	Series	
Wed	1-Mar	12.3	Integral test	UK rules require that students get mid-term grades by Mar 7.
Fri	3-Mar		Review	
Mon	6-Mar		Review	
Tues	7-Mar		Examination 2, 7:30-9:30PM	CB 102, 106, 118, 122
Wed	8-Mar	12.4	Comparison tests	
Fri	10-Mar	12.5	Alternating series	Last day to drop with a "W"
Mon-Sat	13-Mar-18-Mar		Spring Vacation, No Classes	
Mon	20-Mar	12.6	Absolute convg. and the ratio test	
Wed	22-Mar	12.7	Strategy for testing series	
Fri	24-Mar	12.8	Power series	
Mon	27-Mar	12.9	Represent fcn's as pwr series	
Wed	29-Mar	12.10	Taylor and MacLaurin series	
Fri	31-Mar	12.12	Applications of Taylor polynomials	
Mon	3-Apr	11.1	Curves defined by parametric eq'ns	
Wed	5-Apr	11.2	Calculus with Parametric Curves	
Fri	7-Apr		Review	
Mon	10-Apr		Review	
Tues	11-Apr		Examination 3, 7:30-9:30PM	CB 102, 106, 118, 122
Wed	12-Apr	11.3	Polar Coordinates	
Fri	14-Apr	11.4	Areas in Polar Coordinates	
Mon	17-Apr	11.5	Conic Sections	
Wed	19-Apr	10.3	Separable Differential Eq'ns	
Fri	21-Apr	10.4	Exponential growth and decay	
Mon	24-Apr		Review	
Wed	26-Apr		Review	
Fri	28-Apr		Review	Last Class
			Final Exam depends on lecture time.	See Spring 2006 Schedule of Classes, p. 20.

Ass'n #	Date Due	Day Due	Sec	Exercises
1	11-Jan	Wed	5.5	15,20,22,26,28,30,41,47,51,54
2	13-Jan	Fri	7.1	2,5,6,10,12,19,21,22,26,33,35,36
3	18-Jan	Wed	7.2	2,7,8,13,15,17,23,26,29,31,38,45
4	20-Jan	Fri	7.3	
5	23-Jan	Mon	7.4	
6	25-Jan	Wed	7.5	
7	27-Jan	Fri	7.7	
8	30-Jan	Mon	7.7	
9	1-Feb	Wed	8.1	
10	3-Feb	Fri		
11	6-Feb	Mon		
12	10-Feb	Fri	8.2	
13	13-Feb	Mon	8.3	
14	15-Feb	Wed	8.4	
15	17-Feb	Fri	8.5	
16	20-Feb	Mon	8.6	
17	22-Feb	Wed	8.7	

MA 114 EXAMINATION ROOM ASSIGNMENTS
Spring 2006

MA 114 Coordinator:
Brauch Fugate

	MA 114 Calculus II	Exams 1, 2, 3	Spring 2006
	Tuesdays	2/7, 3/7, 4/11	7:30 - 9:30p.m
INSTRUCTOR	Lecture Time	SECTION	Room
Brennan	8 MWF	1, 2, 3, 4	CB 102
Readdy	10 MWF	5, 6, 7, 8,	CB 106
Fugate	9 MWF	9, 10, 11, 12	CB 118
Staff	1 MWF	13, 14, 15, 16	CB 122