

MTH 133**Calculus II**

Fall 2006

Section: Section 60 (AP), 9:10-10:00, MWF, 316 Bessey Hall

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Office Hours: MWF 10:20-11:15am

Recitations: Tuesday 9:10-10:00am, 106 Bessey Hall

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Textbook: *Thomas' Calculus*, 11th Edition

Warning: This document may be subject to minor modifications at later dates. Please check the class webpage (address above) for updated versions and changes.

Grading:

- **Exams:** There will be three mid-term exams. These exams will be held in recitations.
 - Tuesday, September 19
 - Tuesday, October 24
 - Tuesday, November 21

Final Exam: Monday, December 11, 10:00am-12:00noon. The location will be announced later. The final exam is departmental. (That is, all sections of MTH 133 will take the same exam.) According to the university rules, you will not be able to take the final exam early. There will be no makeup exams except in cases of emergency or a schedule conflict. In those cases, documents such as a letter from a physician will be required. If you have a schedule conflict for any of the exams, you should let me know during the first two weeks of classes. Calculators and/or computers are not allowed on any of these exams. These exams will be similar in nature to the problems discussed in class, to the homework problems and to the exercises in the text. So you should try to solve as many problems from the text as possible. All exams are *closed-book* exams. Also no *cheat-sheets* or *notes* are allowed.

- **Homework:** The homework problems are listed at the end of the syllabus. These will not be collected, but it is important to solve as many as possible. (See section of Quizzes below.)
- **Quizzes:** There will be a weekly quiz beginning with second week (except in exam weeks). It will be given each tuesday during recitation. Each quiz will consist of one or two homework problems for that week. The quiz will be for 10-15 minutes.
- **Gateway Exams:** In addition to the midterm exams and homeworks, you are expected to take and pass two *Gateway Exams* (I and II) which test essential skills for the course and are administered by the Math Department. These exams are designed to encourage students to take responsibility for learning essential skills such as algebraic manipulation, differentiation, and integration. The idea is that you should have sufficient skills to ensure success in the subsequent segments of the course. The two exams cover algebraic manipulation and differentiation respectively. These are graded on a right-wrong basis, with no partial credit available. Passing is based on getting all but one or two problems right (out of about 8 problems). The problems are straightforward, and involve no story problems. You may repeat the tests as often as you like (within some time constraints) but may not repeat a test on the same day. The tests are computer generated from a large pool of questions, so it is very likely that no two tests are the same, although a student taking the test often may see some of the same questions. You should take these tests because they count for 40 points (out of 600) of your total grade for the course. These will be given between the following dates:

- Gateway I: Wednesday, September 6 - Friday, October 6
- Gateway II: Monday, October 16 - Wednesday, November 22

The daily timing and locations for these exams will be announced later.

Rules of Examination: Calculators and/or notes are not allowed during the test and nothing which requires a calculator is asked. Students are not allowed to resume a test if they have to leave the room.

Tests will be graded by the monitors as soon as possible after the test is handed in. If the monitor is not otherwise busy, tests may be graded and returned quickly. Students can always return later in the day, or the next day to pick up their graded paper. Please note: a student who does not believe that a paper is graded correctly **MUST NOT** remove the paper from the presence of the monitor. No appeals on the grading will be considered for papers which the student has taken out of the testing room. Papers for which the grading is in dispute will be referred to a faculty supervisor for a final judgment.

Finally, copies of sample of the first MTH 133 gateway exam are available in A313 WH or A212 WH.

- **Grading Policy:** The three in class exams are worth 90 points each. The final is worth 200 points. The quizzes are worth 90 points. Each Gateway Exam is worth 20 points. So your grade will be decided based on the performance out of 600 points detailed above. The two lowest quiz scores will be dropped. After each mid-term exam I will announce the curve for THAT exam. This will help you to understand where you stand in class. However the final grade will be based on the curve which will be decided after the final exam. To give you some idea, the grade curve will be better than or same as the following scale:

Point total	Grade
541-600	4.0
511-540	3.5
481-510	3.0
451-480	2.5
421-450	2.0
391-420	1.5
361-390	1.0

Important Dates for Fall Semester 2006:

- Monday, August 28: First day of classes.
- Friday, September 1: Last day to change to or from Credit/No credit or visitor grading options.
- Monday, September 4: Labor Day, Classes cancelled.
- Friday, September 8: Last day to change from Mth 103, 106, 110, 114, 116, 124, 132, 153H, 254H, or 255H to an approved lower-level course.
- Thursday, September 21: Last day to drop a course and receive a 100% refund.
- Tuesday, October 17: MIDDLE OF SEMESTER, Last day to drop a course with no grade reported. Close of on-line drops.
- Thursday and Friday, November 23 and 24: Thanksgiving Holiday.
- Friday, December 8: Last Day of classes
- Monday, December 11, 10am-12noon: Departmental Final Exam

Remarks: It is very useful to attend all the classes. It would be also very useful to look at the material before each class. You should feel free to ask questions in class as well as outside if you have trouble understanding any material. In

the beginning, make sure you are comfortable with all the prerequisite material. If you have insufficient background and/or if you are not doing well in class, please let me know so that we can work out some solution. It is of paramount importance to do lots of problems.

Academic Honesty: The University's policy concerning academic integrity is covered in the Spartan Life booklet, General Student Regulations. According to the handbook, *no student shall claim or submit the work of another as one's own*. For more information about this and other scholarship issues, please consult the handbook or visit the Spartan Life web sites at <http://www.vps.msu.edu/SpLife/reg3.htm> and click on the link *Integrity of Scholarship and Grades* under the heading 1.00 PROTECTION OF SCHOLARSHIP AND GRADES.

Academic Learning Center: The Mathematics Learning Center provides assistance for students in Mth 133 and other mathematics courses. It is located in the A-wing of Wells Hall. To use it, sign in at the window of the lobby. The monitor will direct you to the appropriate room for this course. The regular hours for the semester are listed below. It opens on August 30.

- Monday, Wednesday: 10:20am-4:00pm, 6-10pm
- Tuesday, Thursday: 10:20am-2:50pm, 6-10pm
- Friday: 10:20am-1:40pm
- Sunday: 5-8pm

TENTATIVE SYLLABUS (sections from the textbook)

- 6.1, 6.3, 6.6
- 7.1-7.8
- 8.1-8.6, 8.8
- 9.1
- 11.1-11.10
- 10.4-10.7

SUGGESTED HOMEWORK PROBLEMS:

- Section 6.1, # 1(a,d), 3, 5, 6, 8, 13, 15, 23, 24, 26, 35, 45(c), 47(a,b).
Section 6.3, # 2, 5, 8, 9, 13, (17, 18, 22 part (a) only), 27.
Section 6.6, # 1, 3, 4, 7, 9, 10, 15(a), 17, 18, 19, 22, 24.
- Section 7.1, Read to “Derivatives of Inverses of Differentiable Functions”, page 470: # 1-7, 9, 25-31 odd, 34, 35.
Section 7.2, # 3-21 odd, 13, 14, 16, 19, 24, 26, 29, 31-34, 37-41 odd, 50, 54, 55, 65, 71, 74.
Section 7.3, # 3, 7-13 odds, 16, 17-39 odds, 34, 41-65 odds, 60. Supplemental exercises on Section 7.3: 1, 2, 3, 5.
Section 7.4, Read Supplemental material for Section 7.4. # 1-17 odds, 18, 20, 22, 39, 41, 44, 47-51 odds, 54, 56, 71.
Section 7.5, # 3, 5, 6, 12, 18, 21, 23, 24, 25.
Section 7.6, Read to “Order and Oh-Notation”, page 514: # 1-7 odds, 12; All supplemental exercises for Section 7.6.
Section 7.7, Skip arccos, arccot and arccsc. # 1-4 all, 7, 8, 19, 41, 43-46 all, 51, 53, 57, 58, 61, 62, 73, 77, 79-85 odd, 89-94 all, 96, 97, 101, 105, 117. Supplemental exercises on Section 7.7: 2, 4, 6, 7, 10.
Section 7.8, Skip coth and csch and all inverse functions. # 1, 5, 12, 13-21 odd, 16, 41-49 odd, 55-59 odd.
- Section 8.1, # 1-7 odd, 13, 14, 17-29 odds, 30, 32, 37, 39, 47, 50, 53.
Section 8.2, # 1-9 odd, 10, 12, 13-19 odd, 22, 24, 25, 27, 29.
Section 8.3, # 1-5, 8, 9, 11, 15-21 odds, 16, 25, 26, 29, 33, 35, 36, 41.
Section 8.4, # 1, 3, 7, 8, 23, 29, 30.
Section 8.5, # 7, 9, 13-21 odd, 24, 25, 26, 29, 32, 37, 39.
Section 8.6, # 9-17 odd, 18, 20, 22, 32, 34, 39, 42, 45, 53, 57, 61, 65.
Section 8.8, # 5, 7, 11, 16, 21, 23, 32, 34, 39, 43, 46, 47-53 odd, 54.
- Section 9.1, # 1, 7, 9, 11, 13, 14, 16. Supplemental exercises for Section 9.1”’ 1, 3, 6.
- Section 11.1, # 3, 5, 6, 11, 13, 14, 16, 25-33 odd, 34, 41, 47, 51, 53, 54, 55, 68, 77.
Section 11.2, Skip Telescoping Series. # 1-9 odds, 12, 14, 23-35 odds, 34, 37, 38 (Hint: Compute the partial sums), 41, 45, 47, 51, 54.
Section 11.3, # 5, 6, 8, 13, 16, 39, 40.
Section 11.4, 1-5 odds, 6, 10, 13-19 odds, 22, 24, 27, 29. Supplemental exercise on Section 11.4: 2, 4, 5, 7.
Section 11.5, Ratio Test only. # 1, 3, 5, 8, 11, 15, 16, 17, 19, 20.
Section 11.6, Absolute Convergence only # 15, 29, 34, 37, 38.
Section 11.7, Read to “Multiplication of Series” , page 803. # 3-13 odds, 14, 15, 18, 22, 25, 29, 33.
Section 11.8, # 3, 5, 7, 8, 9, 11, 12, 17, 18, 21.
Section 11.9, Read to “Euler’s Formula”, page 684. # 1-5 odds, 6, 7, 9, 10, 15, 19, 21, 23.

Section 11.10, Read to “Power Series Solutions of Differential Equations and Initial Value Problems”, page 824. # 1-5 odd, 6, 8.

Section 10.4, # 1, 3, 4, 7, 11. Supplemental exercises on Section 10.4: 2, 3, 6, 8, 10.

Section 9.5, # 1-15 odds, 18, 20, 23, 25, 32, 34, 35, 41-44 all.

Section 9.6, # 1-7 odd, 8, 9, 10, 13, 16, 17, 19, 21, 23, 31, 33.

Section 9.7, Read to “Length of a Curve”’ page 728. # 1-9 odd, 10-14 all.