

MATH 2644 – Calculus II

Section 02, Fall 2007

MWF 12:00 pm – 12:50 pm 207 Humanities
Thursday 12:30 pm - 1:20 pm, 301 Boyd Bldg

Prerequisites: Math 1634.

Instructor: Dr. Rui Xu

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Office hours: MWF: 9:30 am – 10:00 am; 10:50 am – 12:00 pm; 1:50 pm – 2:30 pm; Thursday: 10:20 am – 12:30 pm; 1:20 pm – 2:10 pm or by appointment.

Textbook: Single Variable Calculus, Early Transcendentals Vol. 2, by James Stewart, Fifth Edition, Brooks/Cole Publishing Company, 2005.

Course Description: A continuation of Math 1634. The definite integral and applications, calculus of transcendental functions, standard techniques of integration, sequences and series.

Learning Outcomes: The student will be able to:

1. Compute areas under curves and between curves.
2. Compute volumes by disks, washers, shells, and cross-sections.
3. Solve applied problems involving work.
4. Evaluate antiderivatives using the techniques of integration by parts, trigonometric integrals, trigonometric substitution, partial fractions.
5. Evaluate improper integrals.
6. Compute arc length of a curve and surface area of a surface of revolution.
7. Solve applied problems in physics and engineering.
8. Understand polar coordinates.
9. Compute area and arc length of curves in polar coordinates.
10. Understand conic sections and conic sections in polar coordinates
11. Determine whether a sequence converges or diverges.
12. Determine whether a series converges conditionally, converges absolutely, or diverges using geometric series, p-series, the comparison test, the limit comparison test, the integral test, the ratio test, the root test, and the alternating series test.
13. Determine the radius of convergence and the interval of convergence of a power series.
14. Compute the Taylor series and Maclaurin series of a function.

Grading Methods: Grades will be assessed based on a total of 665 points (as shown below), using the standard decade scale: (90–100%=A, 80–89%=B, 70–79%=C, 60–69%=D, below 60%=F).

Test 1 (Chapter 6)	90pts
Test 2 (Chapter 7)	100pts
Test 3 (Chapter 8 and Chapter 10)	100pts
Test 4 (Chapter 11)	110pts
Final (Comprehensive)	150pts
Homework	100pts
Attendance	15pts
Total	665pts

Homework & Test policy: Homework is due every Friday. Late homework is not acceptable. Homework may be graded partially or totally. I may grade a specific problem or just look for completeness. I am interested in the solution of problems not just their answers. If you just write (or copy) the answer without showing your work in details, you get no credits. Make-up test or homework can only be given for the students who have a University Approved Excuse. In that case, students should contact the instructor in advance to reschedule the make-up test.

Other Policies:

1. Class attendance will be taken every class day. You are not allowed to come to class late or to leave early. If you miss class for any reason, it is your responsibility to get the lecture notes from a classmate, read the text, and do the homework. You are allowed to miss at most 3 classes to get the full 15pts for attendance.
2. Pagers or cell phones should be set to an inaudible setting.
3. If you are a person with any kind of disability and anticipate needing any type of accommodation to participate in this class, please let me know and make appropriate arrangements with Disability Services.

Important Dates:

- August 15 – 21 : Drop/Add and late registration
- September 3 : Labor Day (offices closed, no classes)
- October 8 : Last day to withdraw with a grade of W
- October 11, 12 : Fall break (no classes, offices open)
- November 21-23 : Thanksgiving recess (no classes)
- December 5 : Last day of class
- December 6 : Reading Day
- December 12 (Wednesday) : Final Exam 11:00 am – 1:00 pm

Please note that the homework problems assigned below have been chosen to give you an idea of the range of problems you are expected to be able to work. You are required to do all of the assigned problems and should do more problems for practice. If you have any questions, you can go to my office or Math Tutoring Center (205 Boyd Bldg) for help.

Section 6.1: 1,3,7,11,13,19,21,27

Section 6.2: 1,3,7,9,11,13,19,21,23,29,31,36,41,43,47,49

Section 6.3: 1,3,4,5,7,9,13,15,17,23,29,30

Section 6.4: 1,3,7,9,13

Section 6.5: 1,3,7,9,13

Section 7.1: 1,2,3,7,11,13,15,21,23,29,31,33,35,42,45,55,61

Section 7.2: 1,3,7,11,15,17,21,23,29,33,37,41,43,49,53,59

Section 7.3: 1,3,5,7,9,13,17,23,25,35,39

Section 7.4: 1,3,5,7,11,17,23,25,29,31,43,47,60

Section 7.5: 1,5,11,17,23,25,31,37,41,45,49,57,63,69,73,77

Section 7.6: 1,2,3,4,5,10,11,17,19,26,27,29,33

Section 7.8: 1,2,7,13,15,21,27,31,37,51,57,61

Section 8.1: 1,2,5,7,9,11,15,17,19,31

Section 8.2: 1,3,5,7,11,13,15,25

Section 8.3: 1,11,25,27,29

Section 10.1: 1,4,5,7,9,11,13,15,21,25,27

Section 10.2: 1,3,5,7,11,15,17,25,31,37,39,41,57,61,65

Section 10.3: 1,2,3,5,7,9,11,13,15,17,19,21,23,25,29,31,35,39,57,59,61,67

Section 10.4: 1,3,5,7,9,11,15,21,23,27,29,37,39,45,47

Section 10.5: 1,5,9,11,15,17,19,21,23,25,27,29,33,37,47

Section 11.1: 5,7,9,11,13,15,17,19,23,25,31,37,55,63

Section 11.2: 11,13,15,17,21,23,31,35,41,43,49,63

Section 11.3: 3,5,6,7,9,11,15,17,21,25,27

Section 11.4: 1,3,5,7,11,15,17,19,21,29,31

Section 11.5: 3,5,7,11,13,17,32

Section 11.6: 3,5,7,9,15,19,23,29,31

Section 11.7: 1,3,5,7,9,11,13,17,19,21,23,25,31,33,35

Section 11.8: 3,7,11,15,17,19,23,29

Section 11.9: 3,5,7,11,13,15,23,25,27

Section 11.10: 3,5,7,11,13,15,17,23,27,39,43,47,49,51,55

Section 11.11: 1,3,7,11,17