MATH 2644 – Calculus II
Section 01, Summer 2006
MTWF 12:00 pm – 1:45 pm, 301 Boyd Bldg

Prerequisites: Math 1634.

Instructor: Dr. Rui Xu
Office: 311 Boyd Bldg
Phone: (678)839-4122
E-mail: xu@westga.edu
Website: http://www.westga.edu/~xu/

Office hours: MWF 9:00 am – 10:00 am, 2:00 pm–4:00 pm T 2:00 pm –3:00 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 650 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
Quizzes, Worksheet	100pts
Total	650pts

Quizzes, Worksheet & Test policy: There will be a quiz or worksheet almost every class day. No make-up for missing quizzes. Students who have a University Approved Absence Excuse are eligible for make-up test/worksheet. 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. If a student misses more than six days of class, that student will be withdrawn from the course for failure to attend.

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:

June 5 – 6	: Drop/Add and late registration
June 28	: Last day to withdraw with a grade of W
July 4	: Independence Day Holiday (no classes, offices closed)
July 25	: Last day of class
July 26	: Reading Day
July 28 (Friday)	: Final Exam 10:00 am –12:00 pm

Please note that the homework problems have been chosen to give you an idea of the range of problems you are expected to be able to work. The number of problems has been kept at a reasonable amount, and you are suggested to do all of the problems. You should do more problems for practice. Spend at least 2 hours doing exercises for every hour of class time; more if you are having difficulty.

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