

# MATH 1634 – Calculus I

## Section 04, Fall 2005

M 01:00 pm – 01:50 pm TR 12:30 pm - 1:45 pm, 206 Boyd Bldg

**Prerequisites:** Math 1112 or Math 1113 or equivalent.

**Instructor:** Dr. Rui Xu

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**Office hours:** Monday: 10:00 am – 12:30 am, 2:00 pm – 3:30 pm; Tuesday: 10:45 am – 12:00 pm, 1:45 pm – 3:30 pm; Thursday: 10:45 am – 12:00 pm, 1:45 pm – 3:30 pm; or by appointment.

**Textbook:** Single Variable Calculus, Early Transcendentals Vol. 1, by James Stewart, Fifth Edition, Brooks/Cole Publishing Company, 2005.

**Course Description:** The first of a three-course sequence in calculus. Limits, application of derivatives to problems in geometry and the science. Problems which lead to antiderivatives.

**Topics:** Limits, Continuity, Tangents and Velocity as Rates of Change, Differentiation Rules, Differentiation of Trigonometric Functions, Implicit Differentiation, Higher Derivatives, Derivatives of Logarithmic Functions, Hyperbolic Functions, Related Rate Problems, Maximum-Minimum Problems, the Mean Value Theorem, L'Hospital's Rule and Indeterminate Forms, Curve Sketching, Newton's Method, Antiderivatives, Definite Integrals, the Fundamental Theorem of Calculus, and Integration by Substitution.

**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 (September 12)	100pts
Test 2 (October 10)	100pts
Test 3 (November 7)	100pts
Test 4 (December 4)	100pts
Final (Comprehensive)	150pts
Homework	100pts
<b>Total</b>	<b>650pts</b>

**Homework & Test policy:** Homework is due every Monday. 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. So you need to show your work in details to get credits. Make-up test or homework can only be given for the students who have a University Approved Excuse.

### 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 If a student misses more than six days of class, that student will be withdrawn from the course for failure to attend.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:**

August 22 – 24 : Drop/Add and late registration  
September 5 : Labor Day (no classes, offices closed)  
October 13 : Last day to withdraw with a grade of W  
November 23 – 25 : Thanksgiving recess (no class, offices closed)  
December 6 : Last day of class  
December 9 : Reading Day  
December 15 (Thursday) : Final Exam 11:00 am – 01:00 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 hand in on time. You should do more problems for practice.

Section 1.1: 1,2,21,24,26,40,58,64,65; Section 1.2: 1,3,4; Section 1.3: 3, 32, 36,54

Section 2.2: 2,3,4,6,9,14,25,27,38; Section 2.3: 2,3,10,11,12,17,21,37,40,48(a)

Section 2.4: 3,4,15,19,20,22,27; Section 2.5: 3,4,10,13,31,32,33,37,47

Section 2.6: 1,311,13,14,18,21,29,37,40,63,64; Section 2.7: 1,5(a)(b), 6(a)(b),7,15

Section 2.8: 4,7,8,13,25,27; Section 3.1: 4,7,12,7,21,23,31,45

Section 3.2: 3,6,9,14,17,22,23,27(a),31,35; Section 3.3: 1,7,14,15,18,29

Section 3.4: 1,2,5,9,15,17,18,19,23,29,35,36,37,40

Section 3.5: 1,3,5,8,12,13,19,25,29,31,34,45,51,55,63,64

Section 3.6: 1,3,7,13,21,25,36,41,43,49,59,61

Section 3.7: 1,2,5,9,15,23,26,29,33,35,59

Section 3.8: 2,5,8,13,16,19,21,29,31,35,39,41,44

Section 3.10: 1,2,3,4,5,17,31,36

Section 4.1: 1,3,6,17,19,20,31,33,43,47,50,51,57

Section 4.2: 1,2,11,12,15,17,23,30; Section 4.3: 1,5,7,11,21,25,27,33,35,45

Section 4.4: 1,2,3,5,6,7,8,11,15,23,27,37,41,49,53,57,61

Section 4.5: 1,5,11,55,57; Section 4.7: 2,3,5,9,16,24,56

Section 4.10: 1,3,5,9,13,17,19,25,35,37,61,69,75

Section 5.1: 1,11,13,17,19,20,21

Section 5.2: 1,5,17,18,19,20,21,23,33,35,41,42,43,49,67

Section 5.3: 7,9,11,13,15,17,19,23,25,29,31,35,39,41,49,53,55,61

Section 5.4: 1,2,5,7,9,13,17,19,23,27,31,33,37,43,55

Section 5.5: 9,11,15,21,23,25,31,35,37,40,41,49,53,57,59,61,65,69,75,79