

Math 1910, Section 4, CRN 20917
Calculus I
Spring 2011

Instructor: Lingju Kong

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Class Meetings: TR 10:50 am – 12:05 pm in EMCS 240

Office Hours: TR 9:30 am -10:30 am, 2:30 pm - 3:30 pm, and by appointment.

Textbook: University Calculus with Early Transcendentals, by Hass Weir, and Thomas. We will cover most of the topics in Chapters 1- 4.

Credit: 3 hours

Prerequisites: UTC Math Placement Level 40 or Mathematics 1720 with a minimum grade of C or Math ACT 28 or above with the equivalent of at least one semester of high school trigonometry.

Corequisite: Mathematics 1911.

Course Description: The calculus of functions of one real variable for majors in Mathematics, the physical sciences, and Engineering. Precise definitions of limits, derivatives, and integrals including Riemann sums; applications of these concepts and the Fundamental Theorem of Calculus. [This course fulfills a general education requirement in Mathematics.](#)

Course Objectives: You are expected to acquire not only some computational facility with the topics introduced, but also a basic understanding of the theory involved, the need for precise language, and a greater ability to read and write using the language of mathematics.

Grades: Your grade will be based on a total of 580 points as follows:

Three middle exams (100 point for each) -----	300 points
Final exam -----	200 points
Quizzes -----	60 points
Attendance-----	20 points

Grading Scale: 90-100% A; 80-89% B; 70-79% C; 60-69% D; below 60% F.

Tentative Exam Schedule:

- Exam 1 ----- Tuesday, February 8
- Exam 2 ----- Thursday, March 10
- Exam 3 ----- Tuesday, April 12

Note: Any changes to these dates will be announced in class.

Final Exam: Thursday, April 28, from 11:00 am - 1:00 pm

Make-up Policy: Make-up quizzes are not given for any reason. Make-up tests are given only in extreme circumstances and must be requested in advance and documentation will be required.

Attendance: Class attendance is required for successful completion of the course. Attendance will be taken at the beginning or end of each class period. If an illness or emergence occurs and you have to miss class, be sure to get the notes and handouts for that day. Your attendance points will be reduced 1 point for your first missing, and 2 points for each missing after the first.

Calculators: A graphing calculator with approximately the capabilities of a TI-82 or TI-83 is required for this course. Most students find a calculator helpful for exploring concepts, and for checking answers. But you are expected to be able to set up and solve problems on your own. Indeed, please note that *calculators with symbolic manipulation abilities (such as the TI-92) will not be allowed on the final exam.*

Homework: Homework will be assigned but not collected. However, students in this class are responsible for knowing how to solve every homework problem, being able to reproduce every example in the textbook and in the lectures. There will be exam and quiz questions that are drawn from the lectures, textbook examples, and regular homework. Success in this course will require that you solve problems on every day of the semester.

Important Dates:

January 17 (Monday)	Martin Luther King holiday
January 21 (Friday)	Last day to drop before a “W” is recorded
March 11 (Friday)	Last day to drop with a “W”
March 14-18 (Mon-Fri)	Spring Break
April 25 (Monday)	Last day of classes
April 26 (Tuesday)	Reading day

Communication Information: To enhance student services, the university will use your UTC email address (firstname-lastname@utc.edu) for communication. (See <http://onenet.utc.edu> for your exact address if you do not know it.) Please check your UTC email on a regular basis. If you have problems with accessing your email account, you can contact the help desk at 425-2678.

Academic Conduct: Academic honesty and mutual respect (student with student and instructor with student) are expected in this class. Mutual respect means being on time for class and not leaving early, being prepared to give full attention to class work, not reading newspapers or other materials in class, not using cell phones or pagers during class time, not looking at another student’s work during examinations.

ADA statement: If you are a student with a disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) and think that you might need special assistance or a special accommodation in this class or any other class, call the Office for Students with Disabilities at 425-4006, come by the office - 102 Frist Hall or see <http://www.utc.edu/OSD/>. If you find that personal problems, career indecision, study and time management difficulties, etc. are adversely affecting your successful progress at UTC, please contact the Counseling and Career Planning Center at 425-4438 or <http://www.utc.edu/Administration/CounselingAndCareerPlanning/>.

Advice: Perhaps the single most important factor in your success in this course is your study habits. Think of learning math as “working out” in the gym, Study at least three times per week; do not wait until the day before the exam. Work on the concepts until they make sense. Do not just memorize facts and then forget them a few weeks later. Master each homework problem-beyond just getting a correct answer. Be on the lookout for mistakes in algebra and trig. **Always come to class!** While you are there, listen, think, and ask questions.

Tentative Class Pace for Math 1910 - 4

Note: This is not an exact schedule and will change based on the needs of the class.

Weeks	Dates	Topics
1	1/10-14	Review of functions, limits of functions, the precise definition of a limit
2	1/17-21	The precise definition of a limit (cont.), one-sided limits, continuity
3	1/24-28	Continuity (cont.), limits of involving infinity, tangents and derivatives at a point
4	1/31-2/4	Tangents and derivatives at a point, the derivative as a function, Review
5	2/7-11	Test 1 , Differential rules, rates of change
6	2/14-18	Rates of change (cont), derivatives of trigonometric functions, exponential functions, the chain rule
7	2/21-25	The chain rule (cont.), implicit differentiation, inverse functions and their derivatives
8	2/28-3/4	Logarithmic functions, inverse trigonometric functions, related rates
9	3/7-11	Related rates (cont), linearization and differentials, Review, Test 2
10	3/14-18	Spring Break
11	3/21-25	The mean value theorem, indeterminate forms and L'Hopital's rule,
12	3/28-4/1	Antiderivatives, sigma notation and area, definite integrals,
13	4/4-8	Definite integrals (cont.), the fundamental theorem of calculus, Review
14	4/11-15	Test 3 , the fundamental theorem of calculus (cont.)
15	4/18-22	The substitution method, Review
16	4/25-29	Reading day on 4/26.