

Calculus I, Math 141, Sections 1 & 2

Instructor: George Androulakis, giorgis@math.sc.edu

Lectures: MWF 9:05-9:55 @ LC 412

Instructor's Off. H: MWF 10-11, or by appt @ LC 400J

TA: Earl Hampton, hamptoef@email.sc.edu

Recitations: T 8-8:50 (sec 1), T 9:30-10:20 (sec 2) @ LC 121

Maple Labs: Th 8-8:50 (sec 1), Th 9:30-10:20 (sec 2) @ LC 303A

TA's Off. H: TTh 10:30-12:30, or by appointment @ LC 300A

Overview: For most students Calculus I is the first serious contact with Mathematics. The core of Calculus I is the understanding of Derivatives and Integrals. We will also study the graphs of functions as the main application of the above. The nature of this course requires more the understanding of the above notions rather than memorization of formulas. Throughout the history, the study of these notions and ideas was fundamental and necessary for the development of Mathematics, Physics and Mechanics. Some of the main contributors were Eudoxus (400-347), Archimedes (287-212), Leibniz (1646-1716), Euler (1707-1783), Cauchy (1789-1857), Riemann (1826-1866).

Expected Learning Outcomes: The students are expected to master the following concepts (and demonstrate that by being able to solve related problems):

- (1) Limits and Continuity of Functions.
- (2) The Derivative.
- (3) Applications of the Derivative: Study of Graphs, Minima-Maxima, Mean Value Theorem.
- (4) The Integral.
- (5) The Fundamental Theorems of Calculus.

Text: *Calculus Early Transcendentals*, James Stewart, 6E

Prerequisite: Completion of Math 112 or 115 with a grade of C or better, or qualification by placement.

Grading: Your grade in this course will be based on your performance on homeworks, three midterms exams, a final exam, and Maple labs. The weights assigned to each of these components will be:

Homeworks	19%
Three midterm exams	19% each
Final exam	19%
Maple Labs	5%.

Course grades will be determined according to the scale: A 90-100, B+ 85-89, B 80-84, C+ 75-79, C 70-74, D+ 65-69, D 60-64 F 0-59.

Exams: *Tentative* dates and topics for these exams are:

Exam 1	Friday, September 16	Sections 1.1 – 2.8
Exam 2	Wednesday, October 26	Sections 3.1 – 4.5
Exam 3	Monday, November 21	Sections 4.7 – 6.1
Final exam	Monday, December 5 - 9:00 a.m.	Sections 1.1 – 6.2.

Bring Blue Books to all the exams because because no paper will be provided. Thursday, October 13 is the last day to drop a course or withdraw without a grade of “WF” being recorded. There will be no make-up exams. In case that you miss an exam because of documented reasons of illness, family emergency, or participation in a University sponsored event, if you contact me immediately and provide me with the documentation, then the grade of the missed exam will be substituted by the grade of the final exam.

Homeworks: A homework assignment will be due almost at each lecture, recitation and maple lab. Late homeworks will not be accepted. In case that you are unable to attend class during the day that you turn in homework, because of a documented reason of illness, family emergency, or participation in a University sponsored event, if you contact me immediately and provide me with the documentation, then the grade of the missed homework will be dropped.

Maple labs: The Maple labs will provide computational examples which will further clarify the fundamental concepts of calculus. Your TA will be of complete charge of the Maple labs and your Maple lab component of your grade.

Math labs: The Math Labs is a free tutoring service. Students who need additional help with this course are encouraged to take advantage of this service. No appointment is necessary. The places and hours of the Math Labs are posted on the web site: ”<http://www.math.sc.edu/mathlab.html>”.

Academic honesty: Cheating and plagiarism will not be tolerated in this course. You may discuss homework problems with others, but do not copy solutions from another student or from a book or from the Internet. Violations of this policy will be dealt with a matter consistent with University regulations.

Cell phones: Turn off cell phones during classes.