

University of Southern California Department of Mathematics

MATH 118x Fundamental Principles of Calculus

Fall 2012

Instructor:	Konstantin Zuev	
Office:	KAP 470A	
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Office Hours:	MWF 1:30-3:30 or by appointment	
Section	39435	39443
Lectures	MWF 11:00-11:50 in THH 116	MWF 12:00-12:50 in ZHS 352
Discussions	Tue, Thu in GFS 202	Tue, Thu in KAP 141
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Course Description

The main goal of this course is to give an introduction to the fundamental principles, methods, and concepts of Calculus: Functions, Graphs, Limits, Derivatives, Integrals, and Calculus of several variables.

Prerequisites

MATH 117 Introduction to Mathematics for Business and Economics

Textbooks

- 1. <u>Required</u>: L.D. Hoffman and G.L. Bradley, *Calculus for Business, Economics, and the Social and Life Sciences*, Brief 11th ed., McGraw-Hill, New York, 2013.
- 2. <u>Recommended</u>: Student's Solution Manual

Course Plan

The following is a tentative outline of the material to be covered this term.

<u>Sections</u>	<u>Topic</u>	<u>Lectures</u>
$\S 1.1 - 1.6$	Functions, Graphs, and Limits	1-5
\$2.1-2.6	Differentiation: Basic Techniques	6-11
$\S 3.1, 3.2, 3.4, 3.5$	Additional Applications of the Derivative	12-19
$\S 4.1 - 4.4$	Exponential and Logarithmic Functions	20-23
$\S 5.1 - 5.4$	Integration	24 - 29
§ 6.1	Integration (by Parts)	30-31
§7.1 – 7.3, 7.6	Calculus of Several Variables	32-40

Grading

Quizzes:	15%
First Midterm:	25%
Second Midterm:	25%
Final:	35%

Homework

Suggested homework problems will be posted on the course website after each lecture. These problems will be assigned but not collected.

Quizzes

A quiz will be given each week on Tuesday, except for the first week of class, and for the two weeks when midterms are held. The quiz problems will be similar to homework problems assigned in the previous week. For example, the quiz problems on Sept 4 will be similar to homework problems assigned on Aug 27, 29, and 31. The two lowest quiz grades will be dropped in the final grade calculations. All quizzes will be closed-book and no calculators are allowed or needed.

Midterm Exams

There will be two midterm exams: Wednesday, October 10 (exam 1) and Monday, November 5 (exam 2). The time and place will be announced later. Both exams will be closed-book. No calculators are allowed or needed.

Final Exam

The final exam is comprehensive and will be held at the time specified in the University Schedule of Classes: Wednesday, December 19, 2-4pm, location to be announced. The final exam will be closed-book and no calculators are allowed or needed.

Important Dates

HW:	Weekly on Mondays, Wednesdays, and Fridays
Quizzes:	Sept 4, 11, 18, 25, Oct 2, 16, 23, 30, Nov 13, 20, 27, Dec 4
First Midterm:	Wednesday, October 10
Second Midterm:	Monday, November 5
Final:	Wednesday, December 19, 2-4pm

Expectations

Official announcements, homework assignments, quizzes and midterms solutions will be posted on the course website. You are expected to check the course website on a regular basis. You are encouraged to read the appropriate sections of the textbook in advance and discuss the homework assignments with other students.

Behavior

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office of Student Judicial Affairs for disciplinary action. In particular, the use of cell phones during class or conversation is disruptive behavior.

Academic Integrity

All students are responsible for maintaining standards of academic integrity. The university regards cheating as a very serious issue and recommends F in the course for any violation. In particular, collaboration, use of notes, or any electronic devices during quizzes, midterms or the final are strictly prohibited.

Useful Links

Course website:

http://www-bcf.usc.edu/~kzuev/teaching/2012Fall/Math118x.html Previous Final Exams: http://dornsife.usc.edu/mathcenter/res_classes/118.cfm

This syllabus is not a contract, and the Instructor reserves the right to make some changes during the semester.