

MA 123 (Elementary Calculus)

Time & Location: [Click here](#)

Text

The text listed in #1 below is the official text for the course. It is very readable and has many worked out examples. The set of notes listed under #2 below is available for free online. The third text listed below is a good study guide for students.

- 1.. **Calculus** by Elliot Gootman. The book is published by Barron's, and it will be the primary text for the course. The book can be purchased from the bookstores or online. We shall cover the first ten (10) chapters of this book.

In addition, there are three handouts to supplement the text which you can download here:

[Handout 1](#) - Higher Derivatives

[Handout 2](#) - Exponential and Logarithmic Functions

[Handout 3](#) - Curve Sketching and Concavity

2. **A Brief Introduction to Calculus** ([Click here](#) to download)

This is a set of notes that you may find useful for basic concepts. You might want to download the notes and print a copy. The initial part of the course will review algebra, and these notes should be very useful for that review.

3. **How to Ace Calculus: The Streetwise Guide** by C. Adams, J. Hass, and A. Thompson. This inexpensive book might be a useful guide to study methods for calculus and math in general.

Goals

This course will cover each of the topics from the first ten chapters of the text, Calculus, by Gootman. All of these topics are covered in the online homework sets. Your main goal

should be to learn the material well enough so that you can use calculus in an applied context such as business or social science. It is virtually impossible to learn mathematics without actively taking part in the learning. To understand what this means, consider the impossibility of learning to play tennis by listening to someone describe how to play tennis. You will not learn the material in this course by listening to the lectures, and thinking to yourself - "Yes, I understand that". You must work the problems and make mistakes before you will begin to learn. The instructor's task is that of an assistant to help you learn as much of the material as you desire.

In this course it will not be sufficient to memorize an algorithm for doing specific types of problems. You will be expected to understand the material well enough so that you can work problems similar to, but not identical to the ones we work in class and the ones you encounter in the homework.

Prerequisites

You should have a strong understanding of college algebra and an ACT score of at least 26 or a score of 70% on the placement exam. If you have a weak algebra background it is essential that you immediately brush up on this prerequisite. Most students who do not do well in calculus, find that the required algebra is the major roadblock.

Tentative Course Schedules

[Click here if you are enrolled in a MWF class.](#)

[Click here if you are enrolled in a TR class.](#)

Other important dates:

M 9/1	Labor Day (no class)
W 9/3	Last day to add a class
W 9/17	Last day to drop a class without a grade
F 11/7	Last day to withdraw from a class
W 11/26 - F 11/28	Thanksgiving (no class)
F 12/12	Last day of classes
W 12/17	Final exam

Tentative Course Schedule - MWF Classes

Date	Description
W 8/27	Introduction
F 8/29	Algebra Review (Chapter 1)
M 9/1	<i>Labor Day - no class</i>
W 9/3	Algebra Review (Chapter 1)
F 9/5	Rates of Change (Chapter 2)
M 9/8	Rates of Change (Chapter 2)
W 9/10	Rates of Change (Chapter 2)
F 9/12	Limits (Chapter 3)
M 9/15	Limits (Chapter 3)
W 9/17	Limits (Chapter 3)
F 9/19	Computing some Derivatives (Chapter 4)
M 9/22	Review for Exam 1
W 9/24	Review for Exam 1; EXAM 1, 5-7 pm
F 9/26	Computing some Derivatives (Chapter 4)
M 9/29	Formulas for Derivatives (Chapter 5)
W 10/1	Formulas for Derivatives (Chapter 5)
F 10/3	Formulas for Derivatives (Chapter 5)
M 10/6	Higher Derivatives (Handout 1)
W 10/8	Exponential and Logarithmic Functions (Handout 2)
F 10/10	Exponential and Logarithmic Functions (Handout 2)
M 10/13	Exponential and Logarithmic Functions (Handout 2)
W 10/15	Extreme Values and Mean Value Theorem (Chapter 6)
F 10/17	Extreme Values and Mean Value Theorem (Chapter 6)
M 10/20	Review for Exam 2
W 10/22	Review for Exam 2; EXAM 2, 5-7 pm
F 10/24	Curve Sketching and Concavity (Chapter 6 and Handout 3)
M 10/27	Curve Sketching and Concavity (Chapter 6 and Handout 3)
W 10/29	Word Problems (Chapter 7)
F 10/31	Word Problems (Chapter 7)
M 11/3	Word Problems (Chapter 7)
W 11/5	The Idea of the Integral (Chapter 8)
F 11/7	The Idea of the Integral (Chapter 8)
M 11/10	The Idea of the Integral (Chapter 8)
W 11/12	Computing some Integrals (Chapter 9)

F 11/14	Computing some Integrals (Chapter 9)
M 11/17	Review for Exam 3
W 11/19	Review for Exam 3; EXAM 3, 5-7 pm
F 11/21	Computing some Integrals (Chapter 9)
M 11/24	Fundamental Theorem of Calculus; Antiderivatives (Chapter 10)
W 11/26	<i>Thanksgiving Break - no class</i>
F 11/28	<i>Thanksgiving Break - no class</i>
M 12/1	Fundamental Theorem of Calculus; Antiderivatives (Chapter 10)
W 12/3	Fundamental Theorem of Calculus; Antiderivatives (Chapter 10)
F 12/5	Fundamental Theorem of Calculus; Antiderivatives (Chapter 10)
M 12/8	Review for Final Exam
W 12/10	Review for Final Exam
F 12/12	Review for Final Exam
W 12/17	FINAL EXAM, 6-8 pm

Tentative Course Schedule - TR Classes

Date	Description
R 8/28	Introduction; Algebra Review (Chapter 1)
T 9/2	Algebra Review (Chapter 1)
R 9/4	Rates of Change (Chapter 2)
T 9/9	Rates of Change (Chapter 2)
R 9/11	Limits (Chapter 3)
T 9/16	Limits (Chapter 3)
R 9/18	Computing Some Derivatives (Chapter 4)
T 9/23	Review for Exam 1
W 9/24	EXAM 1, 5-7 pm
R 9/25	Computing Some Derivatives (Chapter 4)
T 9/30	Formulas for Derivatives (Chapter 5)
R 10/2	Formulas for Derivatives (Chapter 5)
T 10/7	Higher Derivatives (<u>Handout 1</u>); Exponential and Log. Fcts. (<u>Handout 2</u>)
R 10/9	Exponential and Logarithmic Functions (<u>Handout 2</u>)
T 10/14	Extreme Values and Mean Value Theorem (Chapter 6)
R 10/16	Extreme Values and Mean Value Theorem (Chapter 6)
T 10/21	Review for Exam 2
W 10/22	EXAM 2, 5-7 pm
R 10/23	Curve Sketching and Concavity (Chapter 6 and <u>Handout 3</u>)
T 10/28	Word Problems (Chapter 7)
R 10/30	Word Problems (Chapter 7)
T 11/4	The Idea of the Integral (Chapter 8)
R 11/6	The Idea of the Integral (Chapter 8)
T 11/11	Computing some Integrals (Chapter 9)
R 11/13	Computing some Integrals (Chapter 9)
T 11/18	Review for Exam 3
W 11/19	EXAM 3, 5-7 pm
R 11/20	Computing some Integrals (Chapter 9)
T 11/25	Fundamental Theorem of Calculus; Antiderivatives (Chapter 10)
R 11/27	<i>Thanksgiving Break - no class</i>
T 12/2	Fundamental Theorem of Calculus; Antiderivatives (Chapter 10)
R 12/4	Fundamental Theorem of Calculus; Antiderivatives (Chapter 10)
T 12/9	Review for Final Exam

R 12/11 Review for Final Exam

W 12/17 FINAL EXAM, 6-8 pm

Course Policies

Grading

You will be able to obtain a maximum of 500 points in this class, divided as follows:

Three 2-hour exams, 100 points each

Final exam, 100 points

Homework, 100 points

Your instructor might include the results of in-class quizzes or some other way of awarding points in the 100 points available for the homework grade.

Your final grade for the course will be based on the total points you have earned as follows.

A: 450-500

B: 400-449

C: 350-399

D: 300-349

E: 0-299

The grading scale might be adjusted at the end of the semester on a course-wide basis (in other words, every instructor will use the same grading scale). You will be guaranteed the above letter grade if your score falls within the given range, but the minimum score for each letter grade might be lowered.

Attendance

Attendance in MA123 is mandatory. Your instructor will inform you how s/he keeps track of your attendance.

Students who have university excused absences or who have university-scheduled class conflicts with uniform examinations may arrange with their instructor to take the exam at

an alternate time. Generally these make-up exams will be scheduled on the day after the regularly scheduled exam. The time and room will be announced later. Work-related conflicts are neither university excused absences nor university-scheduled absences.

Academic Honesty

Cheating or plagiarism is a serious offense and will not be tolerated. It will be thoroughly investigated, and might lead to failure in the course or even to expulsion from the university. See

<http://www.uky.edu/StudentAffairs/Code/part2.html>

(Sections 6.3.1 and 6.3.2) for information on cheating, plagiarism, and penalties.

A summary of recent changes to rules on cheating can be found at the Academic Ombud website:

<http://www.uky.edu/Ombud>

Homework

The course uses an online homework system called WebClass , and your homework is graded and recorded by the system. You can get to WebClass by going to the link <http://www.mathclass.org> . Information about WebClass is found at the link [webclass_information.html](#) . **Before you try to login to WebClass, be sure to read the information on this page** . Be sure you have Cookies and Popups enabled on your browser. After you login, select the web homework link. This will take you to your MA123 class where you do your homework.

Each student has an individual, Personal Version of the web-based homework assignments to work and submit. For each problem set there is also a Common Version similar to the personal version. Everyone gets the same Common Version. Problems on the Common Version are the ones most likely to be discussed in class. **You are expected to solve the Personal Version on your own without help** .

You may attempt a problem as many times as you like. Only your final (and hopefully correct!) answer will be recorded for your homework grade. Additional attempts at a problem need not be made in the same online session, so you can reattempt the problem after getting help from your instructor, in the Mathskeller, or in the Study at the Complex Commons. If you submit the correct answer to a problem before the due date, you receive full credit for the problem.

Caution: The homework policy is generous in that you can attempt a homework problem as many times as needed. After each attempt, the computer tells you whether your answer is correct or not. During an exam, there is no immediate feedback. You must answer the question correctly the first time. In order to be well prepared for the exam, you must be able to work a problem correctly the first time without receiving feedback that a mistake has been made. Practice the homework problems enough so that you can do this. Receiving

a high score in the homework might not be enough preparation for the exams if many of the homework problems were worked correctly only after multiple attempts.

If you submit an incorrect answer to a homework problem, the first thing to check is the syntax you used to submit the answer. A typo will obviously result in an incorrect answer. If you check the syntax carefully, and your answer is still incorrect, go back and rework the problem. It is often better to work other problems first, since it is quite easy to make the same error over and over. If after several attempts, you do not get a correct answer, then get help from your instructor or from a tutor in the Study or Mathskeller. Although the answers to all problems have been checked, it is still possible that there is an error in the system.

Homework will generally be due twice a week at midnight. The due dates are indicated on the homework sets. It is your responsibility to check these dates. **DO NOT WAIT UNTIL THE EVENING OF THE DUE DATE** to do the homework. No homework can be accepted late. If you miss class for a University trip, you must complete your assignments ahead of the due date.

In addition to the online homework, your instructor might give quizzes during class. If this is the case, your instructor will inform you how these quizzes will contribute to the 100 points in the homework category for your section. **Note that class attendance is mandatory for MA123. You will not be allowed to make up missed quizzes unless you have a valid university excuse.** If you anticipate an excused absence you must notify your instructor in writing two weeks before the absence.

Exams

Each exam is worth 100 points. You must bring a photo ID to each exam and you may use a calculator on the exams. Absolutely no cell phone use during an exam is allowed. No questions about the exam will be allowed during the exam. The final exam, Exam 4, will be comprehensive.

[Click here](#) for the room schedule for exams 1-3.

Exam dates

Exam 1 : 5:00-7:00 PM, 24 September 2008. Covers homework sets' 00-05.

Exam 2 : 5:00-7:00 PM, 22 October 2008. Covers homework sets 06-12.

Exam 3 : 5:00-7:00 PM, 19 November 2008. Covers homework sets 13-19.

Exam 4 : 6:00-8:00 PM, 17 December 2008. Comprehensive (covers all homework sets).

After an exam is given, you should go back over the exam and redo problems you got wrong since this will help you prepare for the final.

Alternate exams

Students who have university excused absences or who have university-scheduled class conflicts with uniform examinations may arrange with their instructor to take the Alternate Exam. You must fill out the Alternate Exam Request Form and submit it to your instructor at least two weeks before the scheduled exam. [Click here](#) to download the Alternate Exam Form.

Old exams

Exams from previous semesters are posted [here](#).

Sections and Instructors

If you contact your instructor by email, be sure to place "ma123" in the subject line. An email without this subject heading may be deleted by spam filters.

Instructor's Name	Sections (#, time, location)	E-mail Address
Alberto Corso	001 - MWF 8:00am-8:50am - CP153	corso@ms.uky.edu
Jakayla Robbins	002 - MWF 12:00pm-12:50pm - CP153	jrobbins@ms.uky.edu
Tom Chapman	003 - TR 8:00am-9:15am - BS116	chapman@ms.uky.edu
Marian Anton	004 - MWF 12:00pm-12:50pm - BS116	anton@ms.uky.edu
David Leep	005 - MWF 3:00pm-3:50pm - CP153	leep@ms.uky.edu
Paul Cooley	401 - TR 6:00pm-7:15pm - CB347	paulc44@yahoo.com
Paul Cooley	402 - TR 7:30pm-8:45pm - CB347	paulc44@yahoo.com