MA 113: Calculus I [1]

Sections 001–004

MWF 9:00-9:50 AM CB 114

Spring 2020

Professor: Dr. David Royster
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Office: POT 759
Office Phone: (859) 257-1258 **URL**:`http://www.msc.uky.edu/droyster/`
Office hours: MWF 1000-1050 AM or by appointment

Class webpage: Canvas — `https://uk.instructure.com`

Course Description: A course in one-variable calculus, including topics from analytic geometry. Derivatives and integrals of elementary functions (including the trigonometric functions) with applications. Lecture, three hours; recitation, two hours per week. Students may not receive credit for MA 113 and MA 137. Note: Math placement test recommended.

Prerequisites: Math ACT of 27 or above, or Math SAT of 620 or above, or Math SAT2016 of 650 or above, or a grade of C or better in MA 109 and in MA 112, or a grade of C or better in MA 110, or appropriate score on math placement test, or consent of the department. Students who enroll in MA 113 based on their test scores should have completed a year of pre-calculus study in high school that includes the study of trigonometric functions. [*Per Senate Rule 4.3.3, students will not be permitted to register for this course for a fourth time. To request an exception to this rule, visit* `https://math.as.uky.edu/lower-level-math-overrides`.]

Information on MA 193: Make sure that you are in the correct section of MA 193.

Textbook: Calculus: Early Transcendentals, 8th edition, by James Stewart, ISBN 9781337056403 (Chapters 1-11) or ISBN 9781337030595 (Chapters 1-16). For MA 113, you only need to obtain one of either the Chapter 1-11 text or the Chapter 1-16 text. The

[1] I reserve the right to change or amend this syllabus at any time for any reason.

bookstore has custom paperback editions of the textbook for UK.
If you plan on only taking Calculus I and II (MA 113-114), then you need chapters 1-11.
If you plan on taking Calculus I, II, and III (MA 113-114-213), then you need chapters 1-16.

eBook acces: Class access key — **uky xxxx xxxx**

Required software: i-Clicker app or clicker, graphing calculator or graphing program (such as *desmos, WinPlot, Grapher, Maple, or Mathematica*), computer with an up-to-date browser for Canvas.

Recitations:

TR 08:00-09:15 AM, CB 335 (Section 001)
TR 09:30-10:45 AM, CB 335 (Section 002)
TR 11:00-12:15 PM, CB 343 (Section 003)
M 03:00-04:30 PM, CB 343 (Section 004)
TR 02:00-03:30 PM, Math House (Section 004)

Teaching assistants: Justin Garagnani, Justin.Garagnani@uky.edu, Sections 001 & 002
Lewis Dominguez, Lewis.Dominguez@uky.edu, Section 003 & Vasily Zadorozhnyy, vasily.zadorozhnyy, Section 004

Course Outline: We begin by introducing the notion of a limit, both for sequences and for function of a real variable. Limits are essential to defining derivatives and integrals. By the end of the semester students should know precise definitions of the derivative and the integral and understand the fundamental theorem of calculus which gives the relation between the derivative and the integral. See the course calendar for a list of topics and when they are covered.

Grading: Your grade will depend on homework, three tests, a final, six written assignments, recitation quizzes and lecture attendance. The schedule of tests, homework and the final exam is available on Canvas.

Exam 1: Tuesday, February 11, 5:00–7:00 PM
Exam 2: Tuesday, March 10, 5:00–7:00 PM
Exam 3: Tuesday, April 14, 5:00–7:00 PM
Final Exam: Tuesday, May 5, 6:00–8:00 PM

Grades: You will be able to obtain a maximum of 600 points in this class, divided as follows:

Three 2-hour exams @ 100 points each	300 points
Final exam @ 100 points	100 points
Homework	100 points
Recitation quizzes	30 points (3 each)
Class participation	22 points
Written assignments	48 points (8 each)
Total	600 points

Your grade will be based on the number of points you earned according to the following scheme:

Total Points	540–600	480–539	420–479	360–419	0–359
Final Grade	A	B	C	D	E

Mid-term Grades: Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar (`http://www.uky.edu/Registrar/AcademicCalendar.htm`).

Calculators and Laptop Computers: You may use a graphing calculator on exams and homework. The use of machines with symbolic manipulation capabilities is not allowed during examinations. You may not use any machine (carbon-based or silicon-based life form) that has symbolic manipulation capabilities of any sort on any exam. This precludes the use of TI-89, TI-Nspire CAS, HP 48, TI 92, Voyage 200, Casio Classpad, iPad, tablet or laptop computer. Also, you may not use your cell phone, iPhone, or Blackberry on any exam — even if you forget your regular calculator. If it runs Windows, UNIX, Linux, Ubuntu, MacOS, PalmOS, BeOS, or any derivatives or associates thereof, you cannot use it on the exams. Check with me if you have any questions as to whether a particular machine may be used on a test.

Computers (including laptops, notebooks, iPads, etc.) may be used and required during lectures.

Course Policies: See the main syllabus at main web site.