MA 113:Calculus I
Sections 001–005 — Spring 2016

Classroom: 200 Funkhouser Building

Time: MWF 9:00–9:50 AM

Professor: Dr. David Royster

Office: Patterson Office Tower 759

Office Hours: MWF 10:00–11:30 AM or by appointment. Often it is best to check with me and we can find a convenient time quickly.

Office Phone: (859) 257-1258

email: david.royster@uky.edu

URL: `http://www.msc.uky.edu/droyster`

Class Homepage: `http://www.uky.edu/canvas`

Text: *Calculus: An Early Multivariate Approach* by David Dwyer and Mark Gruenwald

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.

Prerequisites: Math ACT of 27 or above, or math SAT of 620 or above, or MA 109 and MA 112, or MA 110, 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 the trigonometric functions.

Enrollment in MA 113 multiple times: University Senate rule 4.3.3 allows department chairs to prevent a student from registering in a course for a third time, unless a student has withdrawn for urgent, non-academic reasons. Beginning in fall 2016, the Department of Mathematics will begin enforcing this rule for students attempting a fourth registration in MA 109, 110, 113 and/or 137.

Information on MA 193: In addition to the 4 hours of credit for MA 113, the department offers one additional hour of credit for MA 193 on a pass/fail basis. You will pass MA 193 if you have at most 2 unexcused absences during MA 113 recitations and you pass MA 113. If you fail MA 113 or have 3 or more unexcused absences, you will fail MA 193. Your section number for MA 193 has to equal your section number for MA 113. That means, if you drop or change sections of MA 113, please make sure to also drop or change sections of MA 193!

Required access: WebWork:
`http://wwserver.valpo.edu/webwork2/UKY-MA113-Fall-2015/`

Online discussion: Piazza:
`https://piazza.com/piazza.sandbox/spring2016/ma113royster/home`

Required software: TurningPoint clicker, graphing program (such as *WinPlot*, *Grapher*, *Maple*, *Mathematica* or graphing calculator), computer with an up-to-date browser for Canvas. I strongly suggest that you have access to and know how to use a TI-83, TI-84, TI-84+ or similar graphing calculator âĂŞ especially for the tests.

Section 001: TTh 08:00–09:15 AM White Hall Classroom Bldg 237. The teaching assistant is Kathy Effinger (kathy.effinger@uky.edu)

Section 002: TTh 09:30–10:45 AM White Hall Classroom Bldg 341. The teaching assistant is Jonathan Proctor (jonathanproctor@uky.edu)

Section 003: TTh 12:30–01:45 PM White Hall Classroom Bldg 335. The teaching assistant is Jonathan Proctor (jonathanproctor@uky.edu)

Section 005: (Math Excel section)
M 03:00–04:30 PM White Hall Classroom Bldg 337;
TTh 02:00–03:30 PM Math House (654 Maxwelton Ct), Room 100.
The teaching assistant is Dustin Hedmark (dustin.hedmark@uky.edu)

Objective: Study of the basics of calculus with applications to various life and physical sciences. We will learn about derivatives, integrals and the fundamental theorems of calculus. We begin by introducing the notion of a limit. Limits are essential building blocks for defining derivatives and integrals. By the end of the semester you should know precise definitions of the derivative and the integral and the fundamental theorem of calculus, which gives the relation between the derivative and the integral. We will illustrate the methods and ideas of calculus by studying problems from biology. We will study the interpretation of the derivative as a rate of change, and model growth and declines of populations.

Grading: We will have homework, three tests, and a final. The schedule of tests, homework and the final exam is available on Canvas.
Exam 1: Tuesday, February 9, 5:00–7:00 pm
Exam 2: Tuesday, March 8, 5:00–7:00 pm
Exam 3: Tuesday, April 12, 5:00–7:00 pm
Final exam: Wednesday, May 4, 6:00–8:00 pm

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

Three 2-hour exams @ 100 points each	300 points
Final exam @ 100 points	100 points
Homework, Class attendance, Class participation, recitation attendance	100 points
Total	500 points

The 100 points for homework and attendance are computed based on the following components:

Homework:	100 points
Recitation Attendance:	50 points
Attendance in Lecture:	50 points
Class participation:	100 points
Total divided by 3:	100 points

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

Total Points	450–500	400–449	350–399	300–349	0–299
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`).

Web-based Homework: The bulk of the homework will be completed using the **web-based homework** system, *WeBWorK*, that grades your solutions and records your scores. You will have received an email about giving you the URL, login id, and initial password. Each homework set comes as a personal version. When entering answers to the personal version the system will tell you whether your answer is correct or not and will, in the case there are multiple components of the answer, indicate the first part of the answer that is incorrect. **Only correct solutions to your personal version of the homework assignment give you credit!**

You can, at any time, find your current score *WeBWorK* by clicking Grades in the Main Menu on the left of most pages.

There is a button, Preview Answers, on each problem page which will allow you to see your answer before you submit it. There is also a button, Check Answers, for with which you can check your answers. You will find a button, Email instructor, that causes an email to be sent to your TA and your instructor which mainly serves to tell them that you have a question.

Keep in mind then it is not cheating to give or receive help on web homework.

a) Start to work on an assignment as soon as the corresponding material is discussed in class.

b) You may print out copies of your personal version (it is free in the Mathskeller, the student staff will show you how to do so) and put them in a notebook.

c) Get together with classmates to work on the problems. Write down the solutions in your notebook and only thereafter enter your solutions on the webpage. Check your answers by entering them into the system, and, if necessary, rework the problem.

d) Work on the problems of your personal version and remember: only correct solutions to your personal version will earn you credit.

e) Bring the notebook with you when you go to office hours.

f) You are encouraged to discuss homework problems and the course material with each other. However, when it comes time for you to write up or enter the solutions, you are expected to do this completely on your own. It would be the best for your understanding if you put aside your notes from the discussions with your classmates and wrote up the solutions entirely from scratch.

g) If necessary, you may take your version of the homework set with you to recitation and seek help.

h) If you feel you have worked a problem correctly and *WeBWorK* marks it incorrect, please contact your teaching assistant or professor by e-mail.

Late Homework: No late submissions of web homework will be accepted. If an emergency or illness takes you away from school, please discuss your situation with your professor and ask to be excused from an assignment, if appropriate. If you have a scheduled absence (travel or authorized university absence) you must still submit the web homework by the deadline. Please understand that the computer is a harsh task-master. When it says it is midnight, it is midnight.

Using the web homework system *WeBWorK*: Please refer to the document *Introduction to WeBWorK for Students* for full instructions. This can be found on Canvas. In order to access *WeBWorK* do the following steps (Students who registered near the beginning of the semester should wait 24 hours after they registered for MA 113 001-005):

- Use a web browser Internet Explorer, Firefox, Chrome, Safari or other browser. We have found that Chrome, Firefox and Safari seem to work without too many problems. The same cannot be said for Internet Explorer or Edge.

- Go to http://wwserver.valpo.edu/webwork2/UKY-MA113-Fall-2015/

- Log in using your campus active directory account login (LinkBlue) id. Your initial password is the same your UKID# without the leading 9.

- Follow the instructions in the *Introduction to WeBWorK* to reset your password.

Excused Absences: Students need to notify the professor of absences prior to class when possible. Senate Rule 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit âĂIJreasonable cause for nonattendanceâĂİ by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. David Beach (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

Verification of Absences: Students will be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request "appropriate verification" when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Academic Dishonesty: Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed. The following are a few examples of academic dishonesty

1. using someone else's clicker in class or asking someone to falsely use oneâĂŹs clicker in class;

2. having another student complete an assignment for you or give you answers to specific questions;

3. using unauthorized materials or hardware on an exam;

4. looking at another student's answers during an exam;

5. having someone else take your exam for you;

6. lying about having taken an exam or completed an assignment.

Clickers: it is universally agreed that voting for your friends is a violation of the code of student conduct, akin to cheating on a test or having someone else do assignments for you. Students caught using two or more clickers and those for whom they are using the clickers will be dealt with as a cheating violation. Penalties may range from a failing grade in the class to suspension, with permanent notations on transcripts. Don't do it!

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: `http://www.uky.edu/Ombud`. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty.

It is important that you review this information as all ideas borrowed from others need to be properly credited. Part II of Student Rights and Responsibilities (available online at `http://www.uky.edu/StudentAffairs/Code/part2.html`) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

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.

Accommodations due to disability: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Suite 407, Multidisciplinary Science Building, 725 Rose Street, Susan Fogg, Disability Accommodations Consultant, mfogg00@email.uky.edu, (859) 257-2754) for coordination of campus disability services available to students with disabilities.

Class Policies: There are several policies to which you must pay heed.

1. Attendance: Attendance in recitation is mandatory. 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.

2. You have a day-by-day course syllabus and homework and test schedule on Canvas. You NOW KNOW when we have class and when we do not have class. I expect you to be here on all days that we have class.

3. Be on time to class and remain until dismissed. Do not leave in the middle of class.

Inclement Weather Policy: The University of Kentucky Severe Weather Policy can be found at http://www.uky.edu/PR/News/severe_weather.htm. The UK Infoline at (859) 257-5684, UK TV Cable Channel 16 and 19, or the UK Web site at www.uky.edu are the best places to find the most up-to-date situation. In the event that we have inclement weather but the University does not close or cancel classes, and I have to cancel the class, a message to that effect will be left on my voicemail (859-257-1258) and I will email every member of the class (if I have access to email).

If you feel that travel during inclement weather would be hazardous, then try to inform me as soon as safely possible. You will be given the opportunity to make up any work missed or due on that day. As always, each student is responsible for any work missed and will be expected to get the notes from another student or from the web.