

**MA 137: Calculus I for the Life Sciences,
Spring Semester 2017
Time: MWF 11:00-11:50 AM
Location: Room CB 110**

General information

Instructor: David Murrugarra
Email: murrugarra@uky.edu
Website: <http://www.math.uky.edu/~ma137/>
Phone: (859) 257-4734
Office: 771 Patterson Office Tower
Office hours: (subject to change!) MW 10:00 - 11:00 AM and by appointment
Text: *Calculus for Biology and Medicine (3rd edition)*,
by C. Neuhauser. ISBN 978-0-321-64468-8.
Note: I will post course material on Canvas.

Recitations

All recitations meet TR. You must attend the correct recitation section. The locations and meeting times are,

- Section 1, TR 8:00 AM-8:50 AM, Room CB 341.
- Section 2, TR 9:00 AM-9:50 AM, Room CB 341.
- Section 3, TR 1:00 PM-1:50 PM, Room CB 341.
- Section 4, TR 2:00 PM-2:50 PM, Room CB 341.

Teaching Assistants

- Aida Maraj. Office: POT 718, (859) 257-6816. Email: aida.maraj@uky.edu.
Sections 1 and 2.
Office hours: TR 10:00-11:00 am; Friday, 2:00-3:00 pm in the Mathskeller, and by appointment.
- Susanna Lange. Office: POT 702, (859) 257-6804. Email: susanna.lange@uky.edu.
Sections 3 and 4.
Office hours: Tuesday/Thursday 10-11 am (POT 722), Tuesday 9-10 am (Mathskeller), and by appointment.

Course Description for MA 137 (4 credits)

A first course in one-variable calculus. Derivatives and integrals of elementary functions (including trigonometric functions) with applications to the life sciences. Lecture, three hours; recitation, 2 hours per week. Students may not receive credit for MA 113 and MA 137.

Prerequisite

Math ACT of 27 or above, or math SAT of 620 or above, or a grade of C or better in MA 109 and MA 112, or a grade of C or better in MA 110, or appropriate scores on math placement test, or consent of the department. Students who enroll in MA 137 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.

Note: Math placement test recommended. [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>.]

Student Learning Outcomes:

After completing this course, students will be able to:

- apply the methods of calculus in new contexts to solve unfamiliar problems;
- compute fluently;
- write correct justifications for their solutions to problems.

Grading Policy

Final grades will be determined by the following distribution:

	Points	Percent
Homework	40	8%
Quizzes/Attendance	40	8%
Final project	20	4%
Tests	300	60% (20% each)
Final exam	100	20%
Total	500	100%

Grading Scale

Final grades: In general, a 10 point scale is used.

Grade	Points	Percent
A	450-500	90%-100%
B	400-449.9	80%-89.9%
C	350-399.9	70%-79.9%
D	300-349.9	60%-69.9%
E	0-299.9	0%-59.9%

Tests

There will be three tests during the term, each counting 20% of the final grade, i.e., altogether, these three tests will count for 60% of the final grade. Make-up exams will be given only for (1) official representation of the University, and (2) documented medical emergencies requiring hospitalization. Notice of being seen at the Student Health Center is not accepted as documentation. Unexcused absences will result in a zero score.

- **Evening Test 1**, Tuesday, February 7, 5:00-7:00 PM, Room BS 107.
- **Evening Test 2**, Tuesday, March 7, 5:00-7:00 PM, Room BS 107.
- **Evening Test 3**, Tuesday, April 11, 5:00-7:00 PM, Room BS 107.

Final Exam

The final exam will be given on Wednesday, May 3, 8:30-10:30 PM, Room BS 116. This exam will be cumulative and will count for 20% of the final grade.

Homework:

8% of the final grade will be determined by online and written homework. Students are strongly encouraged to collaborate with other students on homework problems but must write up their solutions independently.

- **Web Homework:** Online homework assignments may be found on Webwork. Under exceptional circumstances, students may be granted an extension on homework and will be asked to turn in written homework with complete solutions in lieu of submission on Webwork.
- **Written Homework:** Written homework assignments will be posted on the class website. Homework due dates will be given on the class website. No late homework will be accepted.

Attendance

Attendance is required and class participation is encouraged. Any student who misses a class meeting is responsible for any assignments and/or announcements made. Office hours will not be utilized to re-teach material presented in class. However, questions to better understand the course are always welcome.

- The “Quizzes and Attendance” part of your course grade is computed as follows:

Quizzes	30 points
Recitation attendance	10 points
Total	40 points

- Recitation attendance is based on sign-in sheets each day.
- Excused absences will not be counted against the attendance grade.

Midterm Grade

Your midterm grade will be posted by March 6 and is for your information only (it does not appear on your transcript). It will be computed as follows:

- Exam 1 100 points (100%)

Final Project

As part of the Gen Ed requirements, you are required to submit a final project by the end of the semester (see <http://www.math.uky.edu/~ma137/> for details). Your project paper will be worth at most 20 points. These points will be added to the raw scores (attendance, homework, quizzes, midterms and final grades) that will determine your final letter grade.

Calculators

You may use calculators on the homework and exams. You may not use any machine 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 or laptop computer. Also, you may not use your mobile phone, iPhone or Blackberry on any exam even if you forget your regular calculator. If it runs Android, GEOS, iOS, Linux, MacOS, PalmOS, Ubuntu, Unix, Windows, or similar operating systems, you cannot use it on the exams. Bald answers will receive little or no credit. A bald answer is one that is simply the output of a calculator routine or a single numerical or symbolic expression that has no supporting work.

Excused Absences

Attendance in MA137 is mandatory. Be on time and remain until dismissed. Do not leave in the middle of class. Students need to notify the professor of absences prior to class when possible. Senate Rules 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 reasonable cause for nonattendance 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. Two weeks prior to the absence is reasonable, but should not be given any later. Information regarding major religious holidays may be obtained through the Ombud (859-257-3737, http://www.uky.edu/Ombud/ForStudents_ExcusedAbsences.php).

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

Make-up policies

Per Senate Rule 5.2.4.2, students missing any graded work due to an excused absence are responsible: for informing the Instructor of Record about their excused absence within one week following the period of the excused absence (except where prior notification is required); and for making up the missed work. The professor must give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred.

In particular, if you have university excused absences or have university-scheduled class conflicts with uniform examinations you may arrange with their instructor to take the exam at an alternate time. Generally these make-up exams will be scheduled on the day of or on the day after the regularly scheduled exam. Work-related conflicts are neither university excused absences nor university-scheduled absences.

Verification of Absences

Students may 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 when feasible and in no case more than one week after the absence.

Laptops, cell phones, PDAs

All use of cell phones is prohibited during lectures. Cell phones, laptops, and PDAs will not be allowed during exams.

Student Support

There are two main sources for you to get help. First and foremost are your fellow classmates. I encourage you to work together on your homework as well as studying and learning the material in groups. The second source is your instructor. The instructor holds regularly scheduled office hours, and students are strongly encouraged to drop by for help. Come sooner rather than later. Experience shows that some UK students are reluctant to ask for help as if something they never had to do in high school. Don't fall into this trap. The Mathematics Department wants every student to succeed and we will help you if you make the effort.

Additional Resources

In addition to the textbook, lectures, and office hours there are other resources available that might be of use for you during the course. There is the Mathskeller, CB 063, M-F, 9-5, <http://www.mathskeller.com>.

Academic integrity

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.

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.

Senate Rules 6.3.1 (see <http://www.uky.edu/Faculty/Senate/> for the current set of Senate Rules) 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 a question of plagiarism involving their 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 content from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work (including, but not limited to a published article, a book, a website, computer code, or a paper from a friend) without clear attribution. 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 or information, the student must carefully acknowledge exactly what, where and how he/she has 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.

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

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 (DRC). The DRC coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754 and via email at drc@uky.edu. Their web address is <http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/>.

Accommodations for victims of violence

By federal law, any student who is a victim of dating violence, domestic/intimate partner violence, sexual assault, or stalking (whether on or off campus) is entitled to appropriate accommodations for his or her coursework. To get help getting accommodations and other support, students who are assaulted can do any of the following:

- Tell your instructor who can assist you in accessing resources appropriate to your situation;
- Call the UK VIP Center (Violence Intervention and Prevention Center) at 257-3574 or vipcenter@uky.edu or <http://www.uky.edu/StudentAffairs/VIPCenter/>

about_contact.php; or walk in to the Center in Frazee Hall, lower level, between 8:30 and 5:00;

- Call the University Counseling Center at 257-8701; 2nd floor, Frazee Hall;
- Call Ms. Patty Bender from the UK Institutional Equity and Equal Opportunity at 257-8927 or patty.bender@uky.edu;
- In the case of an emergency, contact the UK Police Department at 911.
- Students may also contact community resources 24-hours a day, including:
 1. Bluegrass Rape Crisis Center at 800.656.4673 or <http://bluegrassrapecrisis.org/>
 2. Greenhouse17 (formerly Bluegrass Domestic Violence Program) at 800.544.2022 or <http://greenhouse17.org/>

Classroom Behavior, Decorum, and Civility

I expect that you will not only attend class, but that you will participate in class. I expect that you will be respectful of yourself and others. Please turn off your cell phones when you enter class. Please do not work on other classes during class. Please do not surf the internet during class. Please do not read the newspaper during class, work on Sudoku, etc. during class. Please do not talk or whisper during lecture unless the instructor has given you the floor. In a classroom it is difficult for other students and the instructor to hear if there are several little conversations taking place at the same time.

The university, college and department has a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right—and the responsibility—to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors. Students who are not respectful, not civil, or disruptive in any way may be asked to leave the class.