Course Title: Elementary Calculus and Its Applications
Course Code: MA 123 - Section 021
Meeting Time: MTWRF, 10:20 AM - 11:20 AM
Classroom: Whitehall Classroom Building, CB 337
Textbook: Calculus, by Elliot Gootman, 1997 ISBN 9780812098198

Instructor: Wesley K. Hough
E-mail: wesley.hough@uky.edu (preferred method of communication)
Office: Patterson Office Tower, POT 706
Office Phone: 859-257-6805
Office Hours: MWF - 11:30 to 12:30. Other times available by appointment.

Overview of Course: MA 123 is an introduction to the main concepts and applications of calculus with emphasis on applications drawn from business, social sciences, and life sciences. Topics include rates of change, limits, tangent lines, derivatives, curve sketching, optimization, related rates, integrals, and the Fundamental Theorem of Calculus. Chapters 1 through 10 and Supplement B of Gootman’s book will be covered.

This course will provide students with the mathematical background needed to pursue the B.A. in Biology, most degree programs in the Gatton College of Business & Economics and the College of Agriculture, and many other degree programs. (MA 123 does NOT satisfy the degree requirements for degrees in Engineering, Physics, Chemistry, Mathematics, or the B.S. in Biology. If you plan on pursuing a degree in one of these areas, talk with an academic advisor immediately to ensure that you enroll in the appropriate calculus sequence.)

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.

UK Core: This course satisfies the Quantitative Foundations requirement of the UK Core General Education program, http://www.uky.edu/GenEd.

Calculator: You will need a scientific or business calculator. At the very least, you will need one that can compute radicals, exponentials, and logarithms. While graphing calculators are allowed, they are not necessary. More affordable calculators, like those in the TI-30X series or the TI-BAII series, will be sufficient. Using the calculator during the test for any reason other than performing the required calculations (for example, to recall a previously stored formula) will be considered cheating. Exam proctors reserve the right to clear the memory on any calculator you bring into the exam room. Note that you will not be allowed to use the calculator on a cell phone or any other communication device.
Grading:

Exam 1 100 points  
Exam 2 100 points  
Exam 3 100 points  
Homework 150 points  
Written Project 1 20 points  
Written Project 2 20 points  
Participation 20 points

Your grade will be based on the following point system:

A  459 - 510  
B  408 - 458  
C  357 - 407  
D  306 - 356  
E  0 - 305

Exams: There will be three exams during the semester. Each will be administered during class meeting times and will likely consist of a mixture of multiple choice and free response questions. The tentative exam dates are:

Exam 1 June 21  
Exam 2 July 12  
Exam 3 August 1

If you have a legitimate university conflict for the day of the exam, you must notify your instructor at least a week before the exam. Alternate exam arrangements will be made on a case-by-case basis. A 10-point penalty may be levied on your exam score if your instructor is not notified of your exam conflict at least a week before the exam.

Written Projects: The first written project will require you to use Microsoft Excel to numerically calculate various limits, and the second project will be related to estimating areas under curves. More specific information will be handed out at appropriate times during the semester. At least one of the two projects will be collected via Blackboard. The tentative due dates for the written projects are:

Project 1 July 1  
Project 2 July 29

Homework: There will be a homework assignment for each chapter of Gootman covered in class. Each assignment will consist of approximately 15 problems and will be graded both for correctness and quality of explanation. You are expected to carefully write out complete solutions, clearly showing and explaining your work. The chapter assignment will be handed out on the day we start the chapter and is due at the start of class on the day we begin the next chapter. Late homework will not be accepted without prior permission. I will drop your lowest homework score when calculating your “Homework” grade for the overall course. The tentative homework due dates are listed on the next page.
Tentative Homework Due Dates

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<tr>
<th>Chapter</th>
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<tr>
<td>Chapter 1</td>
<td>June 11</td>
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<td>Chapter 2</td>
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<td>Chapter 3</td>
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<td>Chapter 5</td>
<td>June 27</td>
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<td>Supplement B</td>
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<td>Chapter 9</td>
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<td>Chapter 10</td>
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**Participation:** Periodically, I will ask for student volunteers to present problems at the board. Each student is expected to volunteer at least three times during the semester. Doing so will earn the student a full 20-point participation grade. Additional presentations may contribute to your final grade in the form of extra credit.

**Attendance and Absences:** Class meets every weekday between June 6 and August 1, except for the University holiday on July 4. I expect that not only will you attend class, but that you come prepared each day to actively participate. At the absolute minimum, this means having completed the assigned reading. That being said, there will be no attendance grade. You have the authority to decide whether or not to attend class, and you will neither gain nor lose points for your choice. However, I tend to more readily assist students who attend class on a regular basis as compared to those who attend only sparingly. Be advised that an ever-growing mountain of research confirms that classroom attendance positively correlates with academic success.

University Senate Rule 5.2.4.2 defines the following as acceptable reasons for excused absences:

1. serious illness;
2. illness or death of family member;
3. University-related trips;
4. major religious holidays;
5. other circumstances your instructor finds to be “reasonable cause for nonattendance.”

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 for adding a class (Friday, June 7). It is almost always possible to notify your instructor of an excused absence before class. Students who have excused absences due to University-related trips or major religious holidays must inform the instructor prior to the absence and must complete all work prior to the absence. Students who are ill must inform the instructor of their absence(s) as soon as they return to class, and they must provide documentation to demonstrate that the absence(s) was/were excused. Students who have excused absences due to illness or the death of a family member will be allowed to make up any missed work in a timely manner. These arrangements must be made with the instructor on a case-by-case basis. Documentation for illness or death of a family member must be provided with one week of returning to classes.
Academic Integrity, Cheating, and Plagiarism: You should feel free to study with friends and classmates, but any work you submit for a grade should be your own work. This applies to all exams, quizzes, and writing assignments, with the exception of assignments that are specifically designated as group assignments. Academic dishonesty, in any form, will not be tolerated. This includes, but is not limited to, copying a classmate’s work, allowing a classmate to copy your work, modifying an exam after it has been handed back in an attempt to deceive the instructor into believing the assignment was graded incorrectly, using a cell phone during an exam, etc. A student found guilty of academic dishonesty will receive an automatic E on the assignment, and in some cases the offense may lead to an E for the course, academic suspension, or even expulsion. See sections 6.3.1 and 6.3.2 at www.uky.edu/StudentAffairs/Code/part2.html for more information regarding academic integrity.

Help and Conflicts: If you ever find yourself in need of extra course help, feel free to visit me during my office hours or contact me for an appointment. In the event that you disagree with one of my decisions and feel that outside intervention is necessary to resolve the conflict, the first person to contact is the summer coordinator, Dr. Jay Hineman (POT 827, 859-257-5746).

Disability Accommodations: If you have a documented disability that requires academic accommodations, please see me as soon as possible during office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 859-227-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Personal Conduct: While class is relatively informal, I ask that you exhibit common courtesy toward me and your fellow students and that you refrain from disruptive behavior. It is unnecessary to use any electronic device other than a calculator during class.

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 disrespectful, not civil, or disruptive in any way may be asked to leave the class.

Important Dates: Please mark the following on your calendar:

• June 7: Last day to add a course
• June 17: Last day to drop a course without it appearing on a student’s transcript
• June 21: Exam 1
• July 4: Independence Day, No Class
• July 10: Last day to withdraw from a course
• July 12: Exam 2
• August 1: Exam 3