

**MA 111: Intro to Contemporary Mathematics, Section 005**  
College of Arts & Sciences (A&S)  
Department of Mathematics (MA)  
Spring 2012

*Please read this syllabus carefully. It contains essential information about the course organization, grading, tests, etc. If you need any additional explanation, please don't hesitate to ask your instructor.*

**Instructor Information:**

*Instructor:* Paul Koester

*Office:* Patterson Office Tower 705

*Phone:* 257-1122

*Email:* paulhkoester@uky.edu (preferred contact method)

*Office Hours:* Monday, 1:00 pm–2:30 pm, Mathskeller, CB 063

Wednesday, 1:00 pm–2:00 pm, POT 705

Other times available by appointment

**Class Time and Location:** MWF, 12:00 pm - 12:50 pm, SRB 303

**Course Web Page:** <http://www.ms.uky.edu/~pkoester/teaching/MA111>

**Blackboard:** This course will use the UK Blackboard site for some components. You can access the Blackboard sites for your course(s) from the following website, using your LinkBlue account:  
<http://elearning.uky.edu>.

**Homework Web Page:** The online homework assignments, and other resources from the textbook publisher, will be accessed through the Pearson website <http://PearsonMyLabAndMastering.com>. In order to access the homework assignments for your section, follow the directions provided in your textbook. You will need a valid email address, the MyMathLab Course ID provided by your instructor, and the student access code, which should have come packaged with your textbook. If you purchased a used textbook, then you will have to purchase a student access code separately from this website using a credit card.

**The MyMathLab Course ID for MA111 Section 005 is koester45714.**

**Required Course Materials:**

*Textbook:* *Excursions in Modern Mathematics for the University of Kentucky with MyMathLab*, Peter Tannenbaum, Pearson, ISBN: 1-256-30145-0.

*Calculator:* For part of the course you will need a scientific calculator. 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 a test for any reason other than performing the required calculations (for example, to recall a previously stored formula) will be considered cheating. Note that you will not be allowed to use the calculator on a cell phone, or any other communication device.

**Overview of the Course:** An introduction to concepts and applications of mathematics, with examples drawn from such areas as voting methods, consumer finance, graph theory, number theory, geometry, topology, and game theory. This course is not available for credit to persons who have received credit in any mathematics course of a higher number with the exceptions of MA 112, 123, 162, 201 and 202. This course does not serve as a prerequisite for any calculus course. Credit not available on the basis of special examination. Prereq: Two years of high school algebra and a Math ACTE score of 19 or above, or MA 108R, or math placement test.

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

**Course Goals:**

- To expose students to a variety of mathematical topics, many of which they would never see in a traditional Algebra class.
- To encourage students to persist in solving problems.
- To develop students who can appreciate the beauty of mathematics.
- To develop students who recognize the value of mathematics in solving a variety of fun and practical problems.

**Student Learning Outcomes:** This course will be an introduction to some modern mathematical methods in application to real life problems. It is expected that by the end of the semester, students will acquire an informal understanding of a variety of new mathematical methods and will be able to appreciate their power and beauty. Students will demonstrate proficiency with number sense and with functional relationships, apply fundamental elements of mathematical knowledge to model and solve problems drawn from real life.

**Course Content:** We will begin the semester by investigating methods for determining the outcome of elections, and compare them according to various fairness criteria (Chapter 1). Then we will turn to matters of money; in particular, the fundamental elements surrounding interest, loans and credit cards, and saving money (Chapter 10). The third unit of the course will focus on a topic with both practical and recreational aspects—navigating through graphs (networks) (Chapter 5). In the fourth unit we will see how to use mathematical principles to analyze the beauty of symmetry—natural and human-made (Chapter 11). Finally, we end the course with an analysis of methods of fairly dividing resources among several people (Chapter 3).

**Grading:**

Participation and in-class work	15%
Written homework	15%
Web homework	20%
Exam 1	12.5%
Exam 2	12.5%
Exam 3	12.5%
Exam 4	12.5%

Your grade will be based on the following percentages (rounded to the nearest whole percent):

A	90%-100%
B	80%-89%
C	70%-79%
D	60%-69%
E	0%-59%

**Participation and in-class work:** This portion of your grade will be earned by completing in-class worksheets, taking quizzes, and actively participating in the lesson. You will usually be allowed (and encouraged) to work in groups on the in-class worksheets. Quizzes will usually be given without warning. Sometimes they will be given at the beginning of the class, other times near the end.

If you are late to class, if you leave class early, if you are disruptive, if you are sleeping, reading the newspaper, surfing the internet, texting, working on other homework, or for any other reason are not actively engaged in activities related to this class, you will lose participation points for that day.

**Homework:** You will have both online homework assignments through MyMathLab and written assignments. You should check MyMathLab on a regular basis to see when new assignments have been posted. You should check <http://www.ms.uky.edu/~pkoster/teaching/MA111> on a daily basis for announcements concerning written assignments. Generally, web homework assignments will be given frequently (1 to 3 times per week) whereas written assignments will be given less often. Web homework assignments will usually test your knowledge and understanding of basic ideas, whereas the written assignments will help you develop a deeper understanding of the material.

**Exams:** We will have three midterm exams and one final exam. The four midterm exams will be given during class. The final exam will be given on Wednesday, May 2, 1-3 pm, in our regular room. The final exam is not cumulative.

**Course Help:** If you find that you need help in the course, see your instructor right away—take advantage of his/her office hours or ask to schedule an appointment. Also, faculty members, graduate students, and undergraduate students are available to answer questions in the Mathskeller, CB 063, M–F, 9–5, <http://www.mathskeller.com>.

**Excused Absences:** 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. 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 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.

**Academic Integrity, Cheating, and Plagiarism:** You should feel free to study with friends, 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 any assignment that is specifically designated as a group assignment.

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. 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 probation, or even expulsion. See sections 6.3.1 and 6.3.2 at [www.uky.edu/StudentAffairs/Code/part2.html](http://www.uky.edu/StudentAffairs/Code/part2.html) for more information regarding academic integrity.

**Disability Accommodations:** If you have 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 (Room 2, Alumni Gym, 859 257 2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

**Suggestions:** Constructive suggestions for this course are welcome at any time. I welcome suggestions that will improve the course both this semester and in semesters to come. If you have any concerns, please bring them to my attention first. Further recourse is available through the office of the Department Ombud and the Department Chair. Both the Ombud and the Chair can be reached from the main office in POT 719.

**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.

**Important Dates:**

The following is a list of important dates for the Fall 2011 semester:

- Wednesday, January 11 First day of classes
- Monday, January 16 Martin Luther King Birthday (no classes)
- Wednesday, January 18 Last day to add a class
- Wednesday, February 1 Last day to drop a class without receiving a grade
- Saturday, March 10 - Sunday, March 18 Spring break (academic holiday)
- Friday, April 6 Last day to withdraw from a class
- Friday, April 27 Last day of classes