

MA 111: Intro to Contemporary Mathematics, Section 010

College of Arts & Sciences (A&S)

Department of Mathematics (MA)

Fall 2011

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: Brad Fox

Office: Patterson Office Tower 902

Email: norman.fox@uky.edu

Office Hours: Monday, 2:00 pm-3:00 pm, Mathskeller, CB 063

Tuesday, 12:30 pm-1:30 pm, POT 902

Wednesday, 1:00 pm-2:00 pm, POT 902

Other times available by appointment

Class Time and Location: TTh, 11:00 am - 12:15 pm, FB 213

Course Web Page: <http://www.ms.uky.edu/~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: 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, which is **fox13185**, 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. It may also be possible for you to purchase an access kit from the bookstore.

Required Course Materials:

Textbook: *Excursions in Modern Mathematics for the University of Kentucky with MyMathLab*, Peter Tannenbaum, Pearson, ISBN: 1-256-30145-0. (The Course ID will be provided to you by your instructor.)

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.

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. Then we will turn to matters of money; in particular, the fundamental elements surrounding interest, loans and credit cards, and saving money. The third unit of the course will focus on a topic with both practical and recreational aspects—navigating through graphs (networks). In the fourth unit we will see how to use mathematical principles to analyze the beauty of symmetry—natural and human-made. Finally, we end the course with an analysis of methods of fairly dividing resources among several people.

Grading:

Attendance and Participation	5%
Quizzes	10%
Homework	30%
Project	5%
Exam 1	10%
Exam 2	10%
Exam 3	10%
Exam 4	10%
Final Exam	10%

Your grade will be based on the following percentages:

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

Attendance and Class Participation: The Attendance and Class Participation portion of your grade will be calculated as follows: Each student will be allowed to miss up to two classes without an excuse, but any further absences will deduct their attendance score. Any excused absence (as described below) will not negatively affect your attendance grade.

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 may not receive credit for attending class that day.

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”.

If you miss class due to a religious holiday or University-related trip, you must email me at least 1 week in advance in order to receive an excuse for that absence, and you are encouraged to complete any work you miss prior to the absence. If you miss due to illness or family death, you must email me within 2 calendar days of the absence to notify me as well as provide a written documentation when returning to class in order to be counted as excused. You will be allowed to make up any work you’ve missed in a timely manner.

Quizzes: There will be frequent in-class quizzes, but not necessarily given on the same day each week. These should be short 5 to 10 minute quizzes given at the end of class, with 1 or 2 given per week with the possible exception of test weeks. They will be worth 5 points each and graded for correctness, and your lowest quiz score (including a 0 if you miss that class without an excuse) will be dropped. Alternate activities including group work may also be counted as a quiz as well.

Homework: You will have both online homework assignments through MyMathLab and written assignments. All written assignments will be posted as announcements in Blackboard. You need to check Blackboard sometime after 5pm each day after class for new online and written assignments. You can access the Blackboard site for your course(s) here: <http://elearning.uky.edu>.

Project: A description of the requirements of the project will be provided by the instructor later in the semester, at least 2 weeks prior to the due date.

Exams: We will have four midterm exams and one final exam. The four midterm exams will be given during class. The final exam will be given on Friday 12/16 at 10:30 in our normal classroom. 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 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>. As a warning, tutors in the Study may not be able to help with some of the material in MA 111, so you are encouraged to use the Mathskeller or office hours as your first resources for receiving help.

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 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, and if you feel that this is necessary, first contact one of the course coordinators Dr. Carl Lee, lee@ms.uky.edu or Dr. John Maki, john.maki@uky.edu.

Classroom Behavior, Decorum, and Civility: I expect that you not only attend class, but also participate in class when asked to. Also, use common courtesy and refrain from any disruptive behavior in class. No electronic devices, other than calculators, are to be used during class.