

Instructor: Elizabeth Weaver
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Office hours: M 1-2 PM in Mathskeller
WF 1-2PM in POT802
Or by appointment

Website: <http://www.ms.uky.edu/~eweaver>

Meeting times: Sec: 010 MWF 10:00 – 10:50am, CB 243
Sec: 011 MWF 12:00 – 12:50pm, CB 243

Course Description: This course explores mathematical methods in a series of applied areas, such as the mathematics of voting, management, population growth, and finance. The course is not available to persons who have received credit in any mathematics course of a higher number with the exception of MA112, MA123, MA162, MA201, and MA202. The course does not serve as a prerequisite for any calculus course.

Prerequisites: Two years of high school algebra and a Math ACTE score of 19 and above, or MA 108R, or math placement test.

Text: We will be using the book *Excursions in Modern Mathematics* by Peter Tannenbaum (second custom edition for the University of Kentucky) published by Pearson Education, Ltd.

Expected Course Outcomes: For most of the students, 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, the students will acquire an informal understanding of a variety of new mathematical methods and will be able to appreciate their power and beauty.

Attendance: Students are expected to attend each lecture and to be active in class discussion. It will count as 5% of your final grade. Your attendance score will be calculated by taking the number of classes in which you participated divided by the total number of classes in the semester. If you are late to class, leave class early, are disruptive, are sleeping, are reading the newspaper, are working on other homework, or for any other reason are not actively engaged in activities related to this class, you will not receive credit for participating in class that day. Absences can be excused if they are University excused and documentation is provided within one week of your return to class.

Homework: There will be regularly assigned homework which will make up 20% of your final grade. Your homework score will be the total number of points you receive on your homework out of the total number of possible homework points. Homework should include all relevant work and be neatly written up using sentences where necessary. Make sure that your work is organized, neatly presented, stapled, and free of any jagged edges (i.e. edges created by tearing paper from a notebook). Failure to submit neat work may result in deductions. I encourage you work in groups but be sure to write up your own solution to each problem. Do not just copy what someone else has written down.

Late homework: Assignments are due at the beginning of class. If an emergency or unexpected absence prevents you from turning in the assignment on time, please see me to request permission to turn in the assignment late. If you have a scheduled absence (travel or authorized University absence) you should arrange to turn in your paper before leaving school. Unexcused and late submissions will be penalized 10% if the paper is turned in late on the due date and an additional 20% for each day that it is late.

Exams: All exams will be closed book and closed notebook unless otherwise specified. Makeup exams will only be administered for a University excused absence with appropriate documentation. If you know you are going to miss an exam for a university excused reason, you must let me know a week prior to the test, this way we can set up a make up exam date that is both fair and reasonable. The dates and material to be covered are as follows (these details are subject to change):

Exam 1: September 30, 2009: Chapters 1 and 2
Exam 2: November 4, 2009: Chapters 5 and 6
Final Exam: Chapters 9 and 3
010: Monday, December 14, 2009: 8-10 am,
011: Friday, December 18, 2009: 10:30am - 12:30 pm

Grading: We will be using a standard 10-point scale 90-100% for an A, 80-89% for a B, etc. Your grade will be based on the following components:

Exam 1:	25%
Exam 2:	25%
Final Exam:	25%
Attendance:	5%
Homework:	20%

Tentative Schedule:

Aug. 26-Sep.9: Mathematics of Voting
Sep.11-Sep. 23: Weighted Voting Systems
Oct.2-Oct.14: Euler Circuits
Oct. 16-Oct.28: The Traveling Salesman Problem
Nov. 6-Nov. 18: The Spiral Growth in Nature
Nov. 20-Dec. 7: The Mathematics of Sharing

Important Dates:

Last day to add: Sep.1
Last day to drop: Sep. 16
Last day to withdraw: Nov. 6
Labor Day (no classes): Sep. 7
Thanksgiving Break: Nov. 25-27

Academic Integrity: The minimum penalty for cheating is a grade of 0 on the assignment. While working together is helpful in the learning process, directly copying answers from another student is considered cheating.

Calculators: There will be no graphing calculators allowed on exams. For most exams students will be allowed to use a scientific calculator; however there may be exams where calculators are not permitted. If there is an exam where calculators are not permitted, it will be announced in advance of the exam. 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.

Final Thoughts: I encourage you email me, and meet with me when you have questions and concerns. I am here to help you, and I welcome any constructive feedback you may have for me. If you are struggling with the course, please come and talk to me as soon as possible. Be sure not to put this off until the end of the semester, as it is often too late to change the outcome of your grade by then. If outside intervention is necessary, contact the course coordinator, Dr. Serge Ochanine (POT837, 257-8837, ochanine@ms.uky.edu). I also encourage you to use the resources on campus, such as the Mathskeller, and work in groups outside of class. Just make sure that the ideas of the course are understood by every individual in the group, as they are important for the exams.

Good luck and have a great semester!