

Course Syllabus  
MAT 107–Excursions in Mathematics  
Sections A, B, C  
Spring 2015  
Dr. John Peter

**Course Description:** MAT 107 is an introduction to a number of mathematical topics in social science, management science, arts and nature. We will study the theory of voting (Chapters 1 through 3), the mathematics of money (Chapter 10), and symmetries and patterns that appear in nature. The course will be example-driven. In particular, you should leave this course with more than one answer to the question “When am I ever going to have to know this stuff?!”.

**Course Learning Goals:**

- In accordance with the Program Learning Goals of the Mathematics Department, this course will assess the student’s ability to formulate and solve mathematical problems, as well as the student’s ability to communicate mathematics in written form.
- The student should become aware of the important role that mathematics plays in many practical situations and be able to give several relevant examples.
- *Social Science:* The student should:
  - Understand a variety of methods that can be used to determine the outcome of an election, along with criteria for determining the validity of each method.
  - Understand the ways in which power can be distributed among voters in an election and be able to accurately determine such power using numerical techniques.
  - Be able to describe and apply several mathematical methods for determining how competing parties can fairly distribute property.
- *Finance:* The student should understand the fundamental mathematics underlying basic borrowing and savings models and be able to apply such mathematics to investigate their own financial situations.
- *Art and Nature:* The student should be able to recognize different types of rigid motions of geometric shapes in order to study patterns and symmetry that appear in both art and nature. The student should also develop an understanding of spiral growth in nature, and how this growth is related to Fibonacci numbers and the Golden Ratio.

**Course Webpage:** (Including a copy of this syllabus, a tentative course schedule, and a link to assigned homework)

[https://www.utica.edu/faculty\\_staff/jpeter/mat107abcs15.cfm](https://www.utica.edu/faculty_staff/jpeter/mat107abcs15.cfm)

**Required Text:** *Excursions in Modern Mathematics*, 8th edition, by Peter Tannenbaum. ISBN: 978-0-321-82573-5

**Class Meetings:**

- **Section A:** Monday, Wednesday, & Friday from 8:30am to 9:20am in 102 Faculty Center
- **Section B:** Monday, Wednesday, & Friday from 9:30am to 10:20am in 102 Faculty Center
- **Section C:** Monday, Wednesday, & Friday from 10:30am to 11:20am in 102 Faculty Center

**Contacting me:** EMAIL: [jwpeter@utica.edu](mailto:jwpeter@utica.edu) (The best way to contact me)  
OFFICE PHONE: 315-792-3730

**Office/Hours:** Room 104 DePerno Hall  
Monday and Friday from 11:45AM to 1:45PM  
*or* By Appointment (made either in person or by email)

**Coursework/Weights:** (See the tentative schedule on the [course webpage](#) for specific dates)

Assessment	% of Final Grade
Homework (Assigned Daily/Never Collected)	0%
Attendance	5%
Weekly Quizzes (Drop Lowest)	20%
Midterm Exam 1 (Feb. 27)	25%
Midterm Exam 2 (April 10)	25%
Final Exam	25%

**Final Exam Dates/Times:** Sec. A: Friday May 8 at 9am  
Sec. B: Monday May 11 at 9am  
Sec. C: Wednesday May 13 at 9am

**NO MAKE-UP WORK WILL BE GIVEN.**

**Grading:** The grading scale will be *no worse* than:

90 – 100% = A/A-      70 – 79% = C+/C/C-      Below 60% = F  
80 – 89% = B+/B/B-      60 – 69% = D+/D

**Secrets to success in this course:**

- Do lots of problems . . . assigned homework and more!
- Come to class
- Read the book
- ASK QUESTIONS!

**Calculators:** For some of the material that we cover, you will need a scientific calculator. Approved calculators are allowed to be used on quizzes and tests. Devices that DO NOT COUNT as a calculator include (but are not limited to) your cell phone, ipod, laptop, or any other similar contraption that functions as anything other than a calculator. Any device that can access the internet and/or send and receive text messages is specifically prohibited. If you are unsure of whether your calculator is appropriate, or if you would like a recommendation, see me right away!

**Attendance:** It is mandatory that I keep track of your attendance. An attendance sheet will be available for you to sign at the beginning of each class. YOU ARE EXPECTED TO ATTEND EVERY CLASS PERIOD. In the event that you miss class (or are mentally absent from class!) it is your responsibility to keep up with all announcements, syllabus adjustments, and/or policy changes made during scheduled class time and/or sent to you via your Utica College email. Please make sure that your Utica College email is functioning properly, and make every effort to contact me using your Utica College email address (that is, be sure to use the address ending in “@utica.edu”) to avoid confusion. If class must be canceled for some reason, you will be notified as early as possible via your Utica College email.

**Classroom Etiquette:** Always keep in mind that you are in a college classroom. You and all of the people around you have paid to be here. By simply showing up for class, you are demonstrating that you take very seriously the opportunity to pursue the best learning experience possible. You are expected to treat all people in the classroom with respect, and to come to class prepared to learn. **Disruptive behavior, including (but not limited to) talking, whispering, texting, eating**

loudly, etc. will negatively impact EVERYONE'S experience and will not be tolerated.

**Intellectual Honesty:** Academic honesty is necessary for the free exchange of ideas and Utica College expects academic honesty from all students. Academic dishonesty includes both *cheating* and *plagiarism*. Plagiarism is the intentional or unintentional use of other people's ideas, words, and/or factual information without crediting the source. Cheating refers to both the giving and the receiving of unauthorized assistance in the taking of examinations or in the creation of assigned and/or graded class work. Utica College faculty are authorized to assign a wide range of academic penalties for incidents of academic dishonesty. Depending on the nature of the offense, the penalty may include a reduced grade for the particular assignment or course, a grade of "F" for the course, or the grade of "F for cheating" for the course. Incidents of academic dishonesty will be reported to the Vice President for Academic Affairs, who will refer any repeat offense, or any particularly egregious first offense, to the Academic Standards Committee, which may recommend a more severe penalty than that imposed by the faculty member.

**Disability Disclosure:** Any student who has need of special accommodations in this class due to a documented disability should speak with me as soon as possible, preferably within the first two weeks of class. You should also contact Kateri Henkel, Director of Learning Services in the Academic Support Services Center (315-792-3032 or khenkel@utica.edu) in order to determine eligibility for services and to receive an accommodation letter. We will work with you to help you in your efforts to master the course content in an effective and appropriate way.

**Writing Proficiency:** Students are expected to possess and use adequate writing skills. All written assignments should be well-written and free of grammar, punctuation, and spelling errors. Help is available in the Writing Center located in the library.

**Math and Science Center:** Peer tutors are available in the Math and Science Center located on the first floor of the library. These services are typically available beginning in the second week of a Fall/Spring semester.

*The author of this syllabus reserves the right to change it at any time during the semester.*