

Course Syllabus
MAT 300-Topology
Spring 2013
John Peter

Course Description: This course will cover basic point-set topology with a focus on developing material relevant to the study of algebraic topology. This is a course in pure mathematics.

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 read, write, and analyze mathematical proofs. This course will also assess the student's ability to communicate mathematics both orally and in written form.
- The student should understand the notion of continuity from both intuitive and rigorous points of view.
- The student should know the definition of a topological space, be familiar with several of the standard ways that one can topologize a set, and be able to relate these ideas to their understanding of continuity.
- The student should be able to define and rigorously investigate topological properties such as compactness and connectedness, and be familiar with some of the separation axioms (in particular the Hausdorff property).
- The student should know what a homeomorphism is and be able to determine, in some simple cases, when two spaces are/aren't homeomorphic. The student should also become familiar with product spaces, quotient spaces, and gluing constructions.
- The student should learn the basic definitions of homotopy theory.
- The student should gain a working knowledge of the L^AT_EX software package.

Class Meetings: Tuesday & Thursday from 1:00pm to 2:15pm in 206 Hubbard Hall

Required Text: *Essential Topology* by Martin D. Crossley. ISBN: 1-85233-782-6

Contacting me: EMAIL: jwpeter@utica.edu (The best way to contact me)
OFFICE PHONE: 315-792-3730 (Please don't leave voicemails)

Office/Hours: Room 104 DePerno Hall
Monday from 12:00PM to 1:00PM
Tuesday and Thursday from 11:30AM to 1:00PM
By Appointment (made either in person or by email)

Coursework/Weights: (See attached schedule for dates)

Assessment	% of Final Grade
Weekly Homework	25%
Midterm Exam 1	25%
Midterm Exam 2	25%
Final Exam	25%

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 ... homework and more!
- Come to class
- Read the book
- ASK QUESTIONS!

Format of Final Exam: About three weeks before the final exam date (see the tentative course schedule) you will each choose a topic from a list of topics that I will have prepared. You will be required to 1) Write an introduction to your topic which is accessible to your classmates and includes a number of relevant examples; 2) Solve a number of problems related to the topic (which I will choose for you, once you have a topic); 3) Give a 15 – 20 minute presentation to the class to introduce them to your topic. You must use the L^AT_EX software package to complete steps 1) and 2) above. This software is free, and I will provide you with instructions for downloading it and getting it to run on your machine. (If you don't have a computer, we will work

to have the software installed on one of the school's computers). It is in your best interest to look into L^AT_EX as soon as possible.

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. Your attendance will not formally count for any part of your grade. However, it may be used, at the instructor's discretion, to determine borderline grades at the end of the semester. **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 (as opposed to gmail, yahoo, etc.) 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.

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