
Instructor: Dr. Laura Taalman**E-mail:** taal@math.jmu.edu**Office:** Roop 123**Instant Message:** ask laura math**Phone:** 568-3355**Class Website:** www.math.jmu.edu/~taal/435_2006.html

Class Times

Tuesdays and Thursdays 12:30–1:45 in Burruss 034.

Office Hours

Mondays and Wednesdays 1:00–3:00 in Roop 123. Also available by email, instant message, phone, appointment, and whenever you can catch me.

Required Course Materials

The textbook for this course is *Topology NOW!*, by Robert Messer and Philip Straffin, published by the Mathematical Association of America.

Course Objectives and Expectations

The main objective of this course is to expose you to a wide variety of topological ideas, from both algebraic and point-set perspectives. There is, however, a meta-goal for this course, which is to help you improve your research and presentation skills in both individual and group settings. A C- or better in one of Math 245, 310, 312, or 315 is a prerequisite for this course, and as such I will assume that you are proficient in reading and writing mathematics and in the basics of logic and set theory.

Grades

Your grade for this course will be determined by:

- attendance and participation in class;
- daily group presentations that you and your group members make to the class;
- two 1-hour exams worth 100 points each;
- a 2-hour cumulative final exam worth 200 points; and
- some small pre-defined opportunities for extra credit (see below).

Extra credit opportunities: You will be able to earn extra credit points for attending talks in the colloquium series of the Department of Mathematics and Statistics and handing in short writeups about the talks. Colloquiums are usually held on Mondays, from 3:45–4:45 in Roop G10 (with tea/refreshments available at 3:30). You can also earn extra credit by attending the Shenandoah Undergraduate Mathematics and Statistics (SUMS) Conference at JMU on Saturday, October 28, and by attending the opening reception for the Contemporary Mathematical Photography and New Media exhibit at the New Image Gallery at JMU on Friday, October 27. If you want to take advantage of these extra credit opportunities, set your schedules accordingly.

Structure of Class

The bulk of each class period will consist of student presentations of homework problems. In the last 15 minutes of each class I will give a short preview lecture of the section to be presented the following day.

Homework

Homework will be assigned for each section. It will not be collected; rather, it will be *presented*. Each day's assignment will be split into small group take-home assignments (with some overlap between groups). Each group will be responsible for 3 or 4 problems to present in the following class period. However, every student in the class is responsible for doing every assigned homework problem – to encourage this, I will write the tests and the final exam so that at least 80% of the problems are very similar to those in the assigned homework. See the class website for homework postings throughout the semester.

Group Work

Each class day, I will choose groups and group members randomly to present homework problems in class. It is the responsibility of the entire group that *everyone* in the group is capable of presenting *all* of the problems the group has been assigned. You will be graded not only on your own presentations, but also on the presentations of your group members. Sometimes your role in the group will be collaborative, where you and the other group members all work together to solve a problem. Sometimes you will be a learner, where other group members will help you get through a problem for which they can already see the answer. Other times, you will be the teacher in your group, explaining a problem to other group members so that they will be able to understand the problem well enough to make a good presentation. If any member of the group cannot clearly present a solution to the problem, then the entire group is responsible. Having said that, please come to me immediately if you are having trouble with a group member or if you wish to switch groups. I will do my best to handle all group issues confidentially and tactfully.

Presentations

Some of you have previously been my students in Math 245. You may remember that in those classes, the presentations were often works-in-progress, where students at the board would regularly get stuck and be able to ask myself or the class for assistance. This is very appropriate in a “bridge course” such as Math 245, but it is not appropriate for this course. Each group is responsible for only few problems for presentation the next day. It is expected that your presentations will be clear and well thought-out, with not only mathematical correctness but also care to make sure that the rest of the class understands the solution being presented. You may even want to spend some of your group work time rehearsing how you plan to present the problem. A few presentation pointers: Don’t stand in front of what you are writing on the board. Talk to the class and not to the board. Be as descriptive as possible; avoid words and phrases like “it” or “now do this.” Be prepared to answer questions from class members and from myself during your presentation. And don’t be nervous. We will strive for a friendly, interactive, noncompetitive atmosphere in class.

Attendance

You are expected to attend every class. You also are expected to be on time to class, and to stay for the entire class period. I will not allow students to regularly come late or leave early, even if they have courses on the other side of campus before/after class. (You are supposed to set your schedule so that you have enough time to travel between classes.) Be sure that you do not miss more than one or two days of class, or your participation grade could be seriously affected.

W/WP/WF Policy:

Please note that the last day to drop a class with a W is on Thursday, October 26. After that time it is my policy to offer grades of WP or WF if requested, up until Thursday, November 9. After that date, no W-type grades will be given in my classes. I only give grades of WP to students with a C- or better. I don’t bend on these rules and deadlines, so make a note of these dates now!