M531 Topology – Fall 2018

Instructor information:

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Course overview:

This class covers the fundamentals of topology. We'll study things like cardinality, bases for a topology, Hausdorff spaces, compactness, continuity, etc.

This course will be taught in the "IBL" style (inquiry based learning). The idea is that, rather than reading and repeating proofs written by others, you will develop your own arguments to establish the theorems. In this way, you will "take ownership of the theorems." We will not use a textbook. Instead, I will give you definitions along with theorems which need proofs. You and your classmates will present your proofs in class. This approach is traditional for a first course in topology. Of course proofs for these theorems can be found in topology textbooks, so, for this reason, students are not allowed to use any resources beyond the notes provided in class, other students in the class and the instructor.

Homework, Presentations and Expectations:

Each week I will give you a list of theorems and exercises to work on. In class, I will ask you to present your work on this list. Your grade will be based on these presentations as well as on a notebook in which you will keep nice proofs of all theorems and exercises. Working together on these problems is allowed, using outside sources (eg. books or internet) is not.
I expect you to be an active participant in the course, even when you are not presenting. Please speak up if you have questions, a criticism, or suggestions for your peers. Of paramount importance is that we maintain a polite and supportive environment. Participation is a critical part of this course and your attendance is required.

Presentations will be given on a volunteer basis as long as there is equal distribution among all students. When the distribution becomes unequal, I will assign problems to be presented with little or no notice. Homework notebooks will be turned in every other Friday.

Presentation grading rubric:

Completely correct and clear proof/solution. 4 points.
Minor technical errors or lacking minor details. 3 points.
Partial explanation/proof is given but significant gap remains. 2 points.
Minimal progress. 1 point.
No preparation is evident. 0 points.

Homework grading rubric:

Correct and easy to read and understand. 4 points.
Good work but some mathematical errors or writing errors that need addressing. 3 points.
Some good intuition, but there is at least one serious flaw. 2 points.
I don't understand this, but I see that you did work on it. 1 point.
No work is evident. 0 points.

University Dates and Deadlines

You should be aware of the important dates and deadlines posted by the Registrar's Office.

Academic Honesty

I take academic honesty very seriously and I will act on any transgressions that I notice. Misconduct is subject to an academic penalty in this course and/or a disciplinary sanction by the university.

Student Conduct Code

All students should be familiar with the *Student Conduct Code*
(http://www.umt.edu/vpsa/policies/student_conduct.php)

Disability modifications

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.