Math 501: Topology, Spring 2019
Tues/Thurs 2:30-3:45  Hume 331

Instructor:  Samuel Lisi
Office Hours:  Hume 318, 9 am – 11 am, Tues/Thurs
Also available by appointment.
Email:  stlisi@olemiss.edu

Course description:
This class is an introduction to general topology (also called point–set topology). We will cover the basic topics of general topology, with a main focus on the three core notions of completeness, connectedness and compactness. At the end of the course, we will briefly touch on some basic notions from algebraic topology, notably the fundamental group.

The topics covered will be primarily from Chapters 2 to 4 of Munkres’s book. Additional materials will be provided from time to time on Blackboard or in class.

The prerequisite of the course is familiarity with the structure of mathematical proofs, elementary set theory, elementary logic and functions (e.g. as covered in Math 305). It is helpful, though not absolutely necessary, to have seen examples of convergence in other contexts (e.g. as would have been studied in 261, 263, 555 or 556).

Course objectives:
The student will learn the language and concepts of point–set topology, which have proved to be fundamental in many branches of modern mathematics. The course will provide the student with an overarching framework to unify the ideas of closeness and convergence that they have seen or will see in other contexts.

The student will also strengthen their skill at structuring and writing mathematical proofs.

Finally, the student will learn the usefulness of abstraction and generalization as a means of solving concrete problems.

Graduate credit expectations:
Students enrolled for graduate credit will be expected to show greater rigor in their proofs and exposition, and will be assigned more homework and given slightly longer tests.

Assessment:
The course grade will be based on the following items:

- Three midterm tests, held during class time. Together, they will count for 50 % of the course grade. The lowest test grade will be replaced by the final exam grade, if it is higher.
  Tentatively, they will be held on February 21st, March 28th, and April 25th (Thursdays).
- Comprehensive Final Exam — 35 % of grade. (Tuesday, May 7th, 4 PM.)
- Homework and class work — 15 % of the course grade.
**Homework and in–class work:**
Homework will be assigned regularly (roughly weekly) and collected. Some problems will be graded on a completion/no completion basis, other problems will be graded in detail.

In–class work will also be assigned, either as individual work or work done in groups. Some of this will be submitted for a grade.

There will also be suggested problems, usually mentioned in class. These will not be graded, but have a good chance of appearing on a later test. Solutions to these will be provided in office hours upon request.

**Course Grade:**

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93 - 100 %</td>
<td>A</td>
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<tr>
<td>90 - 92.9 %</td>
<td>A-</td>
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<tr>
<td>87 - 89.9 %</td>
<td>B+</td>
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<tr>
<td>83 - 86.9 %</td>
<td>B</td>
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<tr>
<td>80 - 82.9 %</td>
<td>B-</td>
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<td>77 - 79.9 %</td>
<td>C+</td>
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<td>70 - 76.9 %</td>
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<td>60 - 69.9 %</td>
<td>D</td>
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<tr>
<td>0 - 59.9 %</td>
<td>F</td>
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**Disability Access and Inclusion:**
The University of Mississippi is committed to the creation of inclusive learning environments for all students. If there are aspects of the instruction or design of this course that result in barriers to your full inclusion and participation, or to accurate assessment of your achievement, please contact the course instructor as soon as possible. Barriers may include, but are not necessarily limited to, timed exams and in-class assignments, difficulty with the acquisition of lecture content, inaccessible web content, and the use of non-captioned or non-transcribed video and audio files. If you are approved through SDS, you must log in to your Rebel Access portal at [https://sds.olemiss.edu](https://sds.olemiss.edu) to request approved accommodations. If you are NOT approved through SDS, you must contact Student Disability Services at 662-915-7128 so the office can: 1. determine your eligibility for accommodations, 2. disseminate to your instructors a Faculty Notification Letter, 3. facilitate the removal of barriers, and 4. ensure you have equal access to the same opportunities for success that are available to all students.

It is the responsibility of any student who has a testing accommodation to schedule the tests with the office of SDS. (Note that this is a recent change.)

**Blackboard:** Course materials and other information will be posted to Blackboard.

**Attendance, cheating and deadlines:**
Attendance is mandatory but will not be checked. Any student who must miss a scheduled exam because of an official university function must reschedule with the instructor to take the exam at a time before the exam is scheduled to be given. No other rescheduling is allowed. Missed work cannot be made up, and a grade of 0 will be assigned. If the student misses the work for a justified reason, the final exam grade will be used to replace the grade of the missing work.

Cheating on any exam, quiz, homework, work to be completed in class; theft, or attempted theft of exam questions; or possession of exam questions prior to the time for examination shall all be offenses subject to appropriate penalties.

The course withdrawal deadline is Monday, March 4. After the Course Withdrawal Deadline, courses dropped will be recorded on University records and the W grade will be recorded if the student is not failing the course at the time of withdrawal; otherwise, the grade recorded will be F. After the course withdrawal deadline, a student may drop a course only in cases of extreme and unavoidable emergencies as determined by the academic dean. (Change of major or dissatisfaction with an expected grade are not acceptable reasons.)