

Math 259 - Spring 2020 Exam 2 Information

Exam 2 will ideally take place Wednesday April 8, between the times of 10:50am and 11:40am. More precisely, the exam will become available on Teams at 10:40am, and the link for submission on BlackBoard will be open until 12:10pm. The extra time is a buffer for technological considerations only; once you obtain the exam please allow yourself only 50 minutes to work on the exam, then promptly upload it to BlackBoard. **Please let me know if you have any reason to believe that this time either will not work (if you are not available during class time) or might not work (because your internet connection is spotty) for us to make alternate arrangements.**

The exam will cover roughly Sections 17, 18, 20, 21 and 23 of Munkres's *Topology*, although as this course builds on itself, please expect to use results and concepts from the first part of the course.

Please read these instructions carefully, as not heeding them will constitute a breach of the UVM Code of Academic Integrity:

- You may not use a calculator or any notes or book during the exam.
- You may not access the internet during the exam for any reason, except to download the exam and then later scan and upload your work.
- **The work you present must be your own.**
- Finally, you will more generally be bound by the UVM Code of Academic Integrity, with which you should familiarize yourself if you haven't already.

You will be asked to acknowledge that you have read these instructions as the first question of the exam.

For each problem, you **must** write down all of your work carefully and legibly to receive full credit **and** use theorems and/or mathematical reasoning to support your answer, as appropriate.

Things that could be on Exam 2:

- Any proof or problem that is identical or substantially similar to a problem that was assigned on the Homework sets 7 through 12. All homework solutions are posted on our course website (or will be soon in the case of Homework 11 and 12).
- You may be asked to give any definition we have covered in the part of the class covered by this exam: closed set, the closure of a set, the interior of a set, neighborhood of a point, limit point of a set, Hausdorff space, convergence of a sequence, the limit of a sequence, continuous function, continuous at a point, homeomorphism, metric, metric topology, metrizable, metric space, separation of a space, and connected space.
- You can also use without proof any result from the textbook. In that case, it is not necessary to quote the correct theorem number. In particular, you should be ready to use Theorem 17.1, Theorem 17.2, Theorem 17.3, Theorem 17.4, Theorem 17.5, Theorem 17.6, Corollary 17.7, Theorem 17.8, Theorem 17.10, Theorem 17.11, Theorem 18.1, Theorem 18.2, Theorem 18.3, the characterization of open sets in a metric space, Lemma 20.2, Lemma 21.2, Theorem 21.3, Lemma 21.4, Lemma 23.1, Lemma 23.2, Theorem 23.3, Theorem 23.4, Theorem 23.5, and Theorem 23.6.
- Do brush up on the theorems/lemmas and definitions from Exam 1. While they will not be the focus on the exam, because the material builds on itself it is inevitable that you will need facts about bases, the subspace and product topology, etc.

Note about graduate credit: There will be an extra question for graduate credit. This will count as a required part of the exam for any student taking the course for graduate credit. For anyone not taking the course for graduate credit, the assigned grade will be the maximum of the grade including the question for graduate credit and the grade not including the question for graduate credit.