Math 259 - Spring 2020
Final Exam Information

The Final Exam will ideally take place on Friday May 8, between the times of 10:30am and 1:15pm. More precisely, the exam will become available on Teams at 10:15am, and the link for submission on BlackBoard will be open until 2:00pm. The extra time is a buffer for technological considerations only; once you obtain the exam please allow yourself only 2 hours and 45 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 our scheduled final exam time) or might not work (because your internet connection is spotty) for us to make alternate arrangements.**

The exam is cumulative and will cover all of the material we have seen this semester.

I will have office hours on Teams during finals week. Please refer to your Outlook calendar or this course page for the schedule when it is finalized. During the office hours, I will be present in the Teams meeting to answer questions. You can submit questions by unmuting yourself and asking, by typing in the chat, or you can email me questions in advance with a time when you would like me to answer them. Office hours will be recorded and posted to our Teams page. You can drop in in the middle of office hours and leave early, but you can also stay the whole time and just listen. I will also be monitoring Campuswire as usual throughout the week.

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, except as explicitly instructed.

Things that could be on the Final Exam:

- Any proof or problem that is identical or substantially similar to a problem that was assigned on any homework this semester, or on Exam 1 or 2. All solutions will be posted shortly.
- You will not be asked to state any definition in this exam. However, certain problems will have a word given in **bold** and you can give the definition of this word for up to 50% credit.
- To this end, you should study all of the definitions given on the Exam 1 Information sheet and all of the definitions given on the Exam 2 Information sheet, as well as the following definitions we have covered since then: path, path connected space, a covering of a space, and compact space. In addition, please study the finite complement topology.
- You can also use without proof any result from the textbook. In that case, it is not necessary to quote the correct theorem number. To this end, you should study all of the theorems listed on the Exam 1 Information sheet and all of the theorems listed on the Exam 2 Information sheet, as well as Corollary 24.2, Theorem 24.3 (the Intermediate Value Theorem; **you should be prepared to state this theorem**), Lemma 26.1, Theorem 26.2, Theorem 26.3, Lemma 26.4, Theorem 26.5, Theorem 26.7, Lemma 26.8, Corollary 27.2, and Theorem 27.3 (the Extreme Value Theorem; **you should be prepared to state this theorem**).

Note about graduate credit: There will be several extra questions for graduate credit. Students taking the class for graduate credit are required to solve **one** of these problems for full credit on the exam. All students are welcome (and encouraged!) to solve as many extra problems as they find interesting and fun, and as they can solve during the time allotted. In the case where any student solves more than the required number of problems, their grade will be calculated in whatever way is most advantageous.