

Math 295: Topology
Spring 2020

The course website is <https://www.uvm.edu/~cvincen1/math295.html>.

Logistical Information: MWF 10:50am-11:40am in Lafayette 411 (3 credit hours).

Instructor Information: Professor Christelle Vincent, office E445 in Innovation Hall.

For content (i.e. mathematical) questions, please post your question to Coursewire at <https://campuswire.com/c/G421F3607>. For personal matters, please reach me by email at christelle.vincent@uvm.edu.

Office hours: Monday noon to 1pm; Wednesday 9:30am to 10:30am; Friday 3:30pm to 4:30pm

During office hours I stay in my office and I am available to answer any question you might have about the material. You should come once a week even if you don't have any questions. But really, you should have questions.

Course Description and Goals: In Topology we will develop the theory of topological spaces and more precisely the basic ideas of point-set topology. Beyond mastery of the subject matter of the course, the main goal of the course is to develop strong proof-writing and communication skills.

Textbook: Munkres's *Topology* 2nd edition.

Attendance: You are expected to attend every lecture. If for whatever reason you cannot attend lecture, you are responsible for asking a classmate to tell you what you have missed. You can always send a friend to turn in your homework in class or to my mailbox. If you miss a quiz, you will get a score of zero on that quiz.

ROTC, military, athletics: If you are a student-athlete or if you are in ROTC or have active military duty and you believe you might need accommodations due to commitments related to these activities, please submit in writing to me by the end of the second full week of classes your planned schedule of athletic competition or your planned schedule of military duties for the semester. For all homework and quizzes, you will be expected to turn in your work on time, or in advance, as necessary, except in very special circumstances.

If you are a student-athlete, the department of Vermont Catamount Athletics has various resources to help you manage your academic load. Do not hesitate to avail yourself of these resources.

Religious accommodations: Students have the right to practice the religion of their choice. If you believe you might need accommodations to take part in religious celebrations, please submit in writing to me by the end of the second full week of classes your religious holiday schedule for the semester. Together we will work on arranging a way to make up any work you might miss. For all homework and quizzes, you will be expected to turn in your work on time, or in advance, as necessary, except in very special circumstances.

SAS: In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact SAS, the office of Student Accessibility Services (previously ACCESS). ACCESS will work with us in an interactive process to explore reasonable and appropriate accommodations, which will be formally communicated to me in an accommodation letter. Once you have this letter, I will be available to meet with you privately to discuss the accommodations you plan to use in this course.

Grading: Your grade for this class will be based on your performance in the following activities, weighted as follows:

Homework: 17.5%

Quizzes: 17.5%

Exam 1: 20%

Exam 2: 20%

Final Exam: 25%

All of your work will be graded on correctness as well as legibility and clarity. I reserve the right to assign a score of zero to any problem or assignment that is unreasonably difficult to understand or read.

All of your grades will be available for your review on Blackboard.

Graduate credit: You may take this class for graduate credit if you are a graduate student or enrolled in the Accelerated Masters Program. If you would like to avail yourself of this option, please let me know today, or by email before Monday January 20. If you do then you will be required to solve the extra problems for graduate credit on the homework, exams, and final exam.

Homework: Every week there will be homework to turn in. The questions will be posted on the course website.

Homework will be due on the announced due date at the beginning of the class period. You must turn in your homework either to me in class or drop it off in my mailbox before class. I do not guarantee that I will find, or grade, homework that is turned in anywhere else. I will drop your lowest two homework scores.

The homework will be substantial and require thought. For this reason **do not leave your homework to the last minute.**

Your homework *must* be stapled, and have your full name.

Please make sure that you understand the code of conduct that I give here; if you ever have any questions as to whether something is academically honest or not, please ask me.

Quizzes: Every week in class there will be a quiz. The quiz will ask for a definition or the statement of a theorem, or it might ask to solve a simple problem or give a short proof inspired by the homework.

There will not be any any make-up quizzes *under any circumstances*. However, if you must miss a quiz for a valid reason you will be excused from the quiz. I will drop your lowest two homework scores.

Exams: There will be two in-class exams and a university-scheduled final exam. The problems on the exams will be similar to the problems on the homework and quizzes. They will ask for definitions, statements of theorems, and to prove things.

The in-class exams will not be cumulative but the final exam will be. Plenty of information will be given closer to the days of the exam.

The in-class exams will be on February 19 and on April 8.

The final exam is on May 8, from 10:30am to 1:15pm, in Lafayette 411.

If you have a conflict with an exam in this class, you must inform me in writing at least one week before the last day of classes.

If an emergency occurs and you need to miss an exam, you must notify me in writing within 24 hours of the exam. Please include the reason and documentation.

Statement on diversity: Mathematics can be learned and enjoyed by everyone, regardless of gender, age, race, sexual orientation, or other personal characteristics. As a group we will work to create a space where we all feel welcomed and encouraged, and any actions or speech that detract from this atmosphere will not be tolerated.

In particular, we will be mindful of encouraging others to let us know if they do not already know something and do everything to support them in their learning. We will not say that things are “trivial.” We will offer corrections gently and with the intention of helping the other, as opposed to making ourselves feel good.

Statement about academic integrity: The goal of college is foremost for you develop your mind and acquire thinking skills, but also to learn to do so honestly and ethically.

In this class, you may use any help you wish on the homework, *as long as you cite your sources and name the people you have spoken with*. It is natural to need help and discussion to solve the problems. It is normal to model your proof after a proof you have found if you don't know how to prove something. What is important is to be honest, and to use these sources ethically.

When you work with other people, you must write your final write up by yourself, in your own words. You must also name each person you have worked with on each problem. When you look up information online, you must write your final write up in your own words, with notation that is consistent with the notation used in the course. You must only use concepts and ideas developed in class. You must also provide the url of each source you have consulted.

For quizzes and exams, all of the work you submit must be yours. You will not be allowed access to any notes or any other resources.

For further details on the University's stance on academic integrity, please visit <https://www.uvm.edu/sites/default/files/UVM-Policies/policies/acadintegrity.pdf>.

Statement on alcohol and cannabis in the academic environment: As a faculty member, I want you to get the most you can out of this course. You play a crucial role in your education and in your readiness to learn and fully engage with the course material. It is important to note that alcohol and cannabis have no place in an academic environment. They can seriously impair your ability to learn and retain information not only in the moment you may be using, but up to 48 hours or more afterwards. In addition, alcohol and cannabis can:

- Cause issues with attention, memory and concentration
- Negatively impact the quality of how information is processed and ultimately stored
- Affect sleep patterns, which interferes with long-term memory formation

It is my expectation that you will do everything you can to optimize your learning and to fully participate in this course.