

MATH 4100—Introduction to Topology

Section 01, TR, 3:45–5:00 pm, NIB 150, CRN: 45298

Fall 2011—3 credits

Instructor: Taylor Jensen

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Office Hours: MTWRF 9:00–9:50 am; MTWR 11:00–11:50 am; other times by appointment

Additional Help: NIB 202 or Browning Learning Resource Center

Required Text: *Topology* (2nd edition) by James R. Munkres

Prerequisite: You **must** have successfully completed both Math 2200 (Discrete Math) and Math 2210 (Multivariable Calculus).

Math 4100 is an overview of elementary point-set topology. Our treatment of the subject will include topological spaces, compactness, connectedness, metric spaces, and Hausdorff spaces.

All classes in mathematics at Dixie State College of Utah support the general education goals of the college. Each mathematics class will:

- Require students to perform mathematical processes including fractions, percentages, decimals, proportions/ratios, algebraic equations, and/or calculus techniques
- Provide students with application problems that use a variety of methods including arithmetical, algebraic, and geometric methods
- Challenge students to make inferences from mathematical models that include formulas, graphs, and tables
- Provide students with real-life applications that use a variety of mathematical functions

Behavior Policies

1. **Your attendance and behavior are expected to reflect your dedication to excellence as a university student.** You are expected to attend class, participate in discussions and group work, and to use class time for Math 4100 activities only.
2. **You must abide by all regulations set forth in the “Student Rights and Responsibilities Code” (DSC Policy 5.33).** These regulations can be found online at <http://www.dixie.edu/humanres/polstu.html> (then click on the link to DSC Policy 5.33). In particular, you should be aware of your obligations pertaining to academic performance.
3. When completing homework, working together is ok—in fact, I encourage it. However, you should understand that directly copying another person’s work is not always conducive to effective learning. (In other words, put things in your own words, even if the ideas are not entirely yours.) Importantly, sharing test information is **not** ok, and if you’re caught, you’ll receive an “F” for the course.

Participation Policies

1. Your grade will be based 100% on participation as defined in this section. Participation includes attendance, homework write-ups, and test taking. Additionally, bonus points can be earned by writing correct proofs on tests.

2. If you miss a day of class, there is a 1 point penalty. If you will be absent for one or more class days as part of an official DSC activity, you must ask me for permission to miss those days—beforehand and in writing—if you want to receive a waiver of the penalty.
3. On each homework assignment, you will be responsible for “writing up” one or more problems. Depending on the number of students, you will have a partner to work with on all or most of your assignments. Failure to turn in a homework write-up on time will result in a 2 point penalty.
4. The goal of your doing homework should be to gain understanding of basic topology. This requires repeated practice with formal proofs. Therefore, you should try to grasp the methods to prove all homework problems, not just the ones you are assigned to write up.
5. There will be one midterm exam and a final exam. If you do not take an exam, there is a 15 point penalty. Additionally, supplying correct proofs on an exam can earn you up to 5 bonus points (per exam).

Exam Policies

1. **Exams cannot be made up for any reason.** The midterm exam will be administered in the Testing Center, while the final exam will be administered in our regular classroom.
2. You must bring the following items to the midterm exam: (a) #2 pencil; (b) photo ID. Moreover, you are allowed to bring your graphing calculator as well as one or more “cheat sheets” (8½ by 11 inches, front and back) to the midterm exam. We will discuss these “cheat sheets” in class before the exam. **Important:** You should photocopy the cheat sheet(s) before you take the midterm exam if you wish to have a permanent copy, because the Testing Center staff will not allow you to take the sheet(s) with you after you complete the exam (for test integrity purposes).

Grading

There are 100 total points possible. Assuming you incur no penalties, you will receive all of these points. Otherwise, grade will be determined according to the percentage of points you earn in this course.

≥ 92% A	≥ 89% A–	≥ 86% B+	≥ 82% B
≥ 79% B–	≥ 75% C+	≥ 70% C	≥ 67% C–
≥ 64% D+	≥ 60% D	< 60% F	

Disability Resource Center

If you are a student with a documented physical or mental impairment that will substantially limit a major life activity, please contact the Disability Resource Center (DRC) on the main campus. The Center Coordinator and staff will assist you in evaluating your eligibility for services. If you are deemed eligible, reasonable accommodations that are appropriate for your disability will be assigned. If you have any questions concerning this process, please contact the Center at (435) 652–7516.

Website Resources

Library	http://library.dixie.edu/
Writing Center	http://new.dixie.edu/english/dsc_writing_center.php
Testing Center	http://new.dixie.edu/testing/
Tutoring	http://dsc.dixie.edu/tutoring/index.htm
Career Center	http://new.dixie.edu/career/

Communication Policy

Important class and college information, including lecture notes, syllabus changes, etc. for this class, will be sent to either the preferred email account you submitted to Dixie State College when you began school here or to your “Dmail” account. This information includes your DSC bill, financial aid and scholarship notices, notification of dropped classes, reminders of important dates and events, and other information critical to your success in this class and at DSC in general. You will be held responsible for any emailed information sent to you by me or by DSC, so please check your email account often. When trying to get in contact with me, the best option is to email me or call my office phone and leave a message.

Lecture Schedule

MATH 4100—Fall 2011

<u>DATE</u>	<u>LECTURE</u>	<u>DATE</u>	<u>LECTURE</u>
8/23	§1 & §2	10/18	§21
8/25	§2 & §3	10/20	§22
8/30	§4 & §5	10/25	Review (<u>Midterm</u>)
9/1	§5 & §6	10/27	§23
9/6	§7 & §9	11/1	§24
9/8**	§9 & §10	11/3	§26
9/13	§12	11/8	§27
9/15	§13	11/10	§28
9/20	§14	11/15	§29
9/22	§15	11/17	§30
9/27	§16	11/22	§31
9/29	§17	11/24	Thanksgiving Break
10/4	§18	11/29	§32
10/6	§19	12/1	§33
10/11	§20	12/6	§34
10/13**	Fall Break	12/8	Review (<u>Final</u>)

** The last day you may drop the class without a “W” appearing on your transcript is Monday, September 12th. The last day you may drop the class is Monday, October 17th. Other important dates on the academic calendar for this semester can be found online at

<http://new.dixie.edu/reg/?page=fall2011>

The midterm exam will open on or around the class day on which we review the preceding material. It will close **three days** after it opens.

The final exam will be at 3:00 pm on Tuesday, December 13th, in NIB 150.