Math 6620 **Algebraic Topology** **Fall 2017**

LECTURE: MWF 11:00 – 11:50 a.m. in GAB 461

INSTRUCTOR: William Cherry
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OFFICE HOURS: Mondays 12:30–1:30;
Tuesdays & Thursdays 1–3;
Wednesdays 9:30–10:30, 12:30–1:30, and 4–5.

Students unable to attend the above scheduled office hours or needing extra help are welcome to make an appointment with me at other times, including evenings and weekends.

PREREQUISITE(S): I will expect that students completed the 5520/30 algebra sequence and know things like: group, normal subgroup, kernel, module, and quotient. It is also handy to be familiar with the basics of general topology (Hausdorff, connected, arc-connected, compact, continuous map between topological spaces, quotient topology, and so forth). I don't think it is necessarily critical to have completed the 5610/5620 sequence. Other places one might pick up enough topological basics are the complex sequence 5410/20 or the 5600 topology class.

TEXTS: Glen E. Bredon, *Topology and Geometry,* Springer, 1993.

GRADES: There will be five components to your final grade, weighted as follows:

Attendence / Classroom participation: 30%
Midterm exams: 45% (15% each)
Final Exam: 25%

IMPORTANT DATES:
MIDTERM EXAMS: Friday, October 6 (Homotopy),
Friday, November 3 (Homology),
and Friday, December 1 (Duality & De Rham)
FINAL EXAM: Monday, December 11, 10:30 – 12:30

Optional Homework: You will also have a regular opportunity to turn in optional homework that will be read and returned to you with comments. But, turning in the homework will not form part of your grade.

ACADEMIC DISHONESTY: Cheating on exams is a serious breach of academic standards and will be punished severely. UNT's full policy on academic integrity can be found at:
http://vpaa.unt.edu/academic-integrity.htm.

Note: It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office

Student Perceptions of Teaching (SPOT)

The SPOT evaluation is a requirement for all organized classes at UNT. This survey will be made available to you at toward end of the semester, providing you a chance to comment on how this class is taught. Please be sure to complete this important survey for all of your classes.

Tentative Course Outline

The course will begin with a survey of general topology, highlighting parts of Chapter I. We will then briefly discuss manifolds in Chapter II. Chapter III will form the first main part of the course where we will learn about the fundamental group and covering spaces. The second main part of the course will be based on Chapter IV, where homology theory is developed. The last part of the course will be based on selections from Chapters V and VI.