

# Topology II

Math 543-101

TR 2:00-3:15, ILB 430

**Instructor:** Prof. Josh Barnard

**Office:** ILB 306

**Phone:** 460-6755

**Office Hours:** TBD

**Course webpage:**

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[www.southalabama.edu/mathstat/personal\\_pages/jbarnard/S09-543/](http://www.southalabama.edu/mathstat/personal_pages/jbarnard/S09-543/)

**Prerequisite:** MA 434 or MA 542.

**Textbook:** *Algebraic Topology*, by Allen Hatcher, Cambridge University Press, 2002. It is also available online free from the author's website at Cornell.

**Course Description:** A continuation of MA 542. Topics covered include the fundamental group, triangulations, classification of surfaces, homology, the Euler-Poincaré formula, the Borsuk-Ulam theorem, the Lefschetz fixed-point theorem, knot theory, covering spaces, and applications.

**Announcements and Handouts:** The course webpage has an announcement section and a handout section. Both of these should be checked regularly, and you are responsible for any information found there. In particular, the requirements and policies for this course may be modified as circumstances dictate; such changes will be provided to students in class and noted on the webpage.

**Schedule:** A course schedule is posted online, and will be updated as the semester progresses. You should read the indicated sections of the book before the relevant class. You should also read through it again before beginning work on the homework, which is also posted on the schedule.

**Homework:** Homework problems will be assigned regularly in class, and also posted online. Depending on the circumstances, homework will either be turned in to be graded, or students will present solutions at the board for evaluation.

**Tests:** There will most likely be two tests, both of which will be take-home tests. Students will also give a final presentation.

**Grading:** Grades will be determined according to the following:

Homework — 50%; Tests — 20% each; Presentation — 10%

**Policies:** If you have any questions or problems, you are encouraged to come by my office during office hours, or make an appointment to come by some other time. Email is the best way to contact me. Please speak to me if you are getting behind. If you have a specific disability that qualifies you for academic accommodations, please notify me and provide certification from the Office of Special Student Services. This office is directed by Ms. Bernita Pulmas and is located in the Student Center, Room 270, Phone 460-7212. Students are assumed to be familiar with the current Academic Misconduct Code, to which we will strictly adhere.