

California State University Long Beach

Math 555: Algebraic Topology, Spring 2018

Professor : Ryan Blair
Email : ryan.blair@csulb.edu
Office : FO3-213
Office Hours: MoWe 2:30-3:30pm in F03-213

Class Meetings: MoWe 5:30-6:45pm in LA5-153

Text: Topology by J. Munkres, 2nd edition and Algebraic Topology by A. Hatcher
(Hatcher's book can be found here: <http://www.math.cornell.edu/~hatcher/AT/ATpage.html>)

Course web page: <http://www.csulb.edu/~rblair/Math555S18/index.html>

Prerequisites: Math 550A or Math 550

Course description: This course is an introduction to algebraic topology. We will cover the following topics together with additional topics as time permits: homotopy of maps, fundamental group, covering spaces, free groups, amalgamation of groups, Seifert–van Kampen theorem, simplicial complexes, chain complexes, exact sequences, simplicial homology, Mayer–Vietoris sequence.

Attendance: To be successful in this course, you should be present for all class meetings. If you must miss class, please notify me as soon as possible. For more information, see http://www.csulb.edu/divisions/aa/catalog/current/academic_information/class_attendance.html

Homework: Homework assignments will be distributed in class and/or on the course web page, typically once a week. They will be due as noted. You are responsible for being aware of the assignments and due dates. Homework assignments will incorporate exercises from the book, exercises from past comprehensive exams and exercises from third sources. Homework will be graded based on correctness and completeness. Late homework will be accepted up to one week after the due date, but will be penalized with a 25% deduction from the final score.

You are strongly encouraged to work in groups to exchange ideas and help each other understand how to approach problems, but the work you turn in must be your own! If you work with others on an assignment, be sure to indicate the names of the other students on your homework. Homework must be legible, well-organized, and written in complete sentences. Handwritten work is fine, but you are encouraged to type up the problems in LaTeX.

Exams: There will be one midterm exam, according to the following tentative schedule:
1) Midterm 1: in class, March 21st

Final Project: The final project will give you the opportunity to explore a topic in Algebraic Topology at a deep level. The project will have a written and oral presentation component. Additional information regarding the final project will be distributed later in the course.

Grades: Your grade for the course will be determined based on the following factors:
Homework 50 %
Midterm exam 20 %
Final Project 30 %

Office hours: I will hold regular office hours at the times noted above, unless I email or tell you otherwise in class. Alternatively, you may set up an appointment to meet with me.

Accommodations: Students needing accommodations because of a disability should first register with Disabled Student Services and present the appropriate forms issued by DSS to the instructor no later than two weeks from the date classes begin. Information regarding DSS can be found at <http://www.csulb.edu/divisions/students2/dss/>.

Withdraw: The last day to withdraw without receiving a W is **February 5th**. The last day to withdraw without the CNSM dean's signature is **April 21st**. Plan early since it's sometimes hard to track people down for signatures. Any office hour may be cancelled due to illness or necessary appointments, and the students should not therefore depend on a faculty member being in his/her office for a particular office hour. Students should secure any necessary signatures well in advance of any deadlines.

Academic Integrity: Academic integrity is expected for assignments and exams. The usual penalty for a student caught cheating or plagiarizing includes an F in the course. Further penalties may include probation, suspension, or expulsion from the university. More information can be found on http://www.csulb.edu/divisions/aa/catalog/current/academic_information/cheating_plagiarism.html

Note: The instructor reserves the right to alter anything on this syllabus at any time during the semester. Any alterations will be announced in class.