

**AMAT 540B - Topology II**

Class: T/Th 10:15am - 11:35am in ES 153

<b>Instructor</b>	Elizabeth Munch, Ph.D.	<b>E-mail</b>	emunch@albany.edu
<b>Office</b>	ES 120D	<b>Phone</b>	518-442-4632
<b>Office Hours</b>	T/Th 9:30-10:15 and 12:30-1:15 or by appt.	<b>Term</b>	Spring 2017

**Course Description:**

From Wikipedia: Algebraic topology is a branch of mathematics that uses tools from abstract algebra to study topological spaces. The basic goal is to find algebraic invariants that classify topological spaces up to homeomorphism, though usually most classify up to homotopy equivalence. Although algebraic topology primarily uses algebra to study topological problems, using topology to solve algebraic problems is sometimes also possible. Algebraic topology, for example, allows for a convenient proof that any subgroup of a free group is again a free group.

**Prerequisites:**

AMAT 540A

**Website:**

The blackboard website, <http://blackboard.albany.edu>, has announcements about the course and any necessary files. Homework will also be announced and saved on this website.

**Textbook:**

- Required: Algebraic Topology by Allen Hatcher  
(Available free at <https://www.math.cornell.edu/~hatcher/AT/ATpage.html>)
- Required: Topology 2nd ed. by James Munkres
- Recommended: Elements of Algebraic Topology by James Munkres

**Grading:**

- **Homework:** The grade in this class will be entirely based on homeworks. There will be approximately bi-weekly homework sets given which will be turned in for a grade. This homework will be typeset in  $\text{\LaTeX}$  or no credit will be given.
- **Points:** Your grade will be based on the total number of accumulated points from the semester. Late homeworks will be accepted until the end of class on the Monday following the due date with a 5 point penalty. The *estimated* number of points is below.

	<i>Estimated Points</i>
Homeworks	$7 \text{ homeworks} \times 50 \text{ points}$
<b>TOTAL:</b>	<hr/> <b>350</b>

**Students with Disabilities:** Reasonable accommodations will be provided for students with documented physical, sensory, systemic, cognitive, learning and psychiatric disabilities. If you believe you have a disability requiring accommodation in this class, please notify the Director of the Disability Resource Center (Campus Center 137, 442-5490). That office will provide the course instructor with verification of your disability, and will recommend appropriate accommodations.