INSTRUCTOR:

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OFFICE HOURS:

Tuesdays and Thursdays 1 to 2pm and by appointment.

TEXT:

This text is required for the course. In addition there are two books on reserve at the Math-
Physics Library, which are worth examining:

- Topology by Hocking and Young.
- An Introduction to Algebraic Topology by A. Wallace.

COURSE DESCRIPTION:

This course is an introduction to Topology, a subject which had its beginnings in questions in
Analysis in the late 19th century. It has since become a central and important part of
mathematics, with strong ties to most branches of mathematics.
About 2/3 of this semester will be concerned with foundations, namely point-set topology.
Given this underpinning, we then move on to the beginning aspects of algebraic topology.

SYLLABUS:

Students will be assumed to be familiar with the main aspects of Chapter 1. Most of Chapters 2
through 8 of the text will be covered, except Chapter 5 (covered only briefly), and Chapter 6
(not at all). This comprises the point-set part of the course. We then move on to algebraic
topology with the study of the fundamental group and covering spaces (Chapters 9 and 13), the
Seifert-van Kampen Theorem (Chapter 11) and the classification of surfaces (Chapter 12). A
rough, hopefully not too optimistic timetable is:

<p>| Ch. 2 | 2 weeks |</p>
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Duration</th>
</tr>
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<tbody>
<tr>
<td>Ch. 3</td>
<td>1½ weeks</td>
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<tr>
<td>Ch. 4</td>
<td>2 weeks</td>
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<tr>
<td>Ch. 5</td>
<td>½ week</td>
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<tr>
<td>Ch. 7</td>
<td>1 week</td>
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<tr>
<td>Ch. 8</td>
<td>½ week</td>
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<tr>
<td>Ch. 9</td>
<td>2 weeks</td>
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<tr>
<td>Ch. 13</td>
<td>1½ weeks</td>
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<tr>
<td>Ch. 11</td>
<td>1½ weeks</td>
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<tr>
<td>Ch. 12</td>
<td>1½ weeks</td>
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</tbody>
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- **HOMEWORK:**

  Homework exercises from the text will be assigned approximately weekly, and due the following week.

- **EXAMS:**

  There will be one Midterm Exam, near the middle of the semester (right after we cover Ch. 8), during lecture time.
  The Final exam is scheduled for Thursday, December 21, 8:00 - 10:30 am.

- **GRADES:**

  The homework and the midterm will represent each 30% of your grade, and the Final Exam 40%.

- **SPECIAL NEEDS:**

  If you have a physical, psychological, medical or learning disability that may impact on your ability to carry on assigned course work, please contact the staff in the [Disabled Student Services](http://www.math.sunysb.edu/courses/mat530.fall1999.html) office (DSS), Room 133 Humanities, 632-6748/TDD. DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential.

This syllabus is available at: [http://www.math.sunysb.edu/courses/mat530.fall1999.html](http://www.math.sunysb.edu/courses/mat530.fall1999.html)