Instructor: Seth Baldwin  
Email: seth.baldwin@unc.edu  
Office: Phillips 406  
Office Hours: Tuesdays 3:15 to 4:15 PM and Thursdays 1:00 to 2:00 PM or by appointment.

Class Meetings: We meet Tuesdays and Thursdays from 2:00 to 3:15 PM in Phillips 367. The final exam is on Saturday, December 5th, from 12:00 to 3:00 PM in our regular classroom.

Text: *Discrete Mathematics and it’s Applications*, Kenneth H. Rosen, 7th edition

Prerequisite: Students must have earned a passing grade in Math 232 (Calculus II) or its equivalent.

Description: Math 381 is designed to serve as a transition to abstract mathematics. We will cover some basic concepts which are widely used throughout mathematics and along the way you will be expected to learn to understand and formulate rigorous mathematical arguments and precise mathematical statements.

Topics: Below is a list of topics which I plan to cover. As the course progresses topics may be added, omitted, or reordered.

Chapter 1 (Logic and Proofs)  
sections 1, 3, 4, 5, 6, 7, 8

Chapter 2 (Sets and Functions)  
sections 1, 2, 3  
possible additional topic: cardinality

Chapter 4 (Number Theory)  
sections 1, 2, 3

Chapter 5 (Induction)  
sections 1, 2

Chapter 9 (Relations)  
sections 1, 3, 5  
possible additional topic: partially ordered sets

Chapter 6 (Counting)  
sections 1, 2, 3, 4, 5

Chapter 7 (Discrete Probability)  
sections 1, 2

Attendance/Classroom Policy: You are expected to be in class every day prepared to learn and work. If you do not attend class, you are still responsible for the material covered.
**Homework:** Homework will be assigned weekly and will be worth 15% of your total grade. Whether the homework involves writing proofs or doing calculations, your written arguments and work should be designed for others to read and understand. You will be graded on correctness, but also your ability to form a clear, rigorous, and precise mathematical argument. You may work on homework with other students, but you must submit your work individually and in your own words. Late homework will not be accepted.

**Tests:** There will be two in-class tests during the semester, each worth 25% of your total grade. I will announce the dates of the tests in advance by at least a week or two.

**Final Exam:** The final exam will be comprehensive and is worth 35% of your total grade. In compliance with the UNC final examination calendar, the final exam will be on Saturday, December 5th, from 12:00 to 3:00 PM in our regular classroom.

**Makeup Policy** The tests and the final exam may be made up only in the case of a documented emergency.

**Grading:** This course will roughly use a ten point scale to assign grades (90 and above: A, 80-89: B and so on). Your grade will be computed as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Test 1</td>
<td>25%</td>
</tr>
<tr>
<td>Test 2</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
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</tbody>
</table>

Final assignment of grades is at my discretion.

**Sakai:** There is a Sakai site for this class at https://www.unc.edu/sakai/. You should let me know right away if you do not have access to it. I expect that you will check Sakai regularly and that you will check your school email on a regular basis.

**Accessibility Resources and Service** The University of North Carolina – Chapel Hill facilitates the implementation of reasonable accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability or pregnancy complications resulting in difficulties with accessing learning opportunities.

All accommodations are coordinated through the Accessibility Resources and Service Office. In the first instance please visit their website http://accessibility.unc.edu, Tel:- 919-962-8300 or Email:- accessibility@unc.edu. If you feel that you require these services please contact ARS as early in the semester as possible.

**Honor Code:** All students are expected to conduct themselves within the guidelines of the UNC Honor System. All academic work should be done with the high level of honesty and integrity that this University demands.

This syllabus is subject to change at the discretion of the instructor.