Instructor: Mark McCombs  
Office: Phillips 358  
email: mccombs@math.unc.edu


Honor Code  
You must pledge all graded work for this class. It is expected that each student in this class will conduct him or herself within the guidelines of the Honor System. All academic work should be done with the high level of honesty and integrity that this University demands.

Course Prerequisite  
You must have earned a passing grade in Math 232 (or its equivalent).

Course Description  
Math 381 is a course designed to provide you with the fundamental skills necessary for success in situations that require you to read, write and reason precisely when working with mathematics. Special emphasis is given to improving your fluency in the use of mathematical vocabulary and notation when writing and critiquing mathematical proofs. The course is divided into four units.  
Unit I Proofs and Rules of Logic  
Unit II Basic Set Theory, Functions and Counting  
Unit III Relations and Basic Number Theory  
In many ways, Math 381 will be the first “abstract” math course in your academic career. Although we will explore specific, concrete examples whenever possible, this course requires you to hone your ability to analyze and articulate the logical essence of the problems being studied. **In other words, you will be expected to learn how to communicate coherently and persuasively using the language and the grammar of mathematics.**

Tests and Grading  
There will be two in-class tests (closed-book, closed notes), each worth 24% of your grade.

Attendance  
I expect you to attend class each day. You will only make things hard on yourself if you miss class. Your class notes will be an invaluable resource when you are studying for the tests and final exam.

Make-Ups  
No make-ups will be given.

Final Exam  
The final exam will be comprehensive (closed-book, closed notes), covering all the content of the course, and will count 36% of your grade. In order to pass the course, you must pass the final exam.

Course Resources  
Lecture notes, homework and test solutions, and extra practice problems will be posted on Sakai.
Course Grades
All course letter grades will be assigned according to the following scale.

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<thead>
<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
<tr>
<td>A</td>
<td>93–100</td>
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<tr>
<td>A−</td>
<td>89.5–92</td>
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<tr>
<td>B+</td>
<td>87.5–89.4</td>
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<tr>
<td>B</td>
<td>83–87.4</td>
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<tr>
<td>B−</td>
<td>79.5–82</td>
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<tr>
<td>C+</td>
<td>77.5–79.4</td>
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<tr>
<td>C</td>
<td>73–77.4</td>
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<tr>
<td>C−</td>
<td>69.5–72</td>
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<tr>
<td>D+</td>
<td>67.5–69.4</td>
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<tr>
<td>D</td>
<td>60–67.4</td>
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<tr>
<td>F</td>
<td>0–59</td>
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Your course grade will be determined as follows.

HW Avg: 16%  Test 1: 24%  Test 2: 24%  Final Exam: 36%

There are no extra credit opportunities in this course.

UNIVERSITY POLICY ONLY ALLOWS A PERMANENT COURSE GRADE TO BE CHANGED IN THE EVENT OF A VERIFIABLE CLERICAL ERROR IN THE CALCULATION OF THE GRADE.

Practice Problems and Homework
A separate practice problem list will be provided for you. This is a minimal list. You should do all the problems on the list, as well as the other problems that I will suggest. It will be impossible (or at least really, really, really, really difficult) to pass this course without doing the practice problems. As a general rule, you should plan on working at least 2 hours outside of class for every one hour in class in this course.

Homework will be collected in the form of problem sets similar to the practice problem list. You will download the homework assignments from the Sakai course website. I encourage working together on the practice problems and the homework assignments. However, you must write up and submit solutions for each graded assignment.

Standards for Written Work
1. Use correct notation and vocabulary. One of the most important objectives of this course is for you to learn how to communicate using the language of mathematics.
2. Some problems may ask for a proof. Others may ask for calculations. But all of them will ask you to discuss mathematics and give good explanations for mathematical statements. You can be concise, but work unsupported by good explanations will not receive full credit even if the answers are correct.
3. All answers must be legible and coherently organized. If I can't read your answer, you will receive no credit.
4. If figures are needed; they should be carefully drawn and labeled. If calculations are needed, present them so that the reader can see clearly how you arrived at your answer.