Course Objectives: In this class we will develop some theoretical aspects of mathematics in a rigorous fashion. Unlike in calculus, problems in this course are not routine—you may not find similar examples in the textbook, and you are required to write convincing proofs. To do this you will need to understand definitions and theorems very clearly. It is not uncommon to spend several hours on a single problem. But if you don’t put in the effort, you won’t benefit much from this course. You must take an active role in learning and understanding the material.

Grading: Course grades will be weighted according to the following scale:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
</tr>
<tr>
<td>Two tests</td>
<td>40%</td>
</tr>
<tr>
<td>Final exam (comprehensive)</td>
<td>35%</td>
</tr>
</tbody>
</table>

Exams: The in-class midterm tests and the final exam are tentatively scheduled as follows:

- Test 1: Wed. Sep. 30
- Test 2: Wed. Nov. 11
- Final Exam: Fri. Dec. 11, 8–11 am

I do not give make-up exams. Please inform me as soon as possible if you have a conflict with one of the test dates.

Homework: Written homework will be assigned and collected weekly. A complete and up-to-date list of all homework assignments with due dates will be posted on the course web page. Homework will be due Wednesdays. Late homework will normally not be accepted for credit.

Doing problems is the most important part of the course—it’s the only way to learn advanced mathematics! I encourage you to consult with me whenever you need help—I’ll gladly provide hints in office hours. You are encouraged to work with classmates while solving homework problems. Learning to explain clearly your own reasoning, and learning to understand the reasoning of others are important goals of this course. However, the work you turn in must represent your own personal understanding of the material. In particular, you must write up your assignments by yourself.

Each week I will assign one or two “advanced problems.” Students registered for MATH 6000 are required to turn in these more-challenging problems, which are designed to encourage you to understand the material at a deeper level. Students registered for MATH 4000 who hope to get an
A should also attempt and turn in a reasonable number of advanced problems over the course of
the semester. These problems will normally be due one week later than the “core problems” from
the same assignment.

**Attendance:** You are expected to attend class every day, read the textbook, and do homework
regularly. Students who incur an excessive number of absences may be withdrawn from the course
at the discretion of the instructor. (Excessive means four or more unexcused absences.) You are
(strongly) encouraged to attend office hours; however, I expect that you will have thought about
the questions you would like to ask before you come.

**Academic Honesty:** All students are responsible for maintaining the highest standards of aca-
demic honesty and integrity in every phase of their academic careers. This includes all homework
assignments. The penalties for academic dishonesty are severe and ignorance is not an acceptable
defense. See [http://www.uga.edu/honesty](http://www.uga.edu/honesty).

**Copyright:** All of the course tests and exams are copyright by the instructor, even if the © symbol
does not appear on them. You may not upload or post copies of these materials to the web without
my explicit written permission.

**Electronics:** As a courtesy to me and to your classmates, please turn off and put away all cell
phones, tablets, laptops, etc. during class time. An exception can be granted if you plan to take
notes on a laptop or tablet; please see me if that is the case.

**Changes:** The course syllabus provides a general plan for the course; deviations may be necessary.
Any modifications will be prominently announced on the course website.