Instructor: Kenneth B. Hannsgen, 556 McBryde, Phone 231-8280. Office hours are Wednesday 10:00 to 11:00 and Thursday 1:30 to 3:30 (subject to change). I will make appointments in person or by e-mail if you cannot see me during the regular hours. In addition, I will respond to questions and suggestions sent via e-mail to: hannsgen@math.vt.edu. Notices and assignments will be posted on Scholar.

Any student with special needs, circumstances, or disabilities should meet with me as soon as possible.

Course Objectives: This is an introduction to the theoretical side of calculus. You should learn to do the following:

1. Give precise statements of the definitions and theorems.
2. Apply the definitions and theorems to particular cases.
3. Write up your results, including proofs, in mathematically correct form.

Prerequisites: Math 2224. The course involves proofs; I strongly recommend that you take Math 3034 before attempting 3224. Many students find 3224 quite difficult; you should expect to spend a considerable amount of time on this course even if you are well prepared.

Topical Contents and Text: Understanding Analysis, by Stephen Abbott, Springer, 2001. We will cover most of Chapters 1-4 and topics from Chapters 5-7.

Evaluation and Grading: Your letter grade will be based on your final average, which will be computed as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>25%</td>
</tr>
<tr>
<td>Your highest two test scores, 20% each</td>
<td>40%</td>
</tr>
<tr>
<td>Your third highest test score</td>
<td>10%</td>
</tr>
<tr>
<td>Final Exam (May 12, 10:05 am)</td>
<td>25%</td>
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</tbody>
</table>

Final averages of 90%, 80% and 70% will guarantee you a grade no lower than A-, B- and C-, respectively.

Homework: Regular homework assignments will be made in class at least one week before the due date, which will normally be a Friday. You may turn in a draft on the preceding Monday. The paper will be returned on Wednesday with a provisional grade.

Written homework will be graded on a scale from 0 to 5 points. A 5 means your solution is complete, clear, well presented and essentially correct. It is always important for you to give a clear write-up of what you attempted, so I can give you fair partial credit. In particular, always use complete sentences and make the write-up physically easy to read: for example, your writing should not be too faint or too small.

Written homework is late after I collect it in class; this includes papers I find in my mailbox or under my office door after class. Late homework counts as a zero. (I will make individual arrangements if, e.g., you have a documented illness that runs for an extended period.) I will not accept electronically-submitted homework, except by prior arrangement.

Tests: There will be three 50-minute tests.

If you miss one test, I will count your other test scores 20% each and increase your final exam score to 35% of the grade. If you miss a second test because of an excused absence, I will give you a makeup that may cover all course material up to the date of the second missed test. The makeup will count 20% and the final exam will count 35%. You must take the makeup within one week of the second missed test.

The comprehensive final exam takes place in our regular classroom on Wednesday, May 12, 2010, 10:05 am – 12:05 pm.

Honor System Policies: The Virginia Tech Honor Code applies to all graded work in this course. You are responsible for knowing the general requirements of the Code and for consulting with your teacher, if necessary, to ensure that you understand exactly how the Honor Code applies to each piece of graded work.
The inclusion in an assignment of work (from any source) done by someone whose name does not appear on the assignment, or the inclusion or the reproduction (by any means) of such work is a violation of the Honor Code unless the inclusion is accompanied by a full citation identifying the source and this inclusion is used in a way explicitly authorized by the teacher.

Consistent with the above, you may consult books and notes for homework, and you may discuss homework assignments with other students in this class, or with me. Copying a solution from any source is prohibited. The assignment you hand in must be the product of your own understanding of the material. Group work is permitted only when explicitly authorized by the teacher.

**General:** I reserve the option of modifying these policies as the course develops. You are responsible for all announcements in class, even on days when you are absent.

**From the MATH DEPT:** If you are not on the class roll that comes out after the last add date, immediately check your schedule at a terminal. For no foreseeable reason will you be allowed to stay in the wrong section or to drop a section for which you are actually enrolled after the last drop date. By simply attending a section you will not be placed on its roll.