Instructor: Thomas Bass  
Office: DSC 113F  
Phone: 471-3263  
Email: tbass@cn.edu

Office Hours:  
MWF 1:00-3:00  
TR 8:30-9:30; 12:30-1:30  
Also by appointment

Catalog Description: First year course in single-variable calculus, primarily intended for science, pre-engineering, and mathematics majors. Differential calculus with applications. Prerequisite: MATH 125 or equivalent.

Liberal Arts Core: Successful completion of this course will satisfy the mathematics requirement in the Carson-Newman Liberal Arts Core: [Students will exhibit] scientific literacy and quantitative reasoning skills critical for making informed decisions.

Textbook: Calculus (2nd edition) by Finney and Thomas.

Objectives: Upon successful completion of this course, students will be able to . . .

- Evaluate limits, including limits involving infinity
- Discuss the continuity of functions
- Demonstrate an understanding of the geometric and physical meanings of the derivative
- Evaluate derivatives of algebraic and trigonometric functions
- Use the chain rule appropriately to evaluate derivatives (both explicitly and implicitly)
- Use properties of limits and of derivatives to sketch the graphs of functions
- Use derivatives and/or differentials to solve application problems, including root estimation, related rates, and optimization.
- Find simple antiderivatives
- Estimate areas with sums
- Evaluate definite integrals using the Fundamental Theorem of Calculus
- Use substitution to evaluate definite and indefinite integrals

Evaluation: Final grades will be awarded according to the following scale:

<table>
<thead>
<tr>
<th>Final Average</th>
<th>Course Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>[90, 100]</td>
<td>A</td>
</tr>
<tr>
<td>[80, 90)</td>
<td>B</td>
</tr>
<tr>
<td>[70, 80)</td>
<td>C</td>
</tr>
<tr>
<td>[60, 70)</td>
<td>D</td>
</tr>
<tr>
<td>[0, 60)</td>
<td>F</td>
</tr>
</tbody>
</table>

The following are the factors (with their weights) that will be used to determine your average:

- **Quizzes:** A short quiz will be given at the beginning of class each Thursday (except on Thursdays that occur extremely close to test days). The lowest two quiz grades will be dropped and the remainder will be averaged; this average will have the same weight as a major test. On occasion, a take-home assignment or a computer laboratory assignment will take the place of the weekly quiz.
- **Tests:** We will have at least three major tests. These tests will roughly correspond to the end of a chapter in the text, and will be announced at least a week in advance. All test grades will count toward the final average; none will be dropped.
- **Final Exam:** The final exam will be given on Tuesday, December 14, at 10:30 a.m. It will be a comprehensive examination, and will carry the same weight as a major test. All students will be required to take the final exam.
1. **Attendance and participation** in class is both required and expected. If you must be absent on a day on which a test or quiz is scheduled, you must let me know in advance. Students with a valid reason may be allowed to make up the assignment in advance. Otherwise, there will be no make-up work allowed except for cases of illness or family emergency. See page 44 of the current Carson-Newman catalog for the college’s policy on class attendance.

2. If you begin having trouble with the material in the course, contact me. I will be most glad to discuss the materials and provide assistance, but don’t wait until after you have failed a quiz to see me!

3. **No extra credit projects will be allowed.**

4. The instructor reserves the right to adjust the grading criteria to meet any special circumstances that may arise during the course.

5. Any student with a special documented disability (sight, hearing, language, mobility, etc.) which may affect class activities should contact Mr. David Humphrey in the Wellness Center, ext. 3268, and provide appropriate documentation.

6. **Classroom courtesy:**
   a. All cell phones, pagers, or other electronic devices should be turned off or placed in silent mode during class (note that most “vibrate” modes are not silent!) I reserve the right to answer any phone that rings during my class.
   b. While you are welcome to bring your laptop computer to class, please use your computer only for mathematics class purposes, and refrain from visiting other sites during class time.
   c. Please refrain from writing papers for or studying for other classes during your mathematics class period.
   d. Do not carry on unnecessary conversations or sleep during the class period.