Math 253
Calculus III
CRN 22465 5 credit hours
M-W 9:30am to 11:50pm
Bldg. 2 Room 248
Spring, 2012

Instructor: Lisa Folberg
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Lfolberg@pcc.edu
www.spot.pcc.edu/~lfolberg

Office Hours: M-T-W-Th 2:30pm to 3:30pm
Bldg. 2 Room 244
T-Th 10:00am to 11:00am
Student Learning Center
Or by appointment
Bldg. 2 Room 212

"Mathematics is not a careful march down a well-cleared highway, but a journey into a strange wilderness, where the explorers often get lost."
W.S. Anglin

Course Content: Includes infinite sequences and series (emphasis on Taylor series), an introduction to differential equations, and vectors in three space. Students will communicate their results in oral and written form. For detailed course content and outcomes go to:
http://www.pcc.edu/ccog/default.cfm?fa=ccog&subject=MTH&course=253

Prerequisites: Successful completion of MTH 252 and placement into WR121.

Required Materials: The text is Calculus Concepts and Contexts, 4th edition, by James Stewart. A graphing calculator is also required, a TI-89 titanium, Voyage 200, or Casio Classpad 330 is recommended. Demonstrations will be presented on a Voyage 200. Maple 15 is recommended. Other requirements include graph paper, a straight edge, and a stapler. The grade on any work requiring multiple pages that is turned in unstapled will be reduced by 10%.

Class Evaluation: Homework will be assigned at the end of each class period and each class will begin with a time for you to ask questions you may have on the previous day’s assignment. Homework will not be collected daily, but rather, each Wednesday will begin with a quiz over previously covered material. Make-up quizzes and make-up midterms will not be given for any reason, so if you know that you will miss class, the quiz or midterm must be taken in advance. Your lowest exam score may be replaced with your final exam score. Homework may be turned in on the day of a midterm – completed homework is your “passport” to make corrections on any exam questions that were missed. Exam corrections are an excellent opportunity to really learn the material, as well as to improve your grade, as up to half of the points missed may be earned back. All assigned homework will make up a portion of your portfolio, which will be collected at the end of the term. (See “Portfolio Guidelines” for more information.) You must pass the final exam in order to pass the course.

The course will cover portions of chapter 7, all of chapter 8, and most of chapter 9, with two midterm exams and a comprehensive final exam on Monday, June 11.

Cheating: Don’t do it! Don’t try to do it! Don’t even think about doing it! Personally, I think the previous statement is pretty straightforward. However, if there are any remaining questions, please check out PCC’s Academic Integrity Policy at http://www.pcc.edu/about/policy/student-rights/student-rights.pdf#academic-integrity. This document explains what constitutes academic dishonesty. It also outlines the consequences of cheating, and – alternatively – student rights.

Cell Phones: Don’t do it! Don’t try to do it! Don’t even think about doing it! Seriously though, please shut them off prior to class...you’re not going to answer them anyway!!! Anybody caught texting during a quiz or midterm will receive a zero on that assignment.
**Computers:** Please stay off of the computers during class time, as the incessant ticking of the keyboard is *rude* and distracting to other students.

**Attendance:** Attendance – both physical and mental – make up 5% of your grade. If you’re not here, you miss in-class activities, lectures, and most importantly, quizzes and homework discussions. Since quizzes and midterms may not be made up for any reason, attendance is crucial to success in this (and any) course.

**Grades:**

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Grade Range</th>
<th>Letter Grade</th>
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</thead>
<tbody>
<tr>
<td>Attendance/Class Participation</td>
<td>5%</td>
<td>90% - 100%</td>
<td>A</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15%</td>
<td>80% - 89%</td>
<td>B</td>
</tr>
<tr>
<td>Portfolio</td>
<td>10%</td>
<td>70% - 79%</td>
<td>C</td>
</tr>
<tr>
<td>Midterm I</td>
<td>20%</td>
<td>60% - 69%</td>
<td>D</td>
</tr>
<tr>
<td>Midterm II</td>
<td>20%</td>
<td>&lt;60%</td>
<td>F</td>
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<tr>
<td>Final Exam</td>
<td>30%</td>
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For detailed information on PCC grading guidelines go to:  
http://www.pcc.edu/resources/academic/standards-practices/AcademicStandardsandPractices-GradingGuidelines.html

**Important Dates:**  
http://www.pcc.edu/registration/dropping.html

- **April 6:** Last day to drop with a full refund  
- **May 25:** Last day to drop  
- **May 25:** Last day to change grading option to Pass/No Pass  

**Students are expected to behave in accordance with PCC’s Code of Student Conduct:**  
http://www.pcc.edu/about/policy/student-rights/student-rights.pdf#code-of-student-conduct

PCC is committed to supporting all students. If you have an accommodation form from the Office for Students with Disabilities (OSD), please make arrangements to meet with me privately to discuss your needs. Accommodations are not retroactive, but begin when the instructor receives the OSD Approved Academic Accommodations form from the student. To request academic accommodations due to a disability, please contact OSD at 971-722-7409 or 971-722-4641. For more information, go to:  
http://www.pcc.edu/resources/disability/
Portfolio Guidelines

1. The portfolio will consist of the following:
   - Homework
   - Lecture Notes
   - Quizzes
   - Exams
   - In-class Activities/Handouts

   All of the preceding items should be punched and neatly organized in a binder.

   The completed portfolio will be graded as follows:
   - Homework 75%
   - Lecture Notes 10%
   - Neatness/Organization 10%
   - Completeness 5%

2. Homework must be written neatly. If I can’t read it, I won’t grade it.

3. Work must be shown to receive credit. I realize that some (very few!) problems can be done in your head. Mathematics is not all about the answer. In fact, how you get to the answer is more important than the answer itself. If you are ever unsure about proper syntax of a mathematical presentation, take note of the way I present problems on the board. The way I write my presentations is not just my personal preference…it is the way proper mathematics is written and hence, accepted (ie: “graded”) by myself and any other mathematician.

4. Graphs must be drawn on graph paper. Linear graphs must be drawn with a straightedge…inaccurate graphs show inaccurate solutions.

5. During the calculation process, real numbers should be kept exact and not converted to a decimal representation or approximation. That is, \( e = e \). It does not equal 2.71828. Why is this important? Because \( \ln(e) = 1 \) while \( \ln(2.71828) \) is irrational but it is approximately equal to .999999.

6. Word problems are to be answered in complete sentences.
Documentation Standards for Mathematics

All work in this course will be evaluated for your ability to meet the following writing objectives as well as for "mathematical content."

1. Every solution must be written in such a way that the question that was asked is clear simply by reading the submitted solution.

2. Any table or graph that appears in the original problem must also appear somewhere in your solution.

3. All graphs that appear in your solution must contain axis names and scales. All graphs must be accompanied by a figure number and caption. When the graph is referenced in your written work, the reference must be by figure number. Additionally, graphs for applied problems must have units on each axis and the explicit meaning of each axis must be self-apparent either by the axis names or by the figure caption.

4. All tables that appear in your solution must have well defined column headings as well as an assigned table number accompanied by a brief caption (description). When the table is referenced in your written work, the reference must be by table number.

5. A brief introduction to the problem is almost always appropriate.

6. In applied problems, all variables and constants must be defined.

7. If you used the graph or table feature of your calculator in the problem solving process, you must include the graph or table in your written solution.

8. If you used some other non-trivial feature of your calculator (e.g., SOLVER), you must state this in your solution.

9. All (relevant) information given in the problem must be stated somewhere in your solution.

10. A sentence that orients the reader to the purpose of the mathematics should usually precede symbol pushing.

11. Your conclusion shall not be encased in a box, but rather stated at the end of your solution in complete sentence form.

12. Remember to line up your equal signs.

13. If work is word-processed all mathematical symbols must be generated with a math equation editor.