MT 136H-53
Calculus and Analytic Geometry II
Spring, 2005

Instructor: Dr. Carl Spitznagel
Office: Dolan E207
Hours: Monday: 9:00—10:00, 2:00—3:00
       Wednesday: 9:00—10:00
       Thursday: 10:00—12:00
       Friday: 9:00—10:00
       Other times by appointment
Phone: 216-397-4683
E-mail: spitz@jcu.edu
WWW: http://www.jcu.edu/cspitzna/


Content and Purpose: MT 136 is a continuation of the study of calculus that was begun in MT 135. In this course you should develop a deeper understanding of the concepts of calculus, and extend your ability to apply the methods of calculus in solving problems. Topics covered include limits, derivatives and integrals of the trigonometric functions, differentials and Taylor polynomials, implicit differentiation, applications of derivatives and integrals, related rates, techniques of integration, parametric equations, and polar coordinates. Material from Chapters 1 through 9 and Chapter 11 of the text will be included in the course.

Technology: Students in this class are required to have a TI-83 or TI-84 calculator, which should be brought to class regularly. Other graphics calculators, such as the TI-85, TI-86 and TI-81 do not have the features of the TI-83, and therefore are not suitable for use in this course. Calculators with symbolic manipulation capabilities, such as the TI-89 and TI-92, may not be used during tests. There will also be occasional assignments that will require use of the computer algebra systems Derive 6 and Maple 9.5 in one of the PC labs on campus.

Daily Class Activity: Classes will consist primarily of lectures, with a small amount of class time devoted to discussion. Please feel free to ask questions at any time during class. In order to benefit from the classes, you are responsible for coming to class properly prepared each day.

Tests: There will be four tests and a final exam, on the following days:

Test 1: Friday, February 11
Test 2: Tuesday, March 8
Test 3: Friday, April 8
Test 4: Friday, April 29
Final Exam: Tuesday, May 10, 8:00—9:50 am
I expect that you will be present for all tests and for the final exam. If you must miss a test because of illness, please phone in advance. In order to make up a missed test, you will be required to furnish proof of reason that is sufficient in my judgment. An unexcused absence from class on the day of a test may result in a grade of 0 on that test. Only extraordinary circumstances warrant a student's being allowed to make up a missed final examination. Please consult the University's *Policy and Procedure for Making Up Missed Final Examinations* for more details.

**Assignments:** A substantial portion of your learning in this course will take place through the assignments, and for this reason it is essential that you be conscientious about doing them. Assignments will be given daily, and will usually be due at the beginning of the second class after the assignment was given. Selected problems will be read and graded.

In addition to the daily assignments there will be several assignments of a somewhat deeper nature, which involve both problem solving and mathematical writing, and which are best done over a longer period of time. You will typically be given at least a week to complete each of these assignments, and you are encouraged to work on them in small groups.

To allow for illness and excused absences, you will be permitted to turn in assignments late, up to a cumulative total of four days for the entire semester. (For example, one assignment may be four days late, or four assignments may be one day late each.) After these grace days have been exhausted, late assignments will receive a 20 percent penalty for each calendar day late, with weekends counting as one day. If you accumulate a total of eight late days, you may lose the privilege of having your late papers read. No assignments will be accepted after May 5, 2005, and no late homework will be accepted after April 29, 2005. (Exceptions to these policies may be made, of course, in case of extended serious illness.)

For additional details on homework assignments, please see the *Policies on Assignments*.

**Getting Help:** In addition to my scheduled office hours, I am also available at many other times. You are welcome to drop in at any time, if you wish to take a chance on finding me. However, you may wish to call me or send e-mail to check on my availability if you would like to see me outside of office hours. I am more than willing to provide hints for homework problems or other course-related matters, provided you seek help in a timely manner.

You may also utilize the department’s free walk-in tutoring service, which is located in Dolan E211. Tutoring will begin during the second week of class, and the tutoring room hours will be posted on the class web site.

**Absence from Class:** Excused absences may be granted at my discretion. If you must miss a class because of an extracurricular activity officially sponsored by the University, you must submit an excused absence request form at least one week in advance of the absence. An unexcused absence from class on the day of a test or other in-class activity may result in a grade of 0 on that activity. In case of any absence, you are responsible for all material covered during your absence. Consult the University’s *Attendance Regulations* for more information.
**Students with Disabilities:** Students with documented disabilities should contact the Coordinator for Students with Disabilities (Ms. Kate Yurick, phone 397-4967) before requesting accommodations in this course. Accommodations will not be granted retrospectively.

**Grading:** Your final grade is my evaluation of your total performance in four areas of scholarship: retention of substantial information, insight into the significance of this information, ability to apply it to new situations, and ability to communicate the knowledge assimilated. Tests will be designed to measure all four facets of scholarship, and will be graded accordingly. The following are rough guidelines for determining final grades.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Average</th>
<th>Weightings</th>
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<tbody>
<tr>
<td>A- to A</td>
<td>90—100</td>
<td><strong>Tests</strong> 65 %</td>
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<tr>
<td>B- to B+</td>
<td>75—89</td>
<td><strong>Final Exam</strong> 20 %</td>
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<tr>
<td>C- to C+</td>
<td>60—74</td>
<td><strong>Assignments</strong> 15 %</td>
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<tr>
<td>D- to D+</td>
<td>50—59</td>
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<tr>
<td>F</td>
<td>below 50</td>
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**Important Dates:**

- Feb. 2    Last day to elect pass/fail option or change to audit
- Feb. 11   Test 1
- March 8   Test 2
- April 8   Test 3
- April 19  Deadline for course withdrawal
- April 29  Test 4
- May 10    Final exam: 8:00—9:50 am