Calculus I: Math 1241 - Spring 2008

MW 11:00 am –12:15 pm
Location: Denny 120

Instructor Catalin Turc (Cat.Turc@uncc.edu)
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Office hours: MW 9:30-10:50 or by appointment
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Course Information and policies:

- **Text:** *Calculus* : *Concepts & Contexts* 3*rd edition*, by James Stewart
- **Homework**: you are expected to do all homework assignments (usually the odd numbers from each section). You should work out as many problems of each type as necessary to master the material. Few problems will be assigned to be turned in and they will be graded.

  Some homework problems will be assigned on the internet via webwork. To log to **webwork**: Go to *www.math.uncc.edu*, click on Information for students, webwork on-line homework, **Spring 2008 − Math 1241 Common**. Both the username and the password are the first part of your UNCC email address. Make sure you change your password after logging in.

- **Exams and Grading**: Your course grade is based on:

  1. Your performance on midterms: we will have four tests that will each count for 15 percent of the course grade.
  2. Your performance on the final exam : the *final exam* will count for 25 percent of the grade. The final exam will be comprehensive and closed book. It will be in three parts. NO calculators will be allowed for the first hour. The first part is designed to be done without calculators. Part I and II are multiple choice, and Part III is free response.
  3. Your performance on the homework assignments and quizzes: the remaining 15 percent of the grade will be based on *homework assignments* and in-class *quizzes*.

Preceding each of the midterm exams there will be review sessions. There will also be at least two review sessions preceding the final exam.

- **Important dates:**

  1. February 6, 2008 - First Test
  2. March 12, 2008 - Second Test
  3. April 2, 2008 - Third Test
  4. April 21, 2008 - Fourth Test
  5. Monday May 1st, 2008 - Final Exam, 8:00am–10:45am, CHHS 145

- **Absence from Exams or quizzes**: You must take all four midterm exams and the final exam to pass. No make-up exams and quizzes are given.

- **Calculators**: The TI-83 is recommended for this class but any other graphing calculator is fine. The use of a calculator may not be allowed on most quizzes and some tests.

- **Cell phones, etc.:** Cell phones should be turned off prior to entering the classroom.

- **Free tutoring:** is offered by the Tutoring Center (Fret 318K) and in the Math tutoring lab (Fret 315).

- **Course Overview**:

  1. **Week 1:** 1.3 New functions from old functions
     1.5 Exponential functions
     & 1.6 Inverse functions and logarithms
  2. **Week 2:** 1.7 Parametric curves
     2.1 The tangent and velocity
     & 2.2 The limit of a function
  3. **Week 3:** 2.3 Calculating limits using the limit laws
     2.4 Continuity
     & 2.5 limits involving infinity
  4. **Week 4:** Review and **Test 1**

5. **Week 5:** 2.6 Tangents, Velocities and other rates of change
   2.7 Derivatives
   &2.8 Derivatives of a function
6. **Week 6:** 2.9 What does the f' say about f ?
   3.1 Derivatives of polynomials and exponential functions
   & 3.2 The product rule and the quotient rule
7. **Week 7:** 3.3 Rates of change in natural and social sciences
   3.4 Derivatives of trigonometric functions
   & 3.5 The chain rule
8. **Week 8:** Review and **Test 2**
9. **Week 9:** 3.6 Implicit differentiation
   3.7 Derivatives of logarithmic functions
   & 3.8 Linear approximations and differentials
10. **Week 10:** 4.1 Related rates
    4.2 Minimum and maximum values
    & Derivatives and the shapes of curves
11. **Week 11:** 4.4 Graphing with calculus and calculators
    Review and **Test 3**
12. **Week 12:** 4.5 Indeterminate forms and l'Hospital's rule
    & 4.6 Optimization problems
13. **Week 13:** 4.8 Newton's method
    & 4.9 Antiderivatives, Review
14. **Week 14: Test 4**
    Review for the final exam