Math 70 Mathematical Analysis for Life Sciences
M W F 11:45 - 12:50 pm SS209B
Fall 2004
Instructor: Dr. Craig Hildebrand Office: Peters 357 Office Phone: 278 2173
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Office Hours: TBA, Also By Appointment and Chance
Text: Calculus with Applications 8th Edition by Lial, Greenwell, and Ritchey
Course Description: This is a four-unit class covering functions, graphs, limits, derivatives, antiderivatives, Integrals and differential equations, with applications in the Life Sciences.
Prerequisites: Students must meet the ELM requirement.
Course Objectives: Learn the basic principles of Calculus. For the most part we will learn how to find and use the derivative of a function, how to find and use the antiderivative (indefinite integral) of a function, and how to find and use the definite integral of a function. We will learn the concepts of the tangent line to a curve and the area under a curve. We will deal with some basic applications involving these topics. We will also improve your algebra skills. Continue learning to write, understand, construct, verbalize and use Mathematical and logical arguments and reasoning in the course work and in other areas where they might apply. Perhaps most importantly, learn to determine independently, the validity of an argument or approach to a problem. Learn to perform independent experiments using calculators and computers to further these goals. If we can do a reasonable job of reaching these objectives you will be prepared to continue in courses that require this course as a prerequisite.
Course Outline: We will cover the chapters R and 1 through 7 of the text.
  Chapter R: Algebra Reference
  Chapter 1: Linear Functions
  Chapter 2: Nonlinear Functions
  Chapter 3: The Derivative
  Chapter 4: Calculating the Derivative
  Chapter 5: Graphs and the Derivative
  Chapter 6: Applications of the Derivative
  Chapter 7: Integration
Homework: In general you will be assigned a weekly homework assignment. The homework will be scored and returned. I will in general not accept late homework. The homework will be scored and returned. I will drop your two lowest scores. Homework will be worth 15 % of your final grade.
Quizzes: In general you will have a 10 to 20 minute quiz each week. They will be corrected, scored, and returned. I will drop your two lowest scores. Quizzes will be worth 15 % of your final grade. There will be no makeup quizzes.
Exams: There will be four Big Tests. There will not be makeup tests. Each will be approximately one and one half hours long and emphasize material covered since the previous exam. Each will be worth 10% of your final grade. The tentative dates and chapters emphasized on the midterms are as follows:

- **Big Test 1**
  - Date: Friday Sept. 24
  - Chapters: 1, 2

- **Big Test 2**
  - Date: Friday Oct. 15
  - Chapters: 3, 4

- **Big Test 3**
  - Date: Monday Nov. 22
  - Chapters: 5, 6

- **Big Test 4**
  - Date: Monday Dec. 6
  - Chapters: 7

Final: The final will be worth 30% of your final grade and will be comprehensive. The date and time of the final exam is: Wednesday Dec. 15 11:00 – 1:00 pm.

Grades will be assigned based on your percentage score as follows.

- **A** 90 - 100%
- **B** 80 - 89%
- **C** 70 - 79%
- **D** 55 - 69%
- **F** 0 - 55%

Attendance: I expect you to attend all classes. If you know you will miss a class make arrangements with me beforehand. I will do my best to make reasonable accommodations. If you do miss a class it is your responsibility to check on announcements and homework. You know the dates for the tests and the final so do not make plans that interfere. You should assume we might have a quiz on any day. My not warning you is not an excuse for missing the quiz.

I will occasionally spend a small amount of time during class answering homework questions and discussing or reviewing ideas and or problems I see during office hours or in the homework. Due to time constraints you will need to utilize my office hours in order to have the majority of your questions answered. Try the assigned homework as soon as possible so that you might ask me questions as soon as possible. Use Blackboard to ask questions. I will check frequently and try to answer promptly.

Students with special needs and or disabilities need to identify themselves to the university and to the instructor so reasonable accommodation for learning and evaluation within the course can be made.

University Policies regarding conduct of courses, including cheating and plagiarism are located in the Catalog and the Schedule of Courses. Please read these sections.

You cannot use any tobacco products in class. You cannot use cell phones or pagers in class. You cannot do outside work in class. While in my class you will be engaged in activities directly related to the material we are covering. Please read the sections in the Schedule of Classes concerning Disruptive Classroom Behavior.

The above schedule and procedures for this course are subject to change in the event of extenuating circumstances.

The 15 percents add up; respect them.