

# MATH 165

## CALCULUS I

Nicholls State University, Spring 2005

Instructor: Dr. Brian Heck. My office is 106-E Peltier Hall and my office phone number is 448-4383 (4383 on campus). I will be available for office hours 2M (MWF), 2T (TR), and 5M, 6M, 7M (MW) (and by appointment). Please drop by if you have any questions. Also, my email is [brian.heck@nicholls.edu](mailto:brian.heck@nicholls.edu).

Prerequisite: Math 102 or 108 (with a C or better) or advanced placement.

Course Materials: Our required text is Calculus (8th ed.) by Varberg, Purcell, Rigdon (Prentice Hall). You will also need to have (at least) a scientific calculator.

Course Descriptions: (Catalog) Limits, derivatives and integrals of algebraic functions, applications of derivatives and integrals.

Several years ago, a group of the brightest minds of our time got together to discuss the greatest achievements of mankind. Their choice for the number one achievement was not the wheel, relativity, computers, or electricity. It was the Calculus. My goal this semester is to teach you enough calculus to prepare you for Calculus II (or whatever course you will take next), but also to help you understand why this subject is so great.

Grading Structure: We will have four 100-point exams and a 200-point final. If your semester average going into the final is an 'A' or a 'B' you may elect to skip the final. Additionally, we will have random unannounced quizzes. I intend to have many of these, and I'll drop the lowest few. We will form a 100-point grade out of the quizzes we keep. Your semester grade will be computed by dividing the number of points you earn (on the four exams, the quizzes, and the final) by 700 (the maximum possible). You will be assigned a letter grade based on the usual 10% scale (A: 90-100%, B: 80-89%, etc). The schedule for our exams is as follows:

Chapter 2: Sections 4-9  
Chapter 3: Sections 1-2  
**Test #1**    **Thursday, February 3**

Chapter 3: Sections 3-10  
Chapter 7: Section 1-4  
**Test #2**    **Tuesday, March 8**

Chapter 4: Sections 1-7  
Chapter 7: Section 5  
**Test #3 Thursday, March 24**

Chapter 5: Sections 1-8  
Chapter 6: Sections 1-5  
**Test #4 Tuesday, April 26**

**\*\*\*Final Exam - TBA\*\*\***

Course Objectives: To learn as much calculus as humanly possible in one semester, while at the same time developing intuition and an awareness of higher mathematics. Ok, want less vagueness? At the conclusion of the semester, a student should understand limits, continuity, transcendental functions, derivatives, antiderivatives and definite integrals. For even more specificity, a student should be able to:

- evaluate limits including limits at infinity
- find the slope of the tangent line to a function
- find the derivative and antiderivative of a given function
- interpret the meaning of a derivative
- graph a function using derivatives
- find the maximum and/or minimum value of a function
- solve application problems using derivatives and antiderivatives
- find the area under a curve of a given function

Disability: If you have a documented disability that requires assistance, you will need to register with the Office of Disability Services for coordination of your academic accommodations. The Office of Disability Services is located in Peltier Hall, Room 100-A. The phone number is (985) 448-4430 (TDD 449-7002).

Instructor Expectations: Come to class prepared to learn. I expect a high degree of intellectual curiosity. In order to understand what we are doing in class, it will be necessary for you to do problems outside of class, and it would be beneficial to you to read the text prior to our covering the material in class. It is assumed that you are attending this university because you have a desire for higher learning. It is therefore expected that you will pay attention, be respectful of your instructor and fellow students, and follow the Code of Student Conduct. Instances of academic dishonesty will be dealt with severely. If you are caught cheating, you will fail this course. Similarly, if you are a disruptive presence in the classroom, you will be dropped from the class.