

MATH 101

COLLEGE ALGEBRA

Nicholls State University, Fall 2006

Instructor: Dr. Brian Heck. My office is 106-E Peltier Hall and my office phone number is 448-4383. I will be available in my office 9-1 and 2-3 (M, W) and 2-3 (T, Th). Please come by if you have any questions. Also, my email is brian.heck@nicholls.edu.

Prerequisite: A grade of a 'C' or better in Math 003 or advance placement.

Text: *College Algebra: Enhanced with Graphing Utilities* (4th ed.) by Sullivan and Sullivan (Prentice Hall)

Calculator: You will need a graphing calculator. I will use a TI-83 Plus exclusively in class, but any similar model will be fine.

Course Description (catalog): Linear equations and inequalities, linear applications, systems of linear equations, quadratic equations and inequalities, absolute value equations and inequalities, radical equations, functions and graphs, polynomial and exponential and logarithmic functions.

Goals of the course: A student who completes this course will be able to:

- perform graphing calculator functions as specified by the textbook exercises and instructor's requirements
- evaluate algebraic expressions
- find the midpoint of a line segment
- identify and/or approximate intercepts
- determine whether a relation represents a function
- find the value of a function
- find the domain of a function
- obtain information from or about the graph of a function
- calculate and interpret the slope of a line
- find the equation of a line
- solve linear equations or equations that lead to linear equations
- solve problems using direct variation
- solve systems of linear equations in two variables
- identify the vertex and vertex form of a quadratic function
- identify the concavity and max/min value of a quadratic function
- solve quadratic equations for real roots
- construct and analyze functions for modeling purposes
- find the domain of a rational function
- find the asymptotes of a linear fractional function
- analyze the graph of a linear fractional function
- solve problems using inverse variation

- form and evaluate a composite function
- simplify and/or evaluate expressions with rational exponents and radicals
- evaluate exponential and logarithmic expressions
- identify the asymptotes of exponential functions
- analyze the graphs of exponential functions
- solve exponential and logarithmic equations
- find the inverse of a one-to-one function
- work with the properties of logarithms

Grading Policy: We will have three 100-point exams and a 100-point final. Your average on the three exams will comprise 80% of your semester grade, and your score on the final exam will comprise the other 20%. The final exam will consist of 40 multiple-choice items. *A student must correctly answer 20 out of 40 questions (50%) on the final exam to pass the course.* If you score less than 50% on the final you will earn a D in the course unless your actual grade is an F, in which case you'll receive an F. If you score at least 50% on the final, your course grade will be based on the usual 10% scale (A: 90-100%, B: 80-89%, C: 70-79%, etc). In order to exit Math 101, you must receive a course grade of C or better.

Tutoring Lab: Students are encouraged to visit the tutoring lab for two hours per week. The Tutorial & Academic Enhancement Center is located in room 154 Beauregard, (985) 448-4100. Please call to set up an appointment.

Attendance/Expectations: I will not include attendance as part of your course grade. I am not your mother or your parole officer, and this is not high school. I do, however, expect you to attend everyday. You are responsible for any and all material covered in class. If you miss any class, it is up to you to meet with me (if necessary) and catch up on the material you missed. 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.

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).

Closing Remarks: I am here to help you learn this material, and I will do all that I can to achieve that goal. However, whether or not you succeed in this course is primarily up to you. If you don't do the work required (attend class, pay attention, ask questions, and do the homework), it is unlikely that you'll do well. Even if you have always struggled with

mathematics, this is a new semester. Give yourself every opportunity to succeed and let me help you.

**Math 101 – College Algebra
Fall 2006 Class Schedule**

Below I have listed the homework assignments for each day, the sections of our text that may serve as reference, and the tentative dates of our exams. All homework assignments are ***odd problems only*** (unless otherwise noted).

Date	Section(s)	Recommended Homework
Tue, 8-22	1.1	pg. 97 25-43, 55-77
Thu, 8-24	1.2, 1.3	pg. 109 29-69, 77-80 all, 89-107; pg. 121 11-33, 45-93
Tue, 8-29	1.5	pg. 139 9-29, 39-43, 79-99
Thu, 8-31	1.6	pg. 147 7-49 every other odd
Tue, 9-5	1.8	pg. 176 7-113
Thu, 9-7	Test #1 Review	
Tue, 9-12	***TEST #1***	
Thu, 9-14	2.1, 2.2	pg. 203 17-47; pg. 216 19-61, 65
Tue, 9-19	2.3, 2.4	pg. 224 9-27; pg. 237 11-20 all, 21-51
Thu, 9-21	2.5	pg. 250 11-49
Tue, 9-26	2.6, 2.8	pg. 263 25-37; pg. 282 1-7
Thu, 9-28	3.1	pg. 312 11-18 all, 35-65, 71-83
Tue, 10-3	3.3, 3.4	pg. 344 11-27, 41, 42; pg. 356 7, 9, 10, 63-68 all
Thu, 10-5	Test #2 Review	
Tue, 10-10	***TEST #2***	
Thu, 10-12	Fall Break	
Tue, 10-17	4.1, 4.2	pg. 402 7-41; pg. 415 17-22 all, 37-67
Thu, 10-19	4.3	pg. 432 11-19, 53-85
Tue, 10-24	4.4	pg. 444 9-43, 57-60 all, 91-109
Thu, 10-26	4.5	pg. 456 7-21, 31-71, 79-84 all
Thu, 10-31	4.6	pg. 461 5-37, 51-63
Tue, 11-2	4.7	pg. 470 3-29
Thu, 11-7	4.8	pg. 482 1-13
Thu, 11-9	5.1	pg. 516 17-39
Tue, 11-14	Test #3 Review	
Thu, 11-16	***TEST #3***	
Tue, 11-21	Thanksgiving	
Thu, 11-23	Thanksgiving	
Tue, 11-28	Final Review	
Thu, 11-30	Final Review	