College Algebra

Course Description
The course continues the development of algebra from MATH 0399, Intermediate Algebra. A review of properties of numbers and linear equations and inequalities is included. Topics are quadratic equations and inequalities, graphs, logarithms, and exponentials, solutions of polynomial equations and systems of equations. It counts as the mathematics component of the University Core Curriculum.

Learning Objectives
On successful completion of this course you should be able to do the following [corresponding text book section numbers in brackets]:

1. Solve linear equations in one variable. [1.1]
2. Solve formulas for indicated variables. [1.1]
3. Solve applications of linear equations and problems involving linear modeling. [1.2]
4. Solve equations using the quadratic formula. [1.4]
5. Solve problems involving quadratic modeling. [1.5 & 3.1]
6. Solve equations with rational expressions. [1.6]
7. Solve equations with radical expressions. [1.6]
8. Solve equations with absolute value expressions. [1.8]
9. Solve polynomial inequalities. [1.7]
10. Solve rational inequalities. [1.7]
11. Solve absolute value inequalities. [1.8]
12. Find radius, center, domain and range of the circle and graph it. [2.1]
13. Solve applied problems using distance and midpoint formulas. [2.1]
14. Decide whether a relation defines a function. [2.2]
15. Find domain and range of the function from the graph. [2.2]
16. Find domain of the function from the equation. [2.2]
17. Determine values for which a function is increasing, decreasing and/or constant. [2.2]
18. Graph linear functions. [2.3 & 2.4]
19. Find slope given a description of the line. [2.3 & 2.4]
20. Given an equation, find slope and sketch the graph. [2.3 & 2.4]
21. Find and interpret rate of change. [2.3 & 2.4]
22. Find composition of functions. [2.7]
23. Analyze graphs of functions using transformations. [2.5 & 2.6]
24. Graph quadratic functions and find vertex (min/max), axis of symmetry, domain and range. [3.1]
25. Solve problems about quadratic models. [1.5 & 3.1]
26. Decide whether a function is one-to-one. [4.1]
27. Determine whether functions are inverses of each other. [4.1]
28. Use graph to find inverse function values. [4.1]
29. Use the change-of-base theorem. [4.4]
30. Use the product, quotient and power properties of logarithms. [4.3]
31. Solve exponential equations. [4.2 & 4.5]
32. Solve logarithmic equations. [4.3 & 4.5]
33. Use exponential expressions and functions to model and solve real world situations. [4.5 & 4.6]
34. Use logarithmic expressions and functions to model and solve real world situations. [4.4 & 4.5]
35. Set up and solve systems of two equations by substitution, elimination, graphing and Cramer's rule. [5.1]
Major Course Requirements
Successful completion of Intermediate Algebra (*Math 0399*) or suitable placements are prerequisites for this course. The following assessments will be given during the semester: online homework and quizzes (20%), group/daily work (20%), skills assessments (20%), qualitative assessments (10%) and a final exam (30%).

Required or Recommended Readings
*College Algebra*, by Lial, Hornsby and Schneider, Pearson Addison Wesley, 10th Ed. A TI-83 or TI-84 graphing calculator is required for the course. Other models may be used but will not be supported by the instructor. MyMathLab is utilized to help you master a variety of algebraic skills in the course via online homework and quizzes. The course instructor code will be given to you in class on the first day of the semester. You have the option of buying the required text (as a bundle) or buying a Course Access Online to access the text electronically.

Course Policies
- Course grade will be based upon the percentage of the total possible points that a student earns and the following grading scale: A: >90% of total points, B: >80% of total points, C: >70% of total points, D: >60% of total points.
- Attendance is mandatory. Attendance will be checked each class period.
- I am available during regular office hours or through special arrangement.
- Each student is expected to take notes during lectures, and keep a record of his/her assignments, tests and over all grades.
- **Homework** will be assigned at each class meeting that we cover new material.
- Several **Online Homework** and **Online Quizzes** will be given during the semester.
- **Group/Daily Work** will be based on time spent in class in groups. The purpose of the groups is to increase your active participation in the class. Daily work also includes preparation for class.
- **Skills Assessments**: 4 skill assessments will be given during the semester. They will be brief and scored for mastery. Full credit will be given for a score of 70% or more on that topic. The skills assessments may be repeated once with 80% of credit if mastery is shown on the second try.
- **Qualitative Assessments**: 4 quantitative assessments will be given during the semester. While they will involve some calculation or solution of a mathematical problem, most credit will be given for explanations of the work done. Emphasis will be on the verbal description of your solution.
- Last day of class is **August 5th**.
- The **Final Exam** will be held 4:00-5:55PM, **August 5th, 2010**. It will be comprehensive with multiple choice questions.

Academic Integrity/Plagiarism.
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or
examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in failing the course.

Dropping a Class
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. (July 22nd, 2011) is the last day to drop a class with an automatic grade of “W” this term.

Preferred methods of scholarly citations
Classroom/professional behavior
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

Grade Appeals
As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

Disabilities Accommodations
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Driftwood 101. If you are a returning veteran and are experiencing cognitive and/or physical
access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

**Tentative Course Outline**

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