TEXARKANA COLLEGE

Syllabus: College Algebra

Course Number: MATH 1314

Semester & Year: Fall 2013

Instructor Information

Name: Professor Robert A. Jones
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Office Hours: Will be posted on office door

Textbook Information: COLLEGE ALGEBRA, An Early Function Approach, Second edition – Robert Blitzer. Pearson 2010.

The student is required to get a graphing calculator for this course.

Student Learning Outcomes for the Course

Upon successful completion of this course, students will be able:

1. To evaluate a function from its graph, formula, or equation.
2. To determine if a relation is a function and state its domain and range given the graph or equation.
3. To perform algebraic operations and compositions with functions.
4. To categorize basic functions given their graphs or equations.
5. To graph the inverse of a function whose graph is given.
6. To solve linear, quadratic, logarithmic, exponential, absolute value, radical and miscellaneous higher order equations.
7. To solve polynomial and rational inequalities.
8. To graph linear, quadratic, absolute value, radical, polynomial, piecewise, exponential and logarithmic functions and selected inverses.
9. To use symmetry and transformations to sketch graphs.
10. To solve linear and nonlinear systems of equations.
11. To set up and solve applications involving functions and relationships.

LINEAR AND QUADRATIC FUNCTIONS

1. Graph linear and quadratic functions
2. Identify the vertex of a parabola

3. Solve linear and quadratic equations
4. Calculate and apply slope
5. Write equations of lines
6. Apply concepts of parallel and perpendicular lines
7. Perform operations with complex numbers

Students will be required to do the following:

POLYNOMIAL AND RATIONAL FUNCTIONS

1. Analyze graphs of polynomials using end-behavior, leading coefficient test.
2. Perform synthetic division and long division.
3. State and use the Remainder Theorem.
4. State and use the Factor Theorem.
5. State and use the Rational Zero Theorem.
6. Solve polynomial equations.
7. Find vertical, horizontal and slant asymptotes.
8. Graph rational functions.

EXPONENTIAL AND LOGARITHMIC FUNCTIONS

1. Define the exponential function.
2. Graph exponential functions.
3. Use exponential models to solve problems.
4. Define the logarithmic function.
5. Use logarithmic models to solve problems.
6. Solve logarithmic or exponential equations.

MATRICES, LINEAR AND NON-LINEAR SYSTEMS

1. Solve Linear and Non-Linear systems using substitution.
2. Solve a Linear System using elimination.
3. Solve a linear system using the Gauss-Jordan Method.
4. Perform operations on matrices.
5. Evaluate determinants.

Student Requirements for Completion of the Course and Due Dates
To complete the students must show up to class to take daily quizzes, major tests and the student must also maintain a math binder that will include all quizzes, tests, homework, handouts and a report on a mathematician. This binder will be turned in on the date of the final exam to be graded. To get credit for this course the student must pass the Math033 final exam and get a grade of C or better in the course.
Student Assessment

You have the following possibilities for earning points:

(1) Daily quizzes - 10% Final Grade

(2) Math Binder - 15% Final Grade

(3) Major Tests/Mid Term - 50% Final Grade

(4) Final Exam - 25% Final

Grading Scale

Grade	
A	90-100
B	80-89
C	70-79
D	60-69
F	59-below

Class Schedule
Absentee Policy

Attendance in a math class is very important, therefore a student will be dropped from math1314 if they have (5) five absentees. The student will be contacted on the fourth absence and a meeting will be scheduled to talk about the absentees. If the student misses two more class they will be dropped.

Make-up Policy

It is important that students attend every math class, therefore there will not be any makeup opportunities given for quizzes and test. However if a student misses a major exam the students grade on the final exam will be put in for the missing score to compute the students class average.

Academic Integrity Statement

Scholastic dishonesty, involving but not limited to cheating on a test, plagiarism, collusion, or falsification of records will make the student liable for disciplinary action after being investigated by the Dean of Students.

Proven violations of this nature can result in the student being dropped from the class with an "F".

This policy applies campus wide, including TC Testing Center, as well as off-campus classroom or lab sites, including dual credit campuses. This information can be found in the Student Handbook at https://texarkanacollege.edu.

Disability Act Statement:

Texarkana College complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Larry Andrews at 903.823.3283, or go by the Recruitment, Advisement, and Retention Department located in the Administration building for personal assistance.

If you have an accommodation letter from their office indicating that you have a disability which requires academic accommodations, please present it to me so we can discuss the accommodations that you might need for this class. *It is best to request these changes at the beginning if not before the start of class* so there is ample time to make the accommodations..

Financial Aid:

Attention! Dropping this class may affect your funding in a negative way! You could owe money to the college and/or federal government. Please check with the Financial Aid office before making a decision.

Name:_____ Date:_____