

MATH 1111: College Algebra

Summer Semester 2019

Instructor: Dr. Abdollah Khodkar
Office: Boyd 309
Phone: (W) 678-839-4126, (Cell) 404-384-6131
Fax: 678-839-6490
Email: akhodkar@westga.edu

Hours Credit: 3 hours

Prerequisites: None

Class Time and Place: Monday and Wednesday, 11am-1:30pm Pafford 112

Courses Description: This course is a functional approach to algebra that incorporates the use of technology. Emphasis will be placed on the study of functions, and their graphs, inequalities, and linear, quadratic, piece-wise defined, polynomial, rational, exponential and logarithmic functions. Appropriate applications will be included.

TEXT: College Algebra and Trigonometry, by Julie Miller and Donna Gerken (McGraw Hill Education)

Office Hours: Monday and Wednesday 10am-11am and 2:30pm-3:30pm.

Learning Outcomes: Students should be able to demonstrate:

1. An understanding of the equations of circles and lines
2. An understanding of functions and how to graph functions
3. An understanding of operations on functions including function composition
4. An understanding of polynomial graphs, including intercepts and end-behavior
5. An understanding of how to find the zeros of a polynomial and how to factor polynomials
6. An understanding of inverse functions and how to find them graphically and algebraically
7. An understanding of the properties of exponential and logarithmic equations
8. An understanding of how to solve exponential and logarithmic equations
9. An understanding of how to solve a system of equations

Topics include

Chapter R: Review of Prerequisites

R2 Integer Exponents and Scientific Notation

R3 Rational Exponents and Radicals

R4 Polynomials and Multiplication of Radicals

R5 Factoring

Chapter 1: Equations and Inequalities

1.1 Linear Equations and Rational Equations

1.2 Applications of Linear and Rational Equations

1.3 Complex Numbers

1.4 Quadratic Equations

1.5 Applications of Quadratic Equations

1.6 More Equations and Applications

1.7 Linear, Compound and Absolute Value Inequalities

Chapter 2: Functions and Relations

2.1 The Rectangular Coordinate System

2.2 Circles

2.3 Functions and Relations

2.4 Linear Equations in Two Variables and Linear Functions

2.5 Applications of Linear Equations and Modeling

2.6 Transformations of Graphs

2.7 Analyzing Graphs of Functions and Piecewise-Defined Functions

2.8 Algebra of Functions and Function Composition

Chapter 3: Polynomials and Rational Functions

3.1 Quadratic Functions and Applications

3.2 Introduction to Polynomial Functions

3.3 Division of Polynomials

3.4 Zeroes of Polynomials

3.7 Variation

Chapter 4: Exponential and Logarithmic Functions

4.1 Inverse Functions

4.2 Exponential Functions

4.3 Logarithmic Functions

4.4 Properties of Logarithms

4.5 Exponential and Logarithmic Equations

4.6 Modeling with Exponential and Logarithmic Functions

Chapter 9: System of Equations and Inequalities

9.1 Systems of Equations in Two Variables and Applications

9.2 Systems of Equations in Three Variables and Applications

Homework: I will upload homework problems that are not to be turned in and graded but that are meant to reflect the sort of questions you can expect on tests and final exam.

Rescheduling tests/final: If you miss a test or the final, you must have a *university-approved excuse* and you must **make an arrangement with me in advance** in order to take a make-up test/exam.

Calculators: You are not allowed to use “**advanced**” calculators such as TI-84 or better in the test or final exam.

Tests: There will be two online tests. Each will be worth 30%.

Test 1: Monday June 17, 2019

Test 2: Monday July 1, 2019

(Tests dates are subject to change.)

Final exam: Wednesday July 24, 2019, 11am-1pm.

The final exam is worth 40% toward your final grade.

There is no extra credit in this course.

Grading Scale:

- A= 90-100%
- B= 80-89%
- C= 70-79%
- D= 60-69%
- F= 0-59%

Grading: Your final grade will be determined as follows:

Test 1: 30%,

Test 2: 30%

Final exam: 40%

Students, please carefully review the following information at this link

<https://www.westga.edu/administration/vpaa/common-language-course-syllabi.php>

It contains important material pertaining to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

