Math 1314: College Algebra  
Fall 2017 Syllabus

Instructor Information
Shayla Hoffman  
Glen Rose High School Room 106  
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Tutorials

<table>
<thead>
<tr>
<th>Monday: 3:40-4:15 pm</th>
<th>Tuesday: 7:15-7:45 am</th>
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</thead>
<tbody>
<tr>
<td>Thursday: 3:40-4:15 pm</td>
<td>(or by appointment)</td>
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</table>

Major Course Requirements

Tests
Tests will be given at the end of units. There will also be a cumulative final examination. The exact dates of these tests will be announced in class.

Daily Work
Daily work will consist primarily of traditional homework problems completed on a computer-based system. Late work is not accepted. To compensate for unavoidable circumstances, however, I will drop your lowest homework score at the end of each six weeks.

Quizzes
Quizzes will be given periodically over homework assignments.

Make-Up Work
If you are absent due to a school activity, it is your responsibility to get your assignment BEFORE you leave. The due date will not change for a school activity. If you are absent for other reasons, it is your responsibility to get the assignment upon your return. Quizzes and tests must be completed before or after school, by the Tuesday following the absence.

Calculations
Daily Grades: 30% (Homework and in class activities)

Major Grades: 70 % (Tests, Projects, Quizzes)

90 and above is an A, 80-89 is a B, 70-79 is a C, 60-69 is a D, and less than 60 is an F
Student Learning Outcomes

1. **Students will demonstrate factual knowledge including the mathematical notation and terminology used in this course.** Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in college algebra including the real numbers, exponents, radicals, polynomials, factoring, functions, equations, inequalities, and graphs.

2. **Students will describe the fundamental principles including the laws and theorems arising from the concepts covered in this course.** Students will identify and apply the laws and formulas that result directly from the definitions; for example, the quadratic formula, rules of exponents, and properties of logarithms.

3. **Students will apply course material along with techniques and procedures covered in this course to solve problems.** Students will use the facts, formulas, and techniques learned in this course to simplify algebraic expressions, graph functions, and solve inequalities, equations and systems of equations.

4. **Students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields.** Students will acquire a level of proficiency in the fundamental concepts and applications necessary for further study in academic areas requiring college algebra as a prerequisite, or for work in occupational fields requiring a background in algebra. These fields might include education, business, finance, marketing, computer science, physical sciences, and engineering, as well as mathematics.

Required Texts or Readings

*College Algebra*, Fifth Edition, by Blitzer

**P. Prerequisites: Fundamental Concepts of Algebra**
- P.1 Algebraic Expressions, Math Models, and Real Numbers
- P.2 Exponents and Scientific Notation
- P.3 Radicals and Rational Exponents
- P.4 Polynomials
- P.5 Factoring Polynomials
- P.6 Rational Expressions

**1. EQUATIONS AND INEQUALITIES**
- 1.2 Linear Equations and Rational Equations
- 1.3 Models and Applications
- 1.4 Complex Numbers
- 1.6 Quadratic Equations
- 1.7 Linear Inequalities and Absolute Value Inequalities

**2. Functions and Graphs**
- 2.1 Basic Functions and Their Graphs
- 2.2 More on Functions and their Graphs
- 2.3 Linear Functions and Slope
- 2.4 More on Slope
- 2.5 Transformations of Functions
- 2.6 Combinations of Functions, Composite Functions
- 2.7 Inverse Functions

**3. Polynomial and Rational Functions**
- 3.1 Quadratic Functions
- 3.2 Polynomial Functions and Their Graphs
- 3.3 Dividing Polynomials: Remainder and Factor Theorem
- 3.4 Zeros of Polynomial Functions
- 3.5 Rational Functions and Their Graphs

**4. Exponential and Logarithmic Functions**
- 4.1 Exponential Functions
- 4.2 Logarithmic Functions
- 4.3 Properties of Logarithms
Subject Matter

We will be studying the basics of algebra including exponents and radicals, logarithms, factoring, algebraic quotients, systems of equations, inequalities, absolute value, complex numbers, and quadratic equations.

The subject matter schedule listed below is tentative, and subject to change and adaptation. For current, updated information about course topics, contact the instructor.

<table>
<thead>
<tr>
<th>Week</th>
<th>Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P.1, P.2</td>
</tr>
<tr>
<td>2</td>
<td>P.4, P.5</td>
</tr>
<tr>
<td>3</td>
<td>P.4, P.6</td>
</tr>
<tr>
<td>4</td>
<td>Review, Test P, 1.2</td>
</tr>
<tr>
<td>5</td>
<td>1.3, 1.4, 1.6</td>
</tr>
<tr>
<td>6</td>
<td>1.7, 5.1, 5.2, Review</td>
</tr>
<tr>
<td>7</td>
<td>Test 1, 2.1, 2.2, 2.3, 2.4</td>
</tr>
<tr>
<td>8</td>
<td>12.5, 2.6, 2.7</td>
</tr>
<tr>
<td>9</td>
<td>Review, Test 2, 3.1</td>
</tr>
<tr>
<td>10</td>
<td>3.2, 3.3, 3.4</td>
</tr>
<tr>
<td>11</td>
<td>3.5, 5.3</td>
</tr>
<tr>
<td>12</td>
<td>Review, Test 3, 4.1</td>
</tr>
<tr>
<td>13</td>
<td>4.2, 4.3, 4.4</td>
</tr>
<tr>
<td>14</td>
<td>4.5, Review, Test 4</td>
</tr>
<tr>
<td>15</td>
<td>Core Assessment, Review</td>
</tr>
<tr>
<td>16</td>
<td>Final Exam</td>
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Core Curriculum Student Learning Objectives

- **Core Objective (Critical Thinking):** Gather, analyze, evaluate, and synthesize information relevant to a question or issue. (CT1)
  - **Course Student Learning Objective:** Students will use mathematical facts, formulas, and techniques to analyze and interpret information related to algebraic expressions and equations.
  - **Assessment:** Assessment exam that demonstrates CT1.

- **Core Objective (Communication):** Develop, interpret, and express ideas through effective visual communication. (CS3)
  - **Course Student Learning Outcome:** Students will create and interpret graphs of algebraic and transcendental functions.
- **Assessment**: Assessment exam that demonstrates CS3.
- **Core Objective (Empirical and Quantitative Skills)**: Manipulate and analyze observable facts and arrive at an informed conclusion. (EQS2)
  - **Course Student Learning Outcome**: Students will use the facts, formulas, and techniques learned in this course to draw conclusions about the properties of various algebraic expressions, equations, and functions.
  - **Assessment**: Assessment exam that demonstrates EQS2.

**Accommodations for Disabilities**
Persons with disabilities which may warrant academic accommodations must contact the Office of Student Services in Suite 112, Houston Harte University Center (325) 942-2047 ([studentservices@angelo.edu](mailto:studentservices@angelo.edu)) in order to request such accommodations prior to any accommodations being implemented. You are encouraged to make this request early in the semester so that appropriate arrangements can be made.

**Absences for Religious Holy Days**
Any student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence.

**Honor Code**
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is available on the web at [http://www.angelo.edu/forms/pdf/honorcode5.pdf](http://www.angelo.edu/forms/pdf/honorcode5.pdf)

*Students must also uphold the guidelines as listed in the GRHS Student Handbook*

**Disclaimer**
This syllabus is current and accurate as of its posting date, but will not be updated. For the most complete and up-to-date course information, contact the instructor.