



*HLC Accreditation Evidence*

Title: Basic Algebra

Office of Origin: Vice President

**BARTON COMMUNITY COLLEGE  
COURSE SYLLABUS**

**I. GENERAL COURSE INFORMATION**

<u>Course Number:</u>	MATH 1821
<u>Course Title:</u>	Basic Algebra
<u>Credit Hours:</u>	3
<u>Prerequisite:</u>	MATH 1809 Basic Applied Mathematics with a grade of C or better or MATH 1811 Preparatory Mathematics with a grade of C or better or appropriate placement score
<u>Division/Discipline:</u>	Academic Division/Mathematics
<u>Course Description:</u>	Topics cover fundamental algebraic operations, factoring, algebraic fractions, linear and quadratic equations, exponents and radicals.

**II. INSTRUCTOR INFORMATION**

**III. COLLEGE POLICIES**

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. [Most up-to-date documents are available on the College webpage.]

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu).

**IV. COURSE AS VIEWED IN THE TOTAL CURRICULUM**

Basic Algebra is designed for students that ultimately need College Algebra credit. This course is a developmental course and does not transfer well nor does it count towards graduation. The three-credit hour Intermediate Algebra is the course that sequentially follows Basic Algebra. Under no circumstances should a student that completes Basic Algebra jump ahead and take the three credit hour College Algebra course.

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course, as approved by the Kansas Board of Regents. [http://kansasregents.org/transfer\\_articulation](http://kansasregents.org/transfer_articulation).

## **V. ASSESSMENT OF STUDENT LEARNING**

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

- A. Students should be able to successfully perform arithmetic and algebraic manipulation of mathematical expressions.
  - 1. Evaluate arithmetic expressions (including absolute values) using the order of operations and properties of real numbers
  - 2. Evaluate algebraic expressions
  - 3. Apply the laws of exponents to simplify expressions containing integer exponents
  - 4. Express numbers in scientific notation
  - 5. Perform addition, subtraction, multiplication and division on polynomial expression
  - 6. Factor expressions with common factors, expressions that require grouping, trinomial expressions, and difference of square expressions
  - 7. Perform addition, subtractions, multiplication, and division on rational expressions
  - 8. Evaluate radicals, approximating those that are irrational
  - 9. Simplify numeric radicals using the product and quotient rules
  
- B. Students should be able to successfully solve algebraic equations and inequalities.
  - 1. Solve linear equations in one variable
  - 2. Solve proportion equations
  - 3. Solve linear inequalities in one variable showing solutions on a number line
  - 4. Solve literal equations that do not require factoring
  - 5. Solve quadratic equations by factoring
  - 6. Develop and solve mathematical models including number, geometry, and percent applications
  
- C. Students should be able to successfully plot graphs on a coordinate plane.
  - 1. Plot points on a coordinate plane
  - 2. Graph linear equations, by plotting points
  - 3. Graph linear equations using intercepts
  - 4. Graph linear equations using the y-intercept and slope
  
- D. Students should be able to successfully analyze equations and graphs.
  - 1. Identify the x-intercept, y-intercept, and slope of the line given its graph
  - 2. Identify the x-intercept, y-intercept, and slope of the line given its equation
  - 3. Determine the equation of a line given its graph, its slope and y-intercept, and its slope and a point
  - 4. Determine equations of both horizontal and vertical lines
  - 5. Determine whether or not an equation is linear
  - 6. Calculate the slope of a line passing through two given points

## **VI. INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

## **VII. TEXTBOOKS AND OTHER REQUIRED MATERIALS**

**VIII. REFERENCES**

**IX. METHODS OF INSTRUCTION AND EVALUATION**

**X. ATTENDANCE REQUIREMENTS**

**XI. COURSE OUTLINE**