Course Information

Course Title	Beginning Algebra
Course Prefix, Num. and Title	MATH 0308
Division	Math & Physical Sciences
Department	Math/College Readiness Math
Course Type	Academic General Education Course (from ACGM, but not WCJC Core)
Course Catalog Description	Topics include real number operations, solving linear equations and inequalities, the introduction to the rectangular coordinate system, graphing linear equations and inequalities, properties of exponents, performing operations with polynomials, and factoring polynomials. This course must be successfully completed with a "C" or better.
Pre-Requisites	TSI Placement
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours: Lab/Other Hours	3:3:0
Equated Pay Hours	3
Lab/Other Hours Breakdown: Lab Hours	0
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

Unit 1 – Review of Real Numbers
1.2 – Symbols and Sets of Numbers
1.3 – Fractions and Mixed Numbers
1.4 – Exponents, Order of Operations, Variable Expressions, and Equations
1.5 – Adding Real Numbers
1.6 – Subtracting Real Numbers
1.7 – Multiplying and Dividing Real Numbers

Unit 2 – Equations, Inequalities, and Problem Solving
2.1 – Simplifying Algebraic Expressions
2.2 – The Addition and Multiplication Properties of Equality
2.3 – Solving Linear Equations
2.4 – An Introduction to Problem Solving
2.5 – Formulas and Problem Solving
2.8 – Solving Linear Inequalities

Unit 3 – Graphing
3.1 – Reading Graphs and the Rectangular Coordinate System
3.2 – Graphing Linear Equations
3.3 – Intercepts
3.4 – Slope and Rate of Change
3.5 – Equations of Lines

Unit 4 – Exponents and Polynomials
5.1 – Exponents
5.2 – Polynomial Functions and Adding and Subtracting Polynomials
5.3 – Multiplying Polynomials
5.4 – Special Products
5.5 – Negative Exponents and Scientific Notation
5.6 – Dividing Polynomials

Unit 5 – Factoring Polynomials
6.1 – The Greatest Common Factor and Factoring by Grouping
6.2 – Factoring Trinomials of the Form $x^2 + bx + c$
6.3 – Factoring Trinomials of the Form $ax^2 + bx + c$ and Perfect Square Trinomials

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

1. Perform operations on real numbers.
2. Perform operations on and evaluate algebraic expressions, including polynomials.
3. Understand properties of and demonstrate the ability to write, solve, and graph linear equations and linear inequalities.
4. Apply the rules for exponents to simplify expressions.
5. Understand and apply factoring rules to polynomial expressions.
6. Solve mathematic and scientific formulas for a specified variable.

Methods of Assessment:

Final Exam (Required)

Other Methods of Assessment:
- Hour Exams
- Homework
- Quizzes
- Short Answer
- Discussion Board
- Participation
- Projects

Required text(s), optional text(s) and/or materials to be supplied by the student:

"Beginning and Intermediate Algebra" by Elyan Martin-Gay, Pearson, 6th edition.

Students must have computer access to the WCJC website, their WCJC student email and online accounts. WCJC has open computer labs, with internet access, on all campuses for students to use.

Suggested Course Maximum:

30

List any specific or physical requirements beyond a typical classroom required to teach the course.

None

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

A. Departmental Final Exam   15-30%
B. Other Course Requirements   70-85%

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

Curriculum Checklist:

☒**Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.

☐**Administrative WCJC Core Course**. Attach the Core Curriculum Review Forms

        ☐Critical Thinking

        ☐Communication

        ☐Empirical & Quantitative Skills

        ☐Teamwork

        ☐Social Responsibility

        ☐Personal Responsibility

☐**WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist