

Course Information

Course Title	Support Course for College Algebra
Course Prefix, Num. and Title	NCBM 0314
Division	Math & Physical Sciences
Department	Math/College Readiness Math
Course Type	Academic General Education Course (from ACGM, but not WCJC Core)
Course Catalog Description	<p>A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.</p> <p>This course is designed to help students accelerate through the developmental math sequence in one semester. It focuses on the college readiness concepts necessary to successfully complete College Algebra concurrently. This class includes directed review, just-in-time instruction, and emphasis on math specific study skills. This course must be successfully completed with a "C" or better to satisfy TSI requirements.</p>
Pre-Requisites	TSI Placement and Advisor/Instructor Recommendation
Co-Requisites	MATH 1314 College Algebra

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	3:3:0
Lab/Other Hours	
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 – Equations

Solving Linear Equations with and without Fractions

Simplifying Square Roots

Factoring Trinomials

Solving Quadratic Equations

Multi-Step Factoring

Unit 2 – Inequalities, Absolute Value and the Rectangular Coordinate System

Solve Linear Inequalities

Absolute Value

Finding Domain

Evaluating Functions

Rectangular Coordinate System

Distance

Slope

Writing and Graphing Linear Equations

Finding Intercepts

Unit 3 – Functions

Parent Functions

Transformations of Functions

Composition of Functions

Inverse Functions

Unit 4 – Polynomial and Rational Functions

Characteristics of Parabolas

End Behavior and finding Zeros

Synthetic Division

Finding Asymptotes

Unit 5 – Exponential and Logarithmic Functions; Systems of Equations; Matrices

Exponent Rules

Properties of Logarithms

Exponential and Logarithmic Equations

Systems of Equations

Multiplying Matrices

Course Learning Outcomes:

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

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.

Methods of Assessment:

Optional 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:

"College Algebra" by Gustafson and Hughes, Cengage, 12th edition.
Knewton Alta Single term access software.

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:

15

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. MATH 1314 Grade 25%
- B. Other Course Requirements 75%

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