Wharton County Junior College

Administrative Master Syllabus

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	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. 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 class must be successfully completed with a "C" or better to satisfy TSI requirements.
Pre-Requisites	TSI Placement or MATH 0308
Co-Requisites	MATH 1314 College Algebra

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
Department Head:	Yvonne Smith Digitally signed by Yvonne Smith DN: cn=Yvonne Smith, o=WCJC, ou=Math and Physical Science, email=smithy@wcjc.edu, c=US Date: 2023.08.05 09:55:52 -05'00'	
Division Chair:	Jennifer Mauch Digitally signed by Jennifer Mauch DN: cn=Jennifer Mauch, o, ou=Wharton County Junior College, email=mauchj@wcjc.edu, c=US Date: 2023.08.04 15:22:32 -05'00'	
VPI:	Leigh Ann Collins Digitally signed by Leigh Ann Collins Date: 2023.08.14 12:37:57 -05'00'	

Wharton County Junior College

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 and Inequalities
Solving Linear Equations with and without Fractions
Simplifying Square Roots
Factoring Trinomials
Solving Quadratic Equations
Multi-Step Factoring
Solve Linear Inequalities
Absolute Value

Unit 2 –Functions and Graphs
Finding Domain
Evaluating Functions
Rectangular Coordinate System
Distance
Slope
Writing and Graphing Linear Equations
Finding Intercepts
Parent Functions
Transformations of Functions
Composition of Functions
Inverse Functions

Unit 3 – Polynomial and Rational Functions
Characteristics of Parabolas
End Behavior and finding Zeros
Long Division
Synthetic Division
Finding Asymptotes

Unit 4 – Exponential and Logarithmic Functions; Systems of Equations; Matrices
Exponent Rules
Properties of Logarithms
Exponential and Logarithmic Equations
Systems of Equations
Multiplying Matrices

Wharton County Junior College

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:

- 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 Robert Blitzer, Pearson, 8th 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 = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 59 or below

Wharton County Junior College

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