

CATALOG INFORMATION

Dept and Nbr: MATH 200 Title: B-STEM CONCUR. SUPPORT
Full Title: B-STEM Concurrent Support
Last Reviewed: 4/13/2020

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 105.00

Title 5 Category: AA Degree Applicable
Grading: P/NP Only
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:
Formerly:

Catalog Description:
A review of the prerequisite skills and competencies for MATH 25, MATH 27, MATH 9 and MATH 16. Intended for students concurrently enrolled in one of these four courses who need a review of the necessary algebra skills. Topics include effective learning strategies and a review of concepts from intermediate algebra.

Prerequisites/Corequisites:
Concurrent Enrollment in MATH 25 OR MATH 27 OR MATH 9 OR MATH 16

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: A review of the prerequisite skills and competencies for MATH 25, MATH 27, MATH 9 and MATH 16. Intended for students concurrently enrolled in one of these four courses who need a review of the necessary algebra skills. Topics include effective learning strategies and a review of concepts from intermediate algebra. (P/NP Only)
Prerequisites/Corequisites: Concurrent Enrollment in MATH 25 OR MATH 27 OR MATH 9

OR MATH 16

Recommended:

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
IGETC:	Transfer Area	Effective:	Inactive:
CSU Transfer:		Effective:	Inactive:
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Not Certificate/Major Applicable

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Apply intermediate algebra topics of simplifying expressions and analyzing functions.
2. Apply intermediate algebra topics of solving equations, inequalities, and systems of equations.

Objectives:

Students will be able to:

1. Apply effective learning strategies for transfer level mathematics.
2. Review simplifying expressions, including rational, exponential, logarithmic, and radical.
3. Review concept of function including evaluation, graphing, domain and range.
4. Review graphical and algebraic methods for solving linear and nonlinear equations.
5. Review graphs of conic sections, including parabolas, ellipses, and hyperbolas.
6. Review algebraic and graphical methods for solving linear and nonlinear systems of equations.
7. Review graphical solutions to systems of linear inequalities.

Topics and Scope:

I. Topics Related to Developing Effective Learning Skills

A. Study skills

1. organization and time management
2. test preparation
3. test-taking skills

B. Self-assessment: using performance criteria to judge and improve work, analyzing and correcting test errors

C. Use of resources: strategies identifying, utilizing, and evaluating the effectiveness of

resources in improving learning, e.g., peer study groups, computer resources, lab resources, tutoring resources

II. Review of Uses of Technology

- A. Evaluate and graph functions
- B. Solve equations and inequalities graphically

III. Review of Functions

- A. Definition of relation, function, domain, and range
- B. Function notation and evaluation
- C. Interval notation, intersection, and union
- D. Analyze graphs of linear, polynomial, absolute value, radical, exponential, and logarithmic functions with and without graphing technology
- E. Mathematical models and other applications of linear and nonlinear functions

IV. Review of Equations and Inequalities

- A. Equations
 - 1. Solutions of literal equations
 - 2. Algebraic and graphical solutions of linear, quadratic, radical, rational, rational, absolute value, exponential, and logarithmic equations
 - 3. Linear equations in two variables
- B. Inequalities
 - 1. Algebraic solutions to absolute value inequalities
 - 2. Graphical solutions of linear and nonlinear inequalities using graphing technology

V. Review of Quadratic Functions

- A. Vertex and general forms
- B. Discriminant
- C. Solutions to quadratic equations using factoring, quadratic formula, and completing the square

VI. Review of Simplifying Expressions

- A. Properties of exponents
- B. Simplification of radical expressions
- C. Simplification of rational expressions, including complex fractions
- D. Operations on rational expressions

VII. Review of Exponential and Logarithmic Functions

- A. The number e
- B. Common and natural logarithms
- C. Laws of logarithms

VIII. Review of Conic Sections

- A. Midpoint and Distance Formulas
- B. Circles
- C. Parabolas
- D. Ellipses
- E. Hyperbolas

IX. Review of Systems of Equations and Inequalities

- A. Linear and nonlinear systems of equations
- B. Systems of linear inequalities

Assignment:

1. Reading outside of class (0-60 pages per week)
2. Problem sets (1-10 per week)
3. Quizzes (0-4 per week)
4. Project(s) (0-5)
5. Exam(s) (1-5)
6. Final exam
7. Effective Learning Skills Writing Assignment(s) (0-5)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Effective Learning Skills Writing Assignment(s)

Writing 0 - 5%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Problem sets

Problem solving 10 - 40%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes, exam(s), and final exam

Exams 50 - 90%

Other: Includes any assessment tools that do not logically fit into the above categories.

Project(s)

Other Category 0 - 20%

Representative Textbooks and Materials:

An online homework system

Intermediate Algebra. Arnold, David. Open Source Text. 2013 (classic)

Intermediate Algebra. Marecek, Lynn. OpenStax. 2017