MATH 155 Course Outline as of Fall 2001

CATALOG INFORMATION

Dept and Nbr: MATH 155 Title: INT ALGEBRA
Full Title: Intermediate Algebra
Last Reviewed: 9/22/2014

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	4.00	Lecture Scheduled	4.00	17.5	Lecture Scheduled	70.00
Minimum	4.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 140.00 Total Student Learning Hours: 210.00

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

Catalog Description:
This course is an intermediate algebra course which incorporates the use of technology. The topics in this course include functions, equations and inequalities in one variable, systems of linear equations in two or three variables, exponential and logarithmic functions and equations, and discrete topics. Graphing calculators and/or computer algebra systems will be incorporated into the above, as appropriate.

Prerequisites/Corequisites:
MATH 151 or MATH 150B.

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Standard intermediate algebra course. (Grade or P/NP)
Prerequisites/Corequisites: MATH 151 or MATH 150B.
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:
	B	Communication and Analytical Thinking	Spring 1988	
	MC	Math Competency		
	MC	Math Competency	Fall 1981	Spring 1988
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

Outcomes and Objectives:
To be successful, students should be able to:
1. Solve linear, quadratic, and radical equations in one variable.
2. Apply elementary methods and theory in solving higher-degree polynomial equations.
3. Define function, domain, and range, and perform operations with functions using functional notation.
4. Graph linear and quadratic equations.
5. Solve systems of linear equations.
6. Simplify expressions involving rational expressions.
7. Simplify expressions involving rational exponents.
8. Solve exponential and logarithmic equations, including those with common and natural logarithms.
9. Apply properties of exponents and logarithms in simplifying expressions and solving equations.
10. Apply topics to modeling and applications.
11. Incorporate use of technology, as appropriate, to the above topics.

Topics and Scope:

USE OF TECHNOLOGY
Emphasis of the course is on graphing technology to demonstrate algebric concepts and to observe and predict the behavior of functions, process information, and manipulate structures such as matrices and summations.
FUNCTIONS AND EQUATIONS
Definition of function, function notation, evaluation, domain, and range.
Graphs of functions to include polynomial, radical, and absolute value.

Graphical and algebraic solutions to equations and inequalities that involve these functions. Solution of literal equations. Applications to emphasize mathematical models that use polynomial, rational, and radical functions.
SYSTEMS OF EQUATIONS/INEQUALITIES
Solution of linear systems, Matrices and RREF Form, Systems of linear inequalities, Applications and modeling.
EXPONENTIAL AND LOGARITHMIC FUNCTIONS AND EQUATIONS
Common and natural logarithms, Graphs, the number e, Laws of logarithms, Solving exponential and logarithmic equations. Applications and modeling
DISCRETE TOPICS
Introduction to sequences and series, Summation notation, Fatorial notation, Pascal's Triangle, Binomial Coefficients, and Binomial expansion. Applications and modeling.

Assignment:

1. The student will have daily outside reading, problem set assignments from required text(s), or instructor chosen supplementary materials.
2. Instructional methodology may include, but not limited to: lecture, demonstrations, oral recitation, discussion, supervised practice, independent study, outside project or other assignments.

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.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.	Writing 0 - 0%

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

Homework problems, Exams	Problem solving 15 - 40%

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

Performance exams	Skill Demonstrations 50 - 75%

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

Multiple choice	Exams 5 - 25%

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

WRITING ASSIGNMENTS	Other Category 0 - 10%

Representative Textbooks and Materials:
Text(s) required of each student will be selected by the department, a committee of the department, or the responsible instructor from the books currently available. Choices in the past have included:
INTERMEDIATE ALGEBRA: CONCEPTS & APPLICATIONS (5th) by Marvin L Bittinger Mervin L. Keedy, & David Ellenbogen, Massachusetts: Addison-Wesley 1997.
INTERMEDIATE ALGEBRA (2nd), Martin-Gay, Houghton-Mufflin, 1997.