

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER:	MAC 1105
COURSE TITLE:	College Algebra
PREREQUISITE(S):	MAT 1033 with a grade of "C" or better or a satisfactory score on the placement test
COREQUISITE(S):	None
CREDIT HOURS:	3
CONTACT HOURS/WEEK:	3
CONTACT HOUR BREAKDOWN:	
Lecture/Discussion:	3
Laboratory:	
Other _____:	
FACULTY WORKLOAD POINTS:	3
STANDARDIZED CLASS SIZE ALLOCATION:	27

CATALOG COURSE DESCRIPTION:

The major topics included in this course are linear equations and inequalities; quadratic equations and inequalities; relations and functions; graphs; systems of equations and inequalities; exponential and logarithmic functions; and applications. A review of algebraic techniques is also included in this course as well as a review of polynomials, factoring, exponents, roots and radicals.

SUGGESTED TEXT(S):	<p>Bittinger, <u>College Algebra: Graphs, Etc.</u>, Addison-Wesley, current ed. ISBN 0-201-75336-7 w/My Math Lab.</p> <p>Sullivan, <u>College Algebra: Enhanced Etc.</u>, Person Education (Prentice Hall), current ed., ISBN 0-13-083335-5</p> <p>Larson, <u>College Algebra: Concepts Etc.</u>, Houghton-Mifflin, current ed. ISBN 0-395-979621-9, 0-618-14031X package</p>
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SUGGESTED TEXT(S): (CONTINUED)

Sullivan, College Algebra, Pearson Education
(Prentice Hall), current ed., ISBN 0-130-08005-8,
0-13-091453-3

Lial, College Algebra, Addison-Wesley, Current Ed.,
ISBN 0-673-9952-6.

Autmann, College Algebra, Houghton-Mifflin, current ed.,
ISBN 0-395-78644-4.

Sullivan, College Algebra: Graphing & Data Analysis,
Prentice Hall, current ed., ISBN 0-13-087916-9.

Burger, Thinkwell's College Algebra, Thinkwell Corporation,
Current ed., ISBN 0-9678357-2-0. (CD_ROMS)

IMPLEMENTATION DATE:

Fall Term, 1987 (881)

REVIEW OR MODIFICATION DATE:

Fall Term, 1999
Fall Term, 2002 (20031)
Spring Term, 2005 (20052)
Fall Term, 2006 (20061)
Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
I. Review of Algebraic Techniques (<u>Optional</u>)	5
A. Exponents, Roots, and Radicals	
B. Equations and Inequalities	
II. Complex Numbers	1
III. Functions and Functional Notation	6
A. Definition	
B. Domain and Range	
C. Operations on Functions	
IV. Types of Functions and Relations and Their Graphs	11
A. Linear	
B. Circles	
C. Quadratic	
D. Cubics	
E. Absolute Value	
F. Radical	
G. Rational	
H. Piece-wise	
V. Inverse Functions	3
A. Definition and Notation	
B. Graphs	
VI. Exponential and Logarithmic Functions	8
A. Properties	
B. Equations	
C. Graphs	
VII. Systems of Equations and Inequalities	4
A. Linear Systems of Equations and Inequalities	
B. Non-Linear Systems	
VIII. Applications	7
A. Curve Fitting	
B. Modeling	
C. Optimization	
D. Exponential and Logarithmic Growth and Decay	

*TOPICS NEED NOT BE COVERED IN THE INDICATED SEQUENCE.



Course Prefix and Number: MAC1105	Semester Credit Hours: 3
Course Title: College Algebra	

Discipline Area for the Course:

<input type="checkbox"/> Communication	<input checked="" type="checkbox"/> Mathematics	<input type="checkbox"/> Social & Behavioral Sciences
<input type="checkbox"/> Humanities & Visual/Performing Arts	<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Other-Designated Option

INTELLECTUAL COMPETENCIES:

<input checked="" type="checkbox"/> Reading	<input type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Ethical Judgment	<input type="checkbox"/> Working Collaboratively

Learning Outcomes

Method Of Assessment

	The students will be able to:	
1	1. Use algebraic techniques, including analytical, numerical, and technology-aided procedures, to solve equations and inequalities.	Students are successful on class tests, quizzes both verbal and written, class assignments and projects as well as speaking properly of concepts in group projects or to one another
2	2. Represent algebraic functions and relations symbolically, graphically, and numerically.	Students are successful on class tests and quizzes--- both verbal and written. Student must be able to identifying functions and relation by equation, title or image.
3	3. Apply algebraic techniques, including analytical, numerical, technology-aided procedures, and modeling techniques to solve real-world situations.	Students are successful on standardized tests that require mathematical methods that require calculators, internet or web quests, models, and measures of the like.
4	4. Demonstrate an understanding of quantitative literacy in solving mathematical problems.	Students are successful on class tests, quizzes both verbal and written, class assignments and projects as well as speaking properly of concepts in group projects or to one another.
5	5. Demonstrate an understanding of the application of mathematical principles to other disciplines through real-world applications.	Students should be able to solve a real world problem/application by showing step by step pencil and paper calculations as well as be able to explain to a friend their method of analysis and conclusion.
6		Students are successful on standardized tests that require mathematical methods, models, and measures.

Name of Person Completing This Form: Ruth Dellinger & Seyed Vafabakhsh

Signature: _____ Date: 9/20/2007

