

COLLEGEWIDE COURSE OUTLINE OF RECORD

MAT 111, INTERMEDIATE ALGEBRA

COURSE TITLE: Intermediate Algebra

COURSE NUMBER: MAT 111

PREREQUISITES: Demonstrated competency through appropriate assessment or a grade of "C" or better in MAT 050 Basic Algebra

DIVISION: General Education

PROGRAM: General Education

CREDIT HOURS: 3

CONTACT HOURS: Lecture: 3

DATE OF LAST REVISION: Spring, 2004

EFFECTIVE DATE OF THIS REVISION: Fall, 2004

CATALOG DESCRIPTION: Reviews basic operations of polynomials, scientific notation, linear equations and inequalities, graphing linear equations, and factoring algebraic expressions. Concentrates on properties of integer and rational exponents, rational expressions and equations, systems of linear equations, radicals, radical equations, quadratic equations, functions and their graphs, and applications. A standard college level intermediate algebra course.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Perform basic operations on polynomials and factor polynomials.
2. Use the properties of integer and rational exponents and scientific notation.
3. Solve linear equations and inequalities.
4. Graph linear equations and inequalities in two variables.
5. Determine linear equations from geometric data.
6. Solve systems of equations using graphing, substitution, and elimination.
7. Solve quadratic equations by factoring and by the quadratic formula.
8. Graph quadratic functions.
9. Simplify rational expressions and solve rational equations.
10. Solve literal equations.
11. Simplify radicals and solve radical equations.
12. Interpret functions algebraically, graphically, and numerically and use function notation.
13. Use relevant mathematical terminology, laws, and notation.
14. Solve a variety of application problems in the above areas.
15. Use a scientific and/or graphing calculator proficiently as related to coursework.
16. Use computer technology which may include the Internet, the Web, email, or computer tutorials to enhance the course objectives.

COURSE CONTENT: Topical areas of study include –

Polynomial operations
Linear equations and inequalities
Factoring
Integer and rational exponents
Systems of linear equations
Quadratic equations

Scientific notation
Graphs of linear equations and inequalities
Rational expressions and equations
Radicals and radical equations
Functions and their graphs
Applications

ACADEMIC HONESTY STATEMENT:

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

ADA STATEMENT:

Ivy Tech State College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact the Office of Disability Support Services.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classroom.