

## Algebra Readiness Test Syllabus

Placement out of the Math Preparatory modules and into Ma 111, 130, 201, or BA/Ma 340 requires a satisfactory understanding of the following topics:

### Set Theory

### Order of Operations

### Polynomial Expressions

- Simplify
- Perform the four operations
- Factor – be sure you recognize and can factor
  - Perfect square trinomials
  - Difference of squares
  - Sum and difference of cubes
  - Polynomials that can be factored by grouping

### Rational Expressions

- Simplify (with positive and negative integer exponents)
- Simplify complex rational expressions
- Perform the four operations

### Radical Expressions

- Simplify
- Convert from radical to rational exponent form
- Perform the four operations

### Complex Numbers

- Perform the four operations
- Simplify powers of  $i$

### Algebra: solve for $x$

*Remember, in all cases a simplified expression has*

- Fractions completely reduced
- No perfect squares under a square root (or perfect cubes under a  $\sqrt[3]{\quad}$ , etc.)
- No negative exponents
- No radicals (or fraction exponents or  $i$ s, which are also radicals) in the denominator
- Polynomials have all like terms combined