

## Master Syllabus

### **MAT 1370 - Intermediate Algebra**

**Division:** Science, Mathematics and Engineering

**Department:** Mathematics

**Credit Hour Total:** 5.0

**Lecture Hrs:** 5.0

**Prerequisite(s):** MAT 1270

**Other Prerequisite(s):** AND Other with a grade of C or better or satisfactory score on math placement test

**Date Revised:** March 2015

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### **Course Description:**

Factoring; operations with polynomials and rational expressions; solving second-degree equations by factoring; operations with rational exponents, radical expressions and complex numbers; relations and functions; simplifying radical expressions; solving equations with rational expressions, equations with radical expressions, quadratic equations by completing the square and the quadratic formula, equations quadratic in form; quadratic functions; variation. Traditional testing (proctored or in Testing Center) is used in all online sections.

### **General Education Outcomes:**

- Critical Thinking/Problem Solving Competency

### **Course Outcomes:**

#### **Perform Operations**

Demonstrate the ability to add, subtract, multiply and divide polynomial expressions, rational expressions, radical expressions and complex numbers.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Passing Grade with a score of 70% or better on exams

#### **Simplify Algebraic Expressions**

Demonstrate the ability to simplify polynomial, rational and radical expressions and expressions involving complex numbers.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Passing Grade with a score of 70% or better on exams

#### **Factor Polynomials**

Demonstrate the ability to factor polynomials having one, two, three or four terms.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Score of 70% or better on exams

#### **Solve Algebraic Equations**

Demonstrate the ability to solve equations, formulas and applications involving quadratic, rational and radical expressions.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Passing Grade with a score of 70% or better on exams

### **Outline:**

Simplify exponential, rational and radical expressions Perform arithmetic operations on polynomials, rational and radical expressions Factor polynomials Solve quadratic, rational and radical equations and applied problems Determine whether a relation is a function Graph quadratic functions