Department:

Mathematics.

Course Description:

This course focuses on basic algebra fundamentals and is designed to prepare students for the Intermediate Algebra course.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Add, subtract, multiply, and divide natural numbers, following the order of operations.
2. Add, subtract, multiply, and divide integers, following the order of operations.
3. Translate English into algebraic expressions and equations.
4. Add, subtract, multiply, and divide rational numbers, following the order of operations.
5. Solve simple equations involving integers, fractions, or decimal coefficients.
6. Solve selected word problems.
7. Solve and graph linear equations.
8. Solve and graph linear inequalities.
9. Add, subtract, multiply, and divide polynomials.
10. Factor selected polynomials.
11. Add, subtract, multiply, and divide rational expressions.
12. Solve equations with rational expressions in them.

Course Content:

A. Real Numbers and Variables
   1. Adding, subtracting, multiplying real numbers
   2. Integer exponents
   3. Order of operations
   4. Distributive property
   5. Combining like terms
   6. Evaluating expressions
   7. Grouping symbols
B. Equations and inequalities
   1. Equations
       a. Simple equations
       b. Equations with fractional coefficients
       c. Literal equations
   2. Inequalities
       a. Solve
       b. Graph
C. Applied problems
   1. Translate English into algebra

2. Convert word problems into equations and solve

3. Convert word problems into inequalities and solve

D. . Exponents and Polynomials

   1. Rules for exponents

   2. Scientific Notation

   3. Polynomials

      a. Add polynomials

      b. Subtract polynomials

      c. Multiply polynomials

      d. Divide polynomials

E. Factoring

   1. Removing common factors

   2. Factoring by grouping

   3. Factoring trinomials

   4. Factoring a difference of two squares

   5. Solving quadratic equations by factoring

F. Rational expressions and equations

   1. Simplify rational expressions

   2. Multiply and divide rational expressions

   3. Add and subtract rational expressions

   4. Simplify complex rational expressions

   5. Solve equations with rational expressions in them

G. Graphing

   1. Graph linear equations

   2. Graph linear inequalities

   3. Associate the algebraic equation with a line

   4. Associate a line with an algebraic equation

Learning Assessments:

Course competencies will be assessed by the use of tests and quizzes

Instructional Materials:

Textbook: Elementary Algebra, Sullivan, Struve, Mazzarella, 3rd Ed., Pearson, 2014 ISBN-13: 978-0-321-88015-4

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students **must** complete the "Disabilities Self-Identification Form" on our Disability Services website.

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.

A Note on Harassment, Discrimination and Sexual Misconduct

Highland Community College seeks to assure all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX, and College policy prohibit harassment, discrimination and sexual misconduct. Highland Community College encourages anyone experiencing harassment, discrimination or sexual misconduct to talk to report to the Vice President for Student Services, the Human Resources Director or complete an online report about what happened so that they can get the support they need and Highland Community College can respond appropriately.

There are both confidential and non-confidential resources and reporting options available to you. Highland Community College is legally obligated to respond to reports of sexual misconduct, and therefore we cannot guarantee the confidentiality of a report, unless made to a confidential resource. Responses may vary from support services to formal investigations. As a faculty member, I am required to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident. For more information about policies and resources or reporting options, please review our Equity Grievance Policy.