ASC 092 Beginning Algebra

Interactive Video Network

Course Description: This course covers is a beginning level algebra course. Topics covered include fundamental operations, fractions, exponents, equations, inequalities, factoring, and graphing. The class doe not satisfy college graduation requirements for math.

Credits: 3 semester credits
Prerequisite(s): none.
Delivery Method: IVN

Course Objectives/Student Outcomes:

It is expected that students will be able to

- Perform basic algebraic operations using positive and negative numbers, fractions, and exponents.
- Demonstrate an understanding of terms and rules used in algebra.
- Utilize problem-solving strategies to solve problems.
- Simplify expressions & solve equations and inequalities.
- Factor using greatest common factor, factor by grouping, and factor trinomials.
- Plot points, graph linear equations, and find slope of a line.
- Analyze and solve various types of math problems
- Utilize a hand-held calculator when solving algebra problems
- Gain the skills needed to participate in a college algebra course
- Perform basic algebraic operations using positive and negative numbers, fractions, and exponents
- Demonstrate an understanding of terms and rules used in algebra
- Utilize problem-solving strategies to solve problems
- Simplify expressions
- Solve equations and inequalities
- Factor using greatest common factor, factor by grouping, and factor trinomials with no x squared coefficient
- Plot points, graph linear equations, and find slope of a line

Instructor: Jan Nahinurk
Office: Online
Office Hours: Use the eMail tool within the online course to communicate with the instructor. Course eMail messages will be checked daily, Monday through Friday. If you have a technical problem, contact the Distance Education office by calling 1-701-228-5479 or 1-888-918-5623 (toll-free).
Email: Use online course eMail tool.
Class Schedule: Online

Textbooks:

Tobey, J. and J. Slater. *Beginning & Intermediate Algebra w/Student Study Pack. 2nd ed.* Prentice Hall. ISBN: 0-13-2187205

Other materials: The Student Study Pack is free with the purchase of a new textbook. The study pack includes the *Student Solution Manual*, online tutor center, and CD lecture videos. The study pack can be purchased separately with a used text. The ISBN for the study pack alone is: 0-13-171159-8.

Order by e-mail: bookcell@msub.nodak.edu
or Order online: https://epayment.ndus.nodak.edu/C22800_ustores

Course Requirements:

Learning algebra is an investment of time. Algebra is learned best by practice, reflect, and practice some more. Understanding the examples provided by the instructor and textbook is a good first step. However, to truly know the material, you should be able to look at a problem, know how to proceed, and carry out the steps WITHOUT ASSISTANCE. The independent practice and graded assignments provide opportunities for you to get to that point. Passing grades on quizzes and tests demonstrate that you have indeed learned the skills taught.

Independent practice: Students can practice the odd numbered problems for each section in the textbook. Answers are found in the back of the book.
Graded assignments: Each lesson is followed by an online Practice Exercise. Each practice exercise can be done multiple times; only the highest score will be used in grading.
Graded quizzes: Practice exercises are followed by graded quizzes of 10-15 questions. Quizzes are limited to 20 minutes and may only be taken one time.
Tests: Four 60-minute exams of approximately 34 questions and a final comprehensive exam are given.

Tentative Course Outline: Consult the course calendar for actual due dates.

WEEK 1: Section 1.1 Adding Real Numbers, Section 1.2 Subtracting Real Numbers, Section 1.3 Multiplying & Dividing Real numbers
WEEK 2: Section 1.4 Exponents, Section 1.5 Order of Operations, Section 1.6 Distributive Property
WEEK 3: Section 1.7 Combining Like Terms, Section 1.8 Using Substitution to Evaluate Algebraic Expressions, Section 1.9 Grouping Symbols
WEEK 4: Review for Test 1, Test 1
WEEK 5: Section 2.1 Addition Principle of Equality, Section 2.2 Multiplication Principle of Equality, Section 2.3 Using the Addition and Multiplication Principles Together
WEEK 6: Section 2.4 Solving Equations with Fractions, Section 2.5 Translating English Phrases into Algebraic Expressions

WEEK 7: Section 2.6 Using Equations to Solve Word Problems, Section 2.7 More Word Problems, Section 2.8 Solving Inequalities in One Variable
WEEK 8: Review for Test 2, Test 2
WEEK 9: Section 3.1 Rectangular Coordinate System, Section 3.2 Graphing Linear Equations
WEEK 10: Section 3.3 Slope of a Line, Section 3.4 Writing the Equation of a Line
WEEK 11: Section 5.1 Rules of Exponents
WEEK 12: Section 5.2 Negative Exponents and Scientific Notation
WEEK 13: Review for Test 3, Test 3
WEEK 14: Section 5.3 Fundamental Polynomial Operations, Section 5.4 Multiplying Polynomials, Section 5.5 Multiplying Polynomials: Special Cases
WEEK 15: Section 5.6 Dividing Polynomials, Section 6.1 Removing a Common Factor, Section 6.2 Factoring by Grouping
WEEK 16: Section 6.3 Factoring Trinomials of form $x^2 + bx + c$, Review for Test 4
WEEK 17: Test 4, Review for Comprehensive Final
WEEK 18: Final Exam

Relationship to Campus Theme:

This course introduces algebra skills that are used to solve problems in science, technology, business, and social sciences.

Classroom Policies:

- Regular participation is expected.
- All quizzes and exams can be taken on any computer with Internet access.
- Students need to set up or select an environment conducive for testing (e.g. distraction-free area at home, a computer lab at a library, etc.)
- Students can take the tests at any time between the given dates and times.
- Each quiz/test will be available for a limited period of time (15-60 minutes) depending upon the number of questions.

Evaluation:

Grades are based on total points earned and include the points earned on practice exercises. Grades will be calculated by dividing total points earned by total points possible.

A--90-100%
B--80-89%
C--70-79%
D--60-69%
F--59% or lower

Academic Integrity: The academic community is operated on the basis of honesty, integrity and fair play. It is the expectation that all students, as members of the college community, adhere to the highest levels of academic integrity. This means that:

- Students are responsible for submitting their own work. Student work must not be plagiarized.
- Students must not cooperate on oral or written examinations or work together on evaluated assignments without authorization.

To learn how to avoid plagiarism in your work, review the website from Purdue University, Is It Plagiarism Yet?

Violations of academic principles such as cheating, plagiarism or other academic improprieties will be handled using the guidelines outlined in the Student Handbook on pages 18, 19, and 37.

Disabilities and Special Needs:

If you have a disability for which you need accommodation, contact the Learning Center to request disability support services: phone 701-228-5477 or toll-free 1-888-918-5623.