

Northern Marianas College
CURRICULUM ACTION REQUEST

Course: MA091 Beginning Algebra

Effective Semester / Session: Spring 2022

Type of Action:

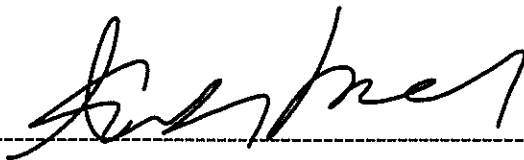
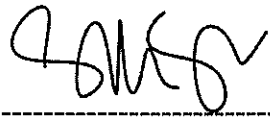
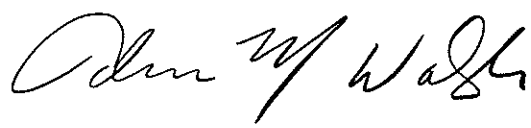
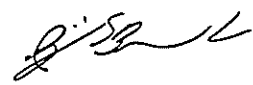
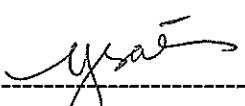
- New
- Modification
- Move to Inactive (Stop Out)
- Cancellation

Course Alpha and Number: MA091

Course Title: Beginning Algebra

Reason for initiating, revising, or canceling:

This course guide is being modified to reflect changes in the change of book and student learning outcomes.

Kathleen Winkfield		1.25.22
Proposer		Date
Velma C. De Leon Guerrero		1/25/2022
Department Chair		Date
Adam Walsh		01.24.22
Language & Format Review Specialist		Date
Ajani Burrell		1.24.2022
Academic Council Chair		Date
Vilma S. Reyes		1/25/22
Interim-Dean of Academic Programs and Services		Date

Course: MA091 Beginning Algebra

1. Department

Science, Mathematics, Health & Athletics

2. Purpose

This course further develops the fundamental math skills and basic algebraic concepts covered in MA087 and MA089. It introduces students to the basic concepts of algebra, including solving equations, polynomials, problem solving, graphic equations and inequalities while solving real-life problems using algebraic principles. A passing grade in this course qualifies students for entrance into MA132, Intermediate Algebra.

3. Description

A. Required/Recommended Textbook(s) and Related Materials

Required:

Richard N. Aufmann and Joanne S. Lockwood, *Beginning Algebra, 8th ed.*
Belmont, CA: Brooks/Cole Cengage Learning, 2013.

Recommended: None

B. Contact Hours

1. **Lecture:** 4 per week / 60 per semester
2. **Lab:** None
3. **Other:** None

C. Credits

1. **Number:** 4
2. **Type:** Non-Degree Units

D. Catalogue Course Description

Note: MA087, MA089 and MA091 are preparatory courses in mathematics and do not carry college degree credit (i.e., NDU = non degree units.)

This course further develops the fundamental math and basic algebraic concepts covered in MA087 and MA089. This course introduces students to the general concepts of algebra, including solving equations in one and two variables, problem solving, graphing linear equations and inequalities while solving real-life problems using algebra. A TI-83, or higher graphic calculator is required. Prerequisites: BE111, or concurrent enrollment, EN085, MA089. (Offered Fall, Spring, and Summer)

Northern Marianas College

Course Guide

Page: 3

Course: MA091 Beginning Algebra

E. Degree or Certificate Requirements Met by Course

None. A passing grade in this course satisfies only the mathematics proficiency requirement for entry into MA132, Intermediate Algebra.

F. Course Activities and Design

Course activities include: lecture, group work and discussions, homework assignments, viewing relevant audio-visual material, quizzes, scheduled testing, calculator exploration, and a comprehensive final exam. Students will be required to participate fully in class discussions and other course assignments.

4. Course Prerequisite(s); Concurrent Course Enrollment

Prerequisites: BE111

Concurrent Course Enrollment: EN085 & MA089

Required English/Mathematics Proficiency Level(s)

English Placement Level: None

Mathematics Placement Level: None

5. Estimated Cost of Course; Instructional Resources Needed

Cost to the Student: Tuition for a 4-credit course; cost of textbook; cost of TI-83 or higher graphics calculator.

Cost to the College: Instructor's salary and classroom.

Instructional resources needed for this course include: whiteboard and markers, ELMO, TV, and a TI-83 graphics calculator.

6. Method of Evaluation

Students will be evaluated by their performance on the chapter quizzes, homework, tests as well as the completion of the final exam. NMC's grading and attendance policies will be followed.

Course: MA091 Beginning Algebra

7. Course Outline

This is a topical outline and does not necessarily indicate the sequence in which the material will be presented.

- 1.0 Set of Real Numbers
- 2.0 Variable Expressions
- 3.0 Linear Equations and Inequalities
- 4.0 Applications in Solving Equations and Inequalities
- 5.0 Graphing Linear Equations and Inequalities
- 6.0 Systems of Linear Equations in Two Variables
- 7.0 Polynomials and Properties of Exponents
- 8.0 Factoring Polynomials
- 9.0 Rational Expressions

Course: MA091 Beginning Algebra

8. Instructional Goals

The course will introduce students to:

- 1.0 Set of Real Numbers;
- 2.0 Linear Equations and Inequalities;
- 3.0 Graphing Linear Equations and Inequalities in Two Variables;
- 4.0 Systems of Linear Equations in Two Variables;
- 5.0 Polynomials and Properties of Exponents;
- 6.0 Factoring Polynomials; and
- 7.0 Rational Expressions.

Course: MA091 Beginning Algebra

9. Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1.0 Perform operations on real numbers by using the algebraic properties of real numbers;
- 2.0 Translate English phrases and sentences to mathematical/algebraic statements;
- 3.0 Evaluate and solve multistep-linear equations and inequalities;
- 4.0 Formulate algebraic equations for setting up and solving real-life word problems using Algebra;
- 5.0 Graphing linear equations and inequalities;
- 6.0 Solve systems of linear equations in two variables and verify solutions to the system;
- 7.0 Apply the properties of exponents for simplifying algebraic expressions and solving algebraic equations;
- 8.0 Use various methods in factoring polynomials; and
- 9.0 Apply the principles of algebra to simplify and solve algebraic fractions (rational expressions and equations, complex fractions, and proportions).

10. Assessment Measures of Student Learning Outcomes

Assessment of student learning may include, but not be limited to, the following:

- 1.0 Homework;
- 2.0 Assignments;
- 3.0 Tests;
- 4.0 Quizzes;
- 5.0 Final Exam.