

CUMBERLAND COUNTY COLLEGE

Course: MA 110 College Algebra

Credits: 3

Prerequisites

MA094 or placement by CBSPT or SAT score.

Description

Topics include polynomial, rational, other algebraic functions; complex number system; exponential and logarithmic functions; and properties and graphs of functions. This course is designed for students who may continue in math, science, technology or business related fields.

Learning Outcomes

At the completion of this course, students should be able to:

- Identify and solve linear and non-linear equations and inequalities with an emphasis on:
 - Linear
 - Quadratic
 - Rational
 - Polynomial
 - Square Root
- Identify and analyze functions with an emphasis on:
 - Linear
 - Quadratic
 - Constant
 - Rational
 - Square Root
- Communicate accurate mathematical terminology and notation in written and/or oral form in order to identify function models to solve problems and interpret found solutions.

Related General Education Outcomes

- Students will translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations.
- Students will construct graphs and charts, interpret them, and draw appropriate conclusions.

Topical Outline

Graphs and Functions
Graphs of equations
Lines

- Functions
 - Library of functions
 - Transformation of functions
 - Combining functions; composite functions
 - Inverse functions
- Systems of Equations
 - Systems of equations in two variables
 - Systems of equations in Three variables
- Polynomial and Rational Functions
 - Quadratic functions
 - Polynomial functions
 - Dividing polynomials and the Rational Zeros Test
 - Zeros of a polynomial function
 - Rational functions
- Exponential and Logarithmic Functions
 - Exponential functions
 - Logarithmic functions
 - Exponential and logarithmic equations and inequalities

Required Texts and Other Materials

Precalculus, A Unit Circle Approach by Ratti-McWaters, 2nd edition: Pearson. 2014

Student Assessment

Assessment may be accomplished through projects, portfolios, online assignments, exams, presentations and/or papers.

Academic Integrity

Plagiarism is cheating. Plagiarism is presenting in written work, in public speaking, and in oral reports the ideas or exact words of someone else without proper documentation. Whether the act of plagiarism is deliberate or accidental [ignorance of the proper rules for handling material is no excuse], plagiarism is, indeed, a “criminal” offense. As such, a plagiarized paper or report automatically receives a grade of **ZERO** and the student may receive a grade of **F** for the semester at the discretion of the instructor.

Available Resources

If you are having difficulty with work in this class, tutoring is available through the Success Center. If you think that you might have a learning disability, contact Project Assist at 856.691.8600, x1282 for information on assistance that can be provided to eligible students.

(List availability of open labs and/or writing center)

Before Withdrawing From This Course

If a student experiences adverse circumstances while enrolled in this course and considers withdrawing, s/he should see an advisor (division or advisement center) BEFORE withdrawing from the class. A withdrawal may cause harmful repercussions to completion rate standards and overall GPA which can limit or eliminate future financial aid in addition to causing academic suspension.