



Catalog Description:

Functions: polynomial, rational, radical, exponential, and logarithmic. Introduction to right-angle trigonometry. Applications.

Prerequisite:

Math Placement Level N; C- or better in 1075; or credit for 104 or 148; or ACT math score ≥ 22 or SAT math score ≥ 520 (scores must be less than 2 years old).

Exclusions:

Not open to students with credit for 1144 or 1150 or higher, or for a quarter-system math course numbered 150 or higher.

Purpose:

College Algebra provides students a college level academic experience that emphasizes the use of algebra and functions in problem solving and modeling, where solutions to problems in real-world situations are formulated, validated, and analyzed using mental, paper-and-pencil, algebraic and technology-based techniques as appropriate using a variety of mathematical notation. Students should develop a framework of problem-solving techniques (e.g., read the problem at least twice; define variables; sketch and label a diagram; list what is given; restate the question asked; identify variables and parameters; use analytical, numerical and graphical solution methods as appropriate; determine the plausibility of and interpret solutions). – Adapted from the MAA/CUPM CRAFTY 2007 College Algebra Guidelines. This course is intended to satisfy the requirements of the Ohio Board of Regents TMM001 College Algebra course with learning outcomes specified in: <http://regents.ohio.gov/transfer/otm/otm-learning-outcomes.php>

Text:

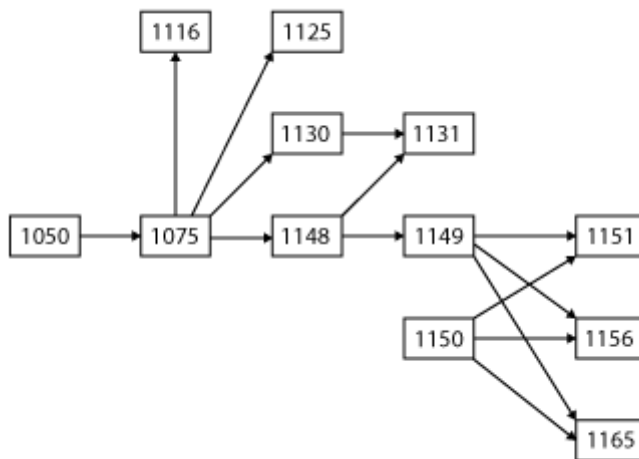
College Algebra & Trigonometry, 1st Edition, by Miller and Gerken, published by McGraw-Hill.
ISBN: 9781259976612

Technology: All students are required to have a graphing calculator, TI-83 or TI-84.

Note: Any calculators (including TI-89 and TI-92) that use a Computer Algebra System (CAS) are not permitted.



Sequencing Chart:



Topics List:

- Week 1 Section 1.7 – Inequalities
Section 2.3 – Functions and Relations
- Week 2 Section 2.4 – Linear Equations in Two Variables
Section 2.5 – Applications of Linear Equations
- Week 3 Section 9.1 – Systems of Linear Equations in Two Variables
Section 9.2 – Systems of Linear Equations in Three Variables
- Week 4 Section 2.6 – Transformations of Graphs
Section 2.7 – Analyzing Graphs of Functions
- Week 5 Test 1
Section 2.8 – Algebra of Functions and Composition
- Week 6 Section 3.1 – Quadratic Functions and Applications
Section 3.2 – Polynomial Functions
- Week 7 Section 3.3 – Division of Polynomials
Section 3.5 – Rational Functions
- Week 8 Section 3.5 – Rational Functions
Section 3.6 – Polynomial and Rational Inequalities
- Week 9 Test 2
- Week 10 Section 4.1 – Inverse Functions
Section 4.2 – Exponential Functions
- Week 11 Section 4.2 – Exponential Functions
Section 4.3 – Logarithmic Functions
- Week 12 Section 4.3 – Logarithmic Functions
Section 4.4 – Properties of Logarithms
- Week 13 Section 4.4 – Properties of Logarithms
- Week 14 Section 4.5 – Exponential and Logarithmic Equations
Section 4.6 – Modeling with Exponential and Logarithmic Functions
Comprehensive review, Final Exam