



U.S. INTERNATIONAL CHRISTIAN ACADEMY

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U.S.I.C.A. Course Outline/Syllabus

Grade/Course: ALGEBRA I No. 1200310

Grade Level: 9th High School

**A)TEXT BOOK: Glencoe McGraw Hill Algebra Concepts and Applications
Glencoe Algebra: Concepts and Applications, Volume 2, Student Edition [Hardcover]
McGraw-Hill(Author)**

ISBN-10: 0078607752 | ISBN-13: 978-0078607752

Order No.: 1

Code:ALG1000

Class Type: Online

Resources:

Text book
Teacher works CD
Teacher interactive
online
Links
Sky Conference

Instructional Supports:

Textbook, Magazines, Journals, Websites
Links, Blackboard, Conference,
Comprehensive Reading Plan

Length:1 year

Area: Mathematics

Credits: 1

Total Numbers of class hours: 300 hrs

Type: Mandatory

Standards:

Florida Sunshine State
Standards

Prerequisite:

Students must have successfully passed a pre-
algebra or a general math class in middle/high
school.

B) Description:

This course is a full year, high school credit course that is intended for the student who has successfully mastered the core algebraic concepts covered in the prerequisite course, Pre-Algebra.

Within the Algebra I course, the student will explore basic algebraic fundamentals such as evaluating, creating, solving and graphing linear, quadratic, and polynomial functions. Upon successfully completing the course, the student should have mastered the following concepts:

- Solve single variable, absolute value, and linear systems of equations.
- Solve and graph single variable, absolute value, and linear inequalities.
- Evaluate, solve, and graph linear and quadratic functions as well as conceptualize the relationship between the independent and dependent variable of a function.
- Understand and know how to apply the distance, midpoint, and slope formulas as well as the Pythagorean theorem.
- Form an equation of a line using the slope-intercept, point-slope and standard forms of a line.
- Organize data in the form of a table or matrix; perform complex matrix operations such as multiplication, evaluating the determinant, and solving a system of linear equations using Cramer's Rule.
- Apply basic fundamental rules of exponents.
- Be able to construct a formula or equation necessary to solve algebraic word problems involving area, perimeter, and linear systems of equations, basic probability and statistical reasoning, distance, and compounding interest.
- Evaluate rational

C) Objectives:

1. To develop in all students an appreciation, curiosity and understanding for mathematics
2. to develop in all students analytical, reasoning, and critical thinking skills
3. to promote an awareness of mathematics

D) Contents

Chapters

Chapter 3
Addition and
Subtraction/Equations

Number, Number Sense and
Operations

Chapter 4: Multiplication & Data Analysis and Probability
division of Equations

Chapter 5
Proportional Reasoning
and Probability

Chapter 6 Functions and Graphs	Number, Number Sense and
Chapter 7 Linear Equations	Patterns, Functions and Algebra
Chapter 8 Powers and Roots	
Chapter 9 Polynomials	Patterns, Functions and Algebra
Chapter 10 Factoring	Mathematical Process Standard
Chapter 11 Quadratic and Exponential functions	
Chapter 12 Inequalities	Number, Number Sense and Operations
Chapter 13 Systems of Equations and Inequalities	Patterns, Functions and Algebra
Chapter 14 Radical Expressions	Mathematical Process Standard
Chapter 15 Rational Expressions	Mathematical Process Standard

F) Reference

1. McDougalLittell Algebra 1: Applications, Equations, & Graphs [Hardcover] (Author)
2. Algebra Survival Guide Workbook: Thousands of Problems To Sharpen Skills and Enhance Understanding [Paperback] by Josh Rappaport(Author)
- 3 High School Algebra Tutor (High School Tutors Study Guides) [Paperback]
The Editors of REA (Author), Algebra Study Guides (Author), Staff of Research & Education Association (Author)

H) Web Reference:

<http://www.calculatorsoup.com/>

www.mathlinks.us

www.coolmath.com

www.mathpower.com/linkstu.htm

www.algebra.com

www.math.com

www.purplemath.com/modules/index.htm

www.softmath.com/links-to-algebra.html

www.emtech.net/math2.htm

www.homeschoolmath.net/online/algebra.php

www.webmath.com

<http://www.homeworksimplified.com>

www.homeschoolmath.net

<http://school.discoveryeducation.com/homeworkhelp/webmath/>

<http://www.cut-the-knot.org/content.shtml>

<http://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/AlgebraTrigIntro.aspx>

<http://www.sosmath.com/>

<http://www.ams.org/mathscinet/>

<http://www.aaamath.com/>

<http://www.algebrahelp.com>

I. Journals:

Advances in Applied Mathematics

Advances in Difference Equations

Advances in Differential Equations

Advances in Geometry

Advances in Mathematics

Advances in Theoretical and Mathematical Physics

Algebra & Number Theory

Algebra Colloquium

Algebra Universalis

Algebraic & Geometric Topology

American Journal of Mathematics

American Mathematical Monthly
Analysis and Applications
The Analyst

J. Magazines:

Math Horizons
Millennium Mathematics

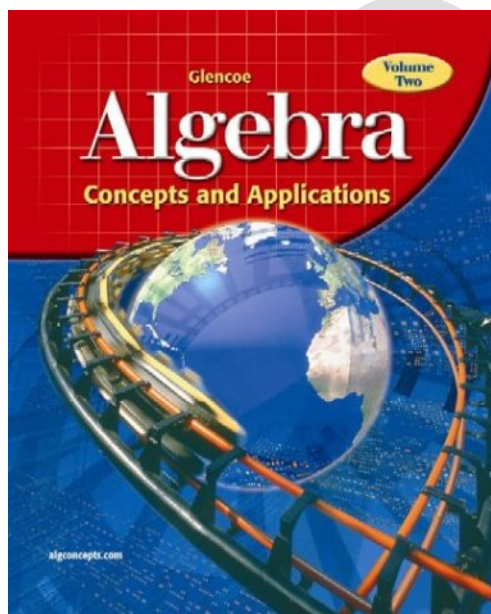
M. Comprehensive Reading Plan

Students are required to read at least 1 book or their equivalent during each class as independent reading at-home. Students must also read for 30 minutes at home as part of their daily homework assignment in all subjects. Check your Class Reading Assignment at www.USICAhs.org/CURRICULUM and check free ebooks at www.openlibrary.org.

Text Book Description:

Publication Date: July 5, 2003 | ISBN-10: 0078607752 | ISBN-13: 978-0078607752 | Edition: 1
An ideal program for struggling students.

Glencoe Algebra: Concepts and Applications, Volume 1 and Volume 2 cover all Algebra 1 concepts in a two-volume format.



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