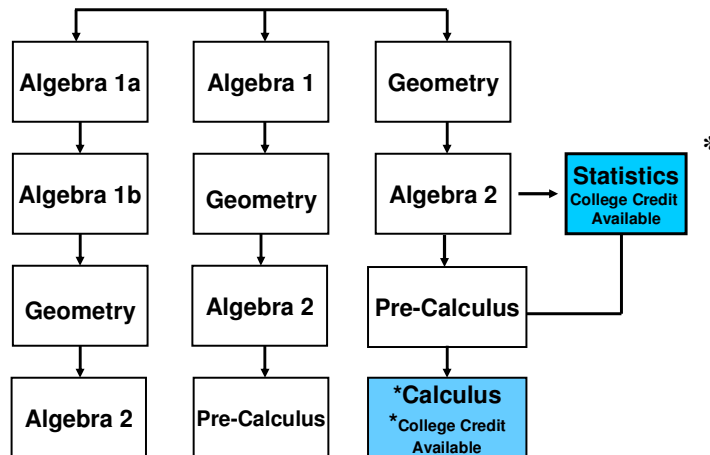


MATH
S V H S Math
Course Options

Incoming Freshmen

* Prerequisite
 Student must have a B- or better in Pre-Calculus to enroll in Calculus



Placement for Grade 9 math will be made by the student and parents based on recommendation of the eighth grade math teacher and achievement test scores.

Algebra IA

Grade 9-10 1 year 1 credit
 Prerequisite: Consent of the instructor

This mathematics course will be the first in a sequence of two courses in which Algebra is made relevant by providing students with alternative teaching strategies and various modeling math activities and connections. This course is designed to introduce students to the concept of working and solving for unknown quantities. Major emphasis is placed on numerical exercises translating verbal or English statements to mathematical statements. This course will focus on the first six chapters of the Glencoe Algebra I textbook including basic operations with variables, integers, and properties, linear equations, formulas, word problems, proportions, probability, and graphing.

Algebra IB

Grade 10 1 year 1 credit
 Prerequisite: Consent of the instructor

This course is the second in the 2-year Algebra I program. As in Algebra IA, major emphasis will be placed on alternative teaching strategies and modeling math activities and connections. This course will finish the last six chapters of the Glencoe Algebra I textbook and focus on the following topics: linear inequalities, polynomials, factoring, quadratics, and radical expressions and equations.

Algebra 1

Grade 9-10 1 year 1 credit

Prerequisite: Consent of the instructor

This course is designed to introduce students to the concept of working and solving for unknown quantities. Major emphasis is placed on numerical exercises translating of verbal or English statements to mathematical statements. The major units of study will be basic operations with variables, integers and properties, linear equations, formulas and word problems, polynomials and factoring, introduction to quadratic equations, and fractions.

Geometry

Grade 9-10-11-12 1 year 1 credit

Prerequisite: PASS both semesters of Algebra 1 or both semesters of Algebra 1B or the consent of the instructor

This course will acquaint the student with the Fundamentals of Geometry, such as parallel lines, triangles, and co-ordinate Geometry. The goals are to develop student skills and abilities as well as knowledge and understanding of math concepts. In particular it will increase the student's ability to: read mathematical proofs with understanding, write proofs with clarity and accuracy, sketch geometric figures and make accurate constructions and use mathematical language. The major units of study will be basic definitions, undefined terms, axioms, and theorems; the study of triangles and quadrilaterals; perpendicular and parallel lines.

An introduction is made to the areas of trigonometry, coordinate geometry, area and volume.

Algebra 2

Grade 9-10-11-12 1 year 1 credit

Prerequisite: PASS Algebra 1 and Geometry or consent of the instructor

This course is designed to strengthen concepts of Algebra I as well as explore more advanced concepts. More emphasis is placed on the theoretical aspect, applications of mathematical principles, and word problems with less emphasis on mere substitution. The major units of study are algebraic fractions and their applications; solving linear equations, absolute value, fractional and quadratic equations; story problems; quadratic formula, coordinate geometry--2 variables; and logarithmic and exponential functions.

Pre Calculus

Grade 11-12 1 year 1 credit
Prerequisite: PASS Algebra 2 and Geometry (strongly recommended "C" or better in both) or consent of the instructor

This course is designed to prepare students for College Mathematics, Calculus, and advanced mathematics in related sciences. This course will require students to unify the concepts learned in geometry and previous algebra courses, and become better problem solvers. The major units of study are: functions, matrices, advanced graphing techniques, trigonometry, analytic geometry, exponential and logarithmic functions, conic sections, sequences and series (including mathematical induction), and polar coordinates.

Statistics*

Grade 11-12 1 Semester (Fall) 1 credit
Prerequisite: Algebra 2 with a C or better
*RVC requires an ACT math score 18 and reading score 19 or meet RVC Accuplacer Requirements

Statistics is intended primarily for students planning on future majors in life science or social science, or others interested in elementary statistics. Topics included are measures of central tendency and variability, graphical presentation of data, normal and binomial distributions, t- and chi-square distributions, sampling, hypothesis testing and correlation. Can be taken for college credit for students with an ACT math sub score of 18 or better or placement from a college placement test.

Calculus

Grade 12 1 year 1 credit
Strongly recommended "B-" or better in Pre Calculus
RVC requires an ACT math score 26 and reading score 19 or meet RVC Accuplacer Requirements

Introduction to Differential and Integral calculus including study of limits and applications of Derivative and the Integral. Some emphasis will also be placed on improving mathematical writing skills and various problem solving strategies. Calculus may be taken for college credit through Rock Valley College with an ACT math sub score of 26 or better, an ACT reading score of 19 or better or placement from a college placement test.