Elko County School District / College and Career Readiness Mathematics
(Curriculum Guide / 2015 - 2016)

This course will satisfy a Math credit.

This course is recommended for students who scored below "college ready" on the College and Career Readiness Exam (currently a score below 22 on the mathematics section of the ACT). The mathematical concepts, skills, and applications reviewed are Pre-Algebra / Elementary Algebra, Intermediate Algebra / Coordinate Geometry, Plane Geometry / Trigonometry.

The objective of this course is to increase students' math skills to the level required to enroll in a credit bearing college math course.

Because of the diversity in size and logistics of the secondary schools in the Elko County School District, each school has the autonomy to teach the course in the manner which will best benefit the students at their school.

The Elko County School District Secondary Mathematics Curriculum Committee recommends the following structure for teaching the class.

FALL SEMESTER

Text: *Nova's ACT MATH PREP COURSE (Kolby and Vaughn)*

Objective: *Prepare students for the December administration of the ACT exam.*

SPRING SEMESTER

Text: *ACCUPLACER MATH SUCCESS (2nd edition—Academic Success Media)*

Objective: *Prepare students for the Spring administration of the Accuplacer exam.*

PRE-ALGEBRA

- basic operations using whole numbers, decimals, fractions, and integers
- place value; square roots and approximations
- the concept of exponents; scientific notation; factors
- ratio, proportion, and percent
- linear equations in one variable
- absolute value and ordering numbers by value
- elementary counting techniques and simple probability
- data collection, representation, and interpretation
- understanding simple descriptive statistics

ELEMENTARY ALGEBRA

- properties of exponents and square roots
- evaluation of algebraic expressions through substitution
- using variables to express functional relationships
- understanding algebraic operations
- solution of quadratic equations by factoring.

INTERMEDIATE ALGEBRA

- the quadratic formula
- rational and radical expressions
- absolute value equations and inequalities,
- sequences and patterns
- systems of equations
- quadratic inequalities
- functions
- modeling
- matrices
- roots of polynomials
- complex numbers

COORDINATE GEOMETRY

- graphing and the relations between equations and graphs, including points, lines, polynomials, circles, and other curves
- graphing inequalities
- slope
- parallel and perpendicular lines
- distance
- midpoints
- conics

PLANE GEOMETRY

- properties and relations of plane figures, including angles and relations among perpendicular and parallel lines
- properties of circles, triangles, rectangles, parallelograms, and trapezoids
- transformations
- the concept of proof and proof techniques
- volume
- applications of geometry to three dimensions

TRIGONOMETRY

- trigonometric relations in right triangles
- values and properties of trigonometric functions
- graphing trigonometric functions
- modeling using trigonometric functions
- use of trigonometric identities
- solving trigonometric equations