

# Wyoming Department of Education Required Virtual Education Course Syllabus

## Natrona County School District # 1

Program Name	Natrona Virtual Learning	Content Area	MA
Course ID	NCV02052.2	Grade Level	9,10,11,12
Course Name	Algebra 1 Sem 2	# of Credits	0.5
SCED Code	02052G0.5022	Curriculum Type	Odysseyware

### COURSE DESCRIPTION

*Sem. 2 Algebra I continues the 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.*

### WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) <a href="#">Use the Standards and Benchmarks as Spreadsheets</a>
N.RN.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.
N.CN.8	(+)Extend polynomial identities to the complex numbers. For example, rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$ .
F.IF.8a	Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
A.APR.6	Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$ , where $a(x)$ , $b(x)$ , $q(x)$ , and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$ , using inspection, long division, or, for the more complicated examples, a computer algebra system.
S.ID.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.*

### SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
UNIT 1: Polynomials	N.CN.8	Recognize a polynomial and the number of terms it has. Multiply monomials. Check the factorization of a polynomial.
UNIT 2: Exponential and Radical Functions	N.RN.2	Evaluate and simplify expressions with zero and negative exponents. Use the multiplication property of exponents to simplify products. Solve equations with irrational solutions.
UNIT 3: Quadratics	F.IF.8a	Determine if the given sides form a right triangle. Identify a quadratic equation. Solve quadratic equations by factoring.

UNIT 4: Rational Expressions	A.APR.6	Reduce rational expressions.Solve proportions.Solve word problems by writing and solving rational equations.
UNIT 5: Probability and Statistics	S.ID.2	Find the mean, median, and mode of a given set of data.Determine the outcomes, or sample space, of an event using a table or a tree diagram.