

Wyoming Department of Education Required Virtual Education Course Syllabus

Natrona County School District # 1

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|--------------|--------------------------|-----------------|-------------|
| 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) Use the Standards and Benchmarks as Spreadsheets |
|-----------|--|
| 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. |

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| 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. |