

Mathematics Scope and Sequence
Vashon Island High School: Math Analysis

First Trimester	Second Trimester
<p>Prerequisites</p> <ul style="list-style-type: none"> • Real numbers • Coordinate system • Linear equations and inequalities • Linear functions: slope, y-intercept, general form, standard form • Solving equations and inequalities: polynomial, absolute value <p>Function review</p> <ul style="list-style-type: none"> • Relation vs. function • Domain and range • Linear functions • Absolute value functions • Polynomial functions • Rational functions • Radical functions <p>Function behavior</p> <ul style="list-style-type: none"> • End behavior • Continuous and discontinuous • Increasing and decreasing • Concavity <p>Complex numbers</p> <ul style="list-style-type: none"> • Sums and differences • Products and quotients • Roots <p>Exponential and logarithmic functions</p> <ul style="list-style-type: none"> • Real exponents • Exponential functions • Logarithmic functions • Properties of logarithms • Evaluating logarithms and solving exponential functions <p>Review of trigonometric functions</p> <ul style="list-style-type: none"> • The unit circle • Properties of the six basic trigonometric functions <p>Inverse trigonometric functions</p> <ul style="list-style-type: none"> • Inverse relations and functions • Inverse of sine and cosine • Inverse of other trigonometric functions • Solving trigonometric equations 	<p>Analytic Trigonometry</p> <ul style="list-style-type: none"> • Fundamental identities • Identity proofs • Sum and difference identities • Multiple angle identities • Law of sines and law of cosines <p>Vectors</p> <ul style="list-style-type: none"> • Vectors in the plane • Dot product <p>Parametric Equations</p> <p>Polar equations</p> <ul style="list-style-type: none"> • Polar coordinates • Graphs of polar equations • DeMoivre's Theorem <p>Matrix mathematics</p> <ul style="list-style-type: none"> • Matrices, dimensions • Addition/subtraction • Multiplication (scalar and matrix multiplication) • Determinant <p>Conic sections</p> <ul style="list-style-type: none"> • Ellipses • Parabolas • Hyperbolas • Graphing quadratic systems • Graphing quadratic inequalities <p>Probability</p> <ul style="list-style-type: none"> • Simple and compound events • Permutations • Combinations • Binomial Theorem <p>Statistics</p> <ul style="list-style-type: none"> • Central tendency • Variation • Normal curve <p>Sequences and series</p> <ul style="list-style-type: none"> • Arithmetic sequences • Geometric sequences • Arithmetic series • Geometric series