

Algebra 2A



The following learning targets represent the major concepts studied and assessed in this course.

Semester 1

Unit A **Functions**

- A1** Understand function notation and evaluate a function given function notation.
- A2** Identify and interpret key characteristics of functions including domain/range, end behavior, increasing/decreasing intervals, turning points, minimums, maximums, and zeroes.
- A3** Describe the effect of transformation algebraically and graphically, including translations, reflections, and dilations.

Unit B1 **Quadratics part 1**

- B1.1** Graph quadratic equations and recognize characteristics of graphs.
- B1.2** Solve quadratics using factoring and graphing techniques.

Unit B2 **Quadratics part 2**

- B2.1** Solve quadratic equations using square roots, including imaginary solutions.
- B2.2** Perform the operations of addition, subtraction, multiplication, and division of complex numbers.
- B2.3** Solve quadratic equations by completing the squares.
- B2.4** Solve quadratic equations by the quadratic formula.
- B2.5** Solve systems of equations with non linear equations.

Semester 2

Unit C **Polynomial Functions**

- C1** Create a sketch of a polynomial function from an equation and create a polynomial equation from a graph.
- C2** Identify key features of polynomials (zeros, multiplicity, end behavior, y-intercept, local minimums and maximums, turning points, transformations).
- C3** Apply the fundamental theorem of algebra to be able to state the number of real and complex zeros.

Unit D **Polynomial Equations**

- D1** Perform the the operations of addition, subtraction and multiplication of polynomials.
- D2** Factor polynomials including difference and sum of two cubes, grouping and quadratic form.
- D3** Divide polynomials.
- D4** Solve polynomial equations by factoring and/or applying the Remainder Theorem.