Unit 2 - Polynomial Equations and Inequalities				
Overall Expectations Evaluated	**Evidence of achievement/Assessment of learning**			
C1,3,4: 1. identify and describe some key features of polynomial functions, and make connections between the numeric, graphical, and algebraic representations of polynomial functions 3. solve problems involving polynomial and simple rational equations graphically and algebraically 4. demonstrate an understanding of solving polynomial and simple rational inequalities. **D3:** 3. compare the characteristics of functions, and solve problems by modelling and reasoning with functions, including problems with solutions that are not accessible by standard algebraic techniques.	1. Assignment 1 (2.5%) 2. Test 1 (4.5%)			
	Student Success Criteria :			
	I can: ● divide polynomial functions by binomials ● use and explain The Remainder Theorem ● use The Factor Theorem & Integral Zero Theorem to factor polynomial functions ● solving Polynomial Equations using the above theorems and other factoring techniques ● recognize families of polynomial functions and write equations for Families of Polynomial Functions ● solve Polynomial Inequalities Graphically and Algebraically			
Approximate weighting for each category in the unit	**K**	**T**	**C**	**A**
	25%	25%	25%	25%
Specific expectations taught and assessed				
C1.1, 1.2, 1.3, 1.5, 1.7, 1.8, 3.1, 3.2, 3.3, 3.4, 3.7, 4.1, 4.2, 4.3, D3.1, 3.2				

Lesson plan	Description	Time frame
1. Prerequisite Skills	● Functions Review ● Expanding and simplifying polynomial expressions ● Factoring simple and complex trinomials ● Factoring difference of squares	2 hours

	● The quadratic equation & quadratic functions ● Determining intervals of positivity & negativity from a graph ● Quiz ● Homework and Help Session	
2. The Remainder Theorem	● Review of standard long division with numbers ● Polynomial Long Division ● The Remainder Theorem ● Synthetic Division ● Quiz ● Homework and Help Session	2 hours
3. The Factor Theorem	● Remainder Theorem Review ● The Factor Theorem ● Steps to Factoring Polynomials ● Integral Zero Theorem ● Quiz ● Homework and Help Session	2 hours

4. Polynomial Equations	● Polynomial Review
	● Common & Group Factoring Review
	● Solving Polynomial equations
	   ○ common & group factoring
	   ○ factor theorem
	   ○ when to use the quadratic equation
	● Solving Polynomial equations graphically using technology
	● Quiz
	● Homework and Help Session	

5. Families of Polynomial Functions	● Families of Functions ○ functions with the same roots make up a family of functions ● Sketching Graphs and families of functions ● Quiz ● Homework and Help Session	2 hours
6. Solving Inequalities	● Interval Notation Review ● Introduction to Polynomial inequalities and how they differ from equations ● Solving inequalities graphically ● Introduction to Solving inequalities algebraically ● Quiz ● Homework and Help Session	2 hours

| 7. Solving Factorable Polynomial Inequalities | ● Solving inequalities algebraically
 ● Interval Charts
     ○ The sign of a polynomial
     ○ Filling out an interval chart
     ○ using an interval chart to solve an inequality
 ● Quiz
 ● Unit Review
 ● Homework and Help Session | 2 hours |