

# 4C Syllabus

Lecture Schedule based on Cohen –Precalculus, 5<sup>th</sup> Edition, 1997

Section	Lectures	Topic
3.1, 3.4	1	Definition of a Function; Combining Functions
3.2, 3.3, 3.4	1	Graphs of Functions; Transformations
3.5, 4.1	1	Inverse Functions; Linear Functions
4.2, Supp.	1	Quadratic Functions; Power Functions
4.6	1	Polynomial Functions
12.1, 12.2, 12.3, 12.4	1	Roots of Polynomial Equations; Complex Numbers; Division of Polynomials; Remainder and Factor Theorems; Fundamental Theorem of Algebra; Vieta's Rule
12.5, 12.6	1	Roots of Polynomial Equations; Various Theorems
4.7	1	Rational Functions
5.1, 5.2, 5.3, 5.4	1	Exponential and Logarithmic Functions; Properties of Logarithms
5.5, 5.6, 5.7	1	Equations involving Exponents and Logarithms; Applications; Exponential Growth and Decay
6.1, 6.3	1	Trig Functions of Acute Angles; Solving Triangles
7.1, 7.2, 6.4, 7.3	1	Radian Measure and Geometry; Trig Functions of All Angles; Trig Functions of Real Numbers
7.4, 7.5, 7.7	1	Graphs of Trig Functions
6.2, 6.5, 7.3	1	Trig Identities
8.1, 8.2, 8.3	1	Addition Formulas; Double-Angle Formulas; Product-to-Sum and Sum-to-Product Formulas
8.4, 8.5	1	Trig Equations; Inverse Trig Functions
9.2, 9.3	1	Vectors in the Plane
9.4	1	Parametric Equations
9.5, 9.6	2	Polar Coordinate System; Polar Functions; Graphs
13.6	1	Trig Form of Complex Numbers; DeMoivre's Theorem
10.1, 10.2	1	Systems of Linear Equations; Gaussian Elimination
10.6, 10.7	1	Nonlinear Systems of Equations; Systems of Linear Inequalities
2.1, 11.2, 11.3	1	Circles; Parabolas
11.4	1	Ellipses
11.5	1	Hyperbolas
12.7, 12.8	1	Partial Fractions
13.3 - 13.5	2	Sequences; Series

Recommended Calculator: TI-85 or TI-86. Symbolic manipulation calculators such as TI-89 or TI-92 are generally disallowed.