CAPE MATHEMATICS

Scheme of work 2017-2018

SEPTEMBER 4, 2017

PRESENTATION COLLEGE
Chaguanas

Programme/Qualification Title: **Cape Mathematics Unit One**		Term I – 04/9/2017 – 15/12/2017
Teachers: Mr. Anthony Hosein Mr. Ganesh Pulchan	No of weeks 15	No of periods per week: 10

Scheme of Work

Topic #	Name	Content
1	Reason and Logic 1 week	Truth tables, Compound statements, Connectives, Conditional statements, Equivalent Propositions, Tautology, Algebra of Propositions
2	Real Number System 1 week	Operations, Closure, Commutativity, Associativity, Identity, Inverse, Simple proofs – exhaustion, direct, contradiction, counter example
3	Principal of Induction 2 weeks	Sequence and series, Sigma notation, Divisibility test and Mathematical Induction
4	Polynomials 1 week	Degree, Remainder Theorem, Factor Theorem, Factorising and Solving Equations
	INTERNAL ASSESSMENT # 1	
5	Indices, Surds and Logarithms 1 week	Laws, Simplification, Rationalising, Exponential, Logarithmic, Solving equations, Change of base, Application
6	Functions 1 week	Describing a function, one to one, onto, bi-jective, inverse, odd and even, periodic, composite, increasing and decreasing, transformations of graphs
7	Cubic Polynomials 2 weeks	Finding the roots
8	Inequalities & Modulus Function 2 weeks	Theorem of inequalities, quadratic inequalities, sign table, triangle inequality
9	Trigonometry & Co-ordinate Geometry 2 weeks	Inverse trig functions and graphs, solving trig functions, trig identities, equations involving double- angle and half-angle, review of co-ordinate geometry, circles, parametric equations
	INTERNAL ASSESSMENT # 2	

Programme/Qualification Title: **Cape Mathematics Unit One**		**Term II – 8/01/2018 – 29/03/2018**
Teachers: Mr. Anthony Hosein Mr. Ganesh Pulchan	**No of weeks** 12	**No of periods per week:** 10

Topic #	Name	Content
1	Vectors in 3D 2 weeks	Algebra of vectors, equality, magnitude, displacement, unit, angle between, perpendicular and parallel vectors, equation of line, equation of plane, Cartesian equation of plane
2	Limits & Continuity 1 weeks	Evaluation – direct substitution, factorising , conjugate; Tending to infinity, Continuity, Types of discontinuity – infinite, point, jump
3	Differentiation I 2 weeks	First principle, Chain rule, product rule, quotient rule, derivative of trig functions
4	Application of Differentiation 2 weeks	Tangents, normal, stationary points, rates of change, graphs of rational functions
5	Integration 2 weeks	Anti-derivative, integration theorem, integral of trig functions, definite integral.
6	Application of Integration 1 week	Area under curve, between curves and axes, volume of solids of revolution
7	Differential Equations 1 week	Classifying differential equations, First order, modelling problems, Second order differential equations
Term III – Correction of Mock Exams / Past Papers/IA #3		