St. Mary's College

Form 3

Course Outline

Academic Year

2022/2023, 2024,2025

Updated September 2022

Term 1

	Topic	Module
1.	Algebraic manipulation Algebraic product Algebraic factors	- Expansion of brackets single term - Expansion of binomials - Factorizing common factors - Factorizing quadratic expressions - Solving algebraic equations with unknown on both sides of equation including equations involving expansions - Solving worded problems applying algebra
2.	Inequalities	- Notation - Graphical representation on a number line - Graphical representation on a Cartesian plane
3.	Pythagoras theorem	- Right angle triangle ratios - Finding missing length - Practical application problem solving
4.	Use of calculator	
5.	Sets	- Set notation - Venn diagrams - Problems involving two and three sets

Term2

1.	Statistics	- Representation of data - Frequency table - Pie chart - Bar graph
2.	Trigonometry	- Trigonometric ratios, sine cosine tangent - Solving problems involving finding missing length and angle - Angle of elevation and depression - Similar and congruent triangles, shapes
3.	Equation of a line	- Plotting points on the Cartesian Plane - Gradient of line, symbol m, gradient between two points

		- Y- intercept, symbol c
		- Equation of a line $y = m\mathrm{x} + c$
		- Graphical representation of a line
		- Midpoint between two points
		- Length of line
4.	Simultaneous Equations	- simultaneous equations with two unknowns
		- Elimination method
		- Substitution method
		- Graphical method

Term 3

1.	Algebraic Fractions	- Manipulating algebraic fractions including fractions numerator and denominator with algebraic expressions
		- Solving equations involving algebraic fractions
2.	Construction	- Parallel and perpendicular lines
		- Constructing angles, 2D shapes
		- Bisecting angles
3.	Consumer Arithmetic	- Simple interest
		- Salaries, bills, rates and taxes