KS5 Course Overview

Further Mathematics

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	Details	Pure: Algebraic Expressions and fractions Quadratics Equations and Inequalities Graph Transformations Straight-line Graphs Circles Binomial Expansion Trigonometry Trigonometric identities and equations Vectors Statistics: Data Collection (not LDS) Measures of location and spread Representations of data Correlation	Pure: Algebraic Methods Differentiation Integration Exponentials and Logarithms Statistics: Probability (Applied 1 and 2) Statistical Distributions Mechanics: Modelling Constant Acceleration Forces and motion Variable Acceleration	Pure: Exponentials and Logarithms continued Pure 2: Algebraic Methods Functions Sequences Binomial Expansion – with partial fractions Radians Trigonometric functions Statistics: Hypothesis Testing Mechanics: Variable Acceleration continued	Pure: Functions and Graphs Parametric Equations Differentiation Trigonometry and modelling Mechanics: Moments Forces and Motion Statistics: Correlation and regression Normal distribution	Pure: Integration Numerical Methods Vectors Mechanics: Projectiles Application of forces Further Kinematics Statistics: Normal distribution continued	Core Pure: Complex numbers Argand Diagrams Series Roots of Polynomials Volumes of Revolution Vectors

	Methods of Assessment	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignments. • Online home works. • Teacher assessments in controlled conditions.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignments. • Online home works. • Teacher assessments in controlled conditions.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignment. • Online home works. • Teacher assessments in controlled conditions.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignment. • Online home works. • Teacher assessments in controlled conditions.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignment. • Online home works. • Teacher assessments in controlled conditions.	End of year exams

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		(Topic Name)	(Topic Name)	(Topic Name)	(Topic Name)	(Topic Name)	(Topic Name)
Year 13	Details	Core Pure 1: Matrices Linear Transformations Proof by induction Core Pure 2: Complex Numbers Series Polar Coordinates Hyperbolic functions Further Mechanics: Momentum and impulse Work, Energy, Power Further Pure: Vectors	Core Pure 2: Methods in calculus Differential Equations Modelling with differential equations Volumes of revolution Further Mechanics: Elastic Strings and springs Elastic collisions in 1D	Further Mechanics: Elastic Collisions in 2D Further Pure: Conic Sections 1 Inequalities Taylor Series Methods in Calculus	Further Pure: Conic Sections 2 t-formulae Numerical Methods Differential Equations	Revision for Summer exams	Exam details
	Methods of Assessment	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignments. • Online home works. • Teacher assessments in controlled conditions.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignments. • Online home works. • Teacher assessments in controlled conditions.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignments. • Online home works. • Mock exams.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignments. • Online home works. • Teacher assessments in controlled conditions.	During this unit, Student progress and attainment is assessed by: • In-class quizzes. • Assignments. • Online home works. • Teacher assessments in controlled conditions.	

Useful Resources

https://www.physicsandmathstutor.com/
https://www.mathsnetalevel.com/logon.php
https://alevelmathsrevision.com
Exam Board Specification: Edexcel (hyperlink to correct version)
https://qualifications.pearson.com/content/dam/pdf/A%20Level/Mathematics/2017/specification-and-sample-assesment/a-level-l3-mathematics-specification-issue4.pdf

https://qualifications.pearson.com/content/dam/pdf/A%20Level/Mathematics/2017/specification-and-sample-assesment/a-level-l3-further-mathematics-specification.pdf