

# KS5 CURRICULUM: YEAR 13 A LEVEL FURTHER MATHS

## Overview

Pure Maths - An extension of the techniques and knowledge gained at GCSE. Developing algebraic and manipulative skills, graph drawing and trigonometry. New concepts are also introduced and developed including logarithms and calculus.

Mechanics - The study of statics and moving bodies including forces and energy.

Statistics - Presentation and analysis of data. Probability and probability distributions.

	Focus / Topic	Knowledge & Skills	Assessment
<b>Autumn 1</b>	Pure Chapters 1 - 3	Complex numbers, Series, Methods in calculus.	<b>Assessment week (w/b 21<sup>st</sup> Sept 2020)</b> – this will cover all topics since the start of year 12.
<b>Autumn 2</b>	Pure Chapters 4 – 7	Volumes of revolution, Polar Coordinates, Hyperbolic functions, Methods in differential equations.	<b>Year 13 Mock Assessment Fortnight (w/b 7th Dec 2020)</b> – this will cover all the A-Level content covered so far.
<b>Spring 1</b>	Statistics Chapter 3, 5	Geometric and negative binomial distributions, Central limit theorem.	Topic Testing on all chapters throughout half term.
<b>Spring 2</b>	Statistics Chapter 7, 8 Mechanics Chapter 3	Probability generating functions, Quality of tests. Elastic Strings and Springs.	Topic Testing on all chapters throughout half term.
<b>Summer 1</b>	Mechanics Chapter 5 Revision	Elastic collisions in two dimensions.	Topic Testing on all chapters throughout half term.
<b>Summer 2</b>			Public exams

## Further Information

Exam board – Edexcel – the specification can be found here:

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

All students require a Casio Classwiz calculator for this course: [https://www.amazon.co.uk/Casio-FX-991EX-S-UH-Scientific-Calculator-Resolution/dp/B0719FWP3X/ref=sr\\_1\\_1?keywords=casio+classwiz+calculator&qid=1562138320&s=gateway&sr=8-1](https://www.amazon.co.uk/Casio-FX-991EX-S-UH-Scientific-Calculator-Resolution/dp/B0719FWP3X/ref=sr_1_1?keywords=casio+classwiz+calculator&qid=1562138320&s=gateway&sr=8-1)

We use the Edexcel textbooks for this course:

<https://www.pearsonschoolsandcolleges.co.uk/secondary/Mathematics/16plus/EdexcelASandAlevelMathematics2017/EdexcelASandAlevelMathematics2017.aspx>