Year	Term	Week	Hours	Chapter: Topic	Topic break-down (sub-topics)	Learning Objectives: Students will be able to:
Year 10 Higher Mathematics Curriculum Plan	Term 1 – Module 1 and 2	1	3	Review and revision 5		
		2 – 3	7	12: Similarity	12.1 Similar triangles	Show two triangles are similar. Work out the scale factor between similar triangles.
					12.2 Areas and volumes of similar shapes	Solve problems involving the area and volume of similar shapes.
		4 – 5	7	13: Exploring and applying probability	13.1 Experimental probability	Calculate experimental probabilities and relative frequencies. Estimate probabilities from experiments. Use different methods to estimate probabilities.
					13.2 Mutually exclusive exhaustive outcomes	Recognise mutually exclusive, complementary and exhaustive events.
					13.3 Expectation	Predict the likely number of successful events, given the number of trials and the probability of any one outcome.
					13.4 Probability and two-way tables	Read two-way tables and use them to work out probabilities.
					13.5 Probability and Venn diagrams	Use Venn diagrams to solve probability questions.
		6	4	14: Powers and standard form	14.1 Powers (indices)	Use powers (also known as indices). Multiply and divide by powers of 10.
		7	3	Review and revision 6		
		8 – 9	Half Term Break			
		1 – 2	7	14: Powers and Standard Form	14.2 Rules for multiplying and dividing powers	Use rules for multiplying and dividing powers.
					14.3 Standard form	Change a number into standard form. Calculate using numbers in standard form.
		3 – 5	11	15: Equations and inequalities	15.1 Linear equations	Solve equations in which the variable (the letter) appears as part of the numerator of a fraction. Solve equations where you have to expand brackets first Solve equations where the variable appears on both sides of the equals sign Set up equations from given information and then solve them.
					15.2 Elimination methods for simultaneous equations	Solve simultaneous linear equations in two variables using the elimination method.
					15.3 Substitution method for simultaneous equations	Solve simultaneous linear equations in two variables using the substitution method.
		6	3	Examinations and revision		
		7	4	Examinations and revision		
		8 – 9	Christmas Break			
	Term 2 – Module 3 and 4	1 – 2	7	15: Equations and inequalities	15.4 Balancing coefficients to solve simultaneous equations	Solve simultaneous linear equations by balancing coefficients.
					15.5 Using simultaneous equations to solve problems	Solve problems using simultaneous linear equations.
		3	3	Number recap and review		
		4 – 5	7	15: Equations and inequalities	15.6 Linear inequalities	Solve a simple linear inequality and represent it on a number line.
					15.7 Graphical inequalities	Show a graphical inequality Find regions that satisfy more than one graphical inequality.
					15.8 Trial and improvement	Estimate the answer to an equations that does not have an exact solution using trial and improvement.
		6	4	Review and revision 7		
		7	Half Term Break			
		1 – 2	7	16: Counting, accuracy, powers and surds	16.1 Rational numbers, reciprocals, terminating and recurring decimals	Recognise rational numbers, reciprocals, terminating decimals and recurring decimals. Convert terminal decimals to fractions. Convert fractions to recurring decimals. Find reciprocals of numbers or fractions.
					16.2 Estimating powers and roots	How to estimate powers and roots of any given positive number.
					16.3 Negative and fractional powers	Apply the rules of powers to negative and fractional powers. Find and use the relationship between negative powers and roots.
		3	3	Statistics recap and review		
		4 – 5	7	16: Counting, accuracy and surds	16.4 Surds	Simplify surds. Calculate and manipulate surds, including rationalising a denominator.
					16.5 Limits of accuracy	Find the error interval or limits of accuracy of numbers that have been rounded to different degrees of accuracy.

					16.6 Problems involving limits of accuracy	Combine limits of two or more variables together to solve problems.
					16.7 Choices and outcomes	Work out the number of choices, arrangements or outcomes when choosing from lists or sets.
		6	4	**Review and revision 8**		
		7 – 8	**Easter Break**			
		1 – 4	10	**17: Quadratic equations**	17.1 Plotting quadratic graphs	Draw and read values from quadratic graphs.
					17.2 Solving quadratic equations by factorisation	Solve a quadratic equation by factorisation. Rearrange a quadratic equation so that it can be factorised.
					17.3 Solving a quadratic equation by using the quadratic formula	Solve a quadratic equation by using the quadratic formula. Recognise why some quadratic equations cannot be solved.
					17.4 Solving quadratic equations by completing the square	Solve a quadratic equation by completing the square.
Term 3 – Module 5 and 6		5	3	**Review and revision 9**		
		6	4	**Review and revision 9**		
		7	**Half Term Break**			
		1 – 2	7	**17: Quadratic equations**	17.4 continued Solving quadratic equations by completing the square	Solve a quadratic equation by completing the square.
					17.5 The significant points of a quadratic curve	Identify the significant points of a quadratic function graphically. Identify the roots of a quadratic function by solving a quadratic equation. Identify the turning point of a quadratic function by using symmetry or completing the square.
		3	3	**Summer examinations and revision**		
		4	4	**Summer examinations and revision**		
		5 – 7	11	**17: Quadratic equations**	17.6 Solving one linear and one non-linear equation using graphs	Solve a pair of simultaneous equations where one is linear and one is non-linear, using graphs.
					17.7 Solving quadratic equations by the method of intersection	Solve equations by the method of intersecting graphs.
					17.8 Solving linear and non-linear simultaneous equations algebraically	Solve simultaneous equations where one equation is linear and the other is non-linear.
					17.9 Quadratic inequalities	Solve quadratic inequalities.