

Unit	Title	Estimated hours	Date
FP3 – Term 1			
1	Hyperbolic functions	6	HT1 week 1-3
.1	The definitions of the hyperbolic functions		
.2	Graphs of hyperbolic functions		
.3	Finding and using hyperbolic identities and their similarity to trig identities.		
.4	Defining and using inverses of hyperbolic functions.		
.5	Solving equations involving hyperbolic functions.		
2	Further coordinate systems	4	HT1 week 4-5
.1	Equations for an ellipse		
.2	Using parametric equations to find tangents and normals		
.3	Cartesian and parametric equations for a hyperbola		
.4	Equations of tangents and normal to a hyperbola		
.5	Defining the focus and directrix of the ellipse and hyperbola		
	Mock Exam	2	HT1 Week 6
.6	Finding the equations of simple loci.	2	HT1 week 7
3	Differentiation	4	HT2 week 1-2
.12	Hyperbolic and inverse hyperbolic functions		
.3	Inverse trig functions		
4	Integration	6	HT2 week 3-5
.1	Recognition of standard integrals		
.2	Integration involving hyperbolic functions		
.3	Using trig and hyperbolic substitutions		
.4	Integration involving quadratic expressions in the denominator		
.5	Inverse trig and hyperbolic functions using by parts		
.6	Deriving and using the reduction formula		
	Mock exam	2	HT2 week 6
.78	Arc length and surface area of revolution	2	HT2 week 7
		28 hours	
Term 2			
5	Vectors	8	HT3 week 1-4
.12	The definition of vector product and interpreting the modulus as an area		
.3	The triple scalar product and using it to find the volume of parallelepiped and of a tetrahedron.		
.45	Vector and Cartesian equations of lines and planes		
.6	Using vectors in a variety of contexts		
	Mock Exam	2	HT3 Week 5
	More vectors – past paper questions	2	HT3 Week 6
9	Matrix Algebra	6	HT4 week 1-3
.1	Transpose of a matrix		
.23	Determinant and inverse of a 3x3 matrix		
.45	Using matrices to represent linear transformations in 3-D and using inverse matrices to reverse the effects.		

.67	Mock Exam	2	HT4 week4
	Eigenvalues, eigenvectors and reducing symmetrical matrices to diagonal form.	2	HT 4 Week 5
		22 hours	