Mathematics Department
C4 - Planning

Time	Chapter	Reference
	1. Algebra and Functions	
2 to 3 Lessons	1.1 Adding & subtracting algebraic fractions.	Exercise 1A
1:1 & 1.2 1:3 & 1:4 1.5	1.2 Partial fractions with 2 linear factors in the denominator.	Exercise 1B
	1.3 Partial fractions with 3 or more linear factors in the denominator.	Exercise 1C
	1.4 Partial fractions with repeated linear factors in the denominator.	Exercise 1D
	1.5 Improper fractions into partial fractions.	Exercise 1E
	Summary of Key Points	**Mixed Exercise 1F**

4 Lessons 2:1, 2.2, 2.3 2.4	**2. Coordinate geometry in the (*x*,*y*) plane** 2.1 Parametric equations used to define the coordinates of a point. 2.2 Using parametric equations in coordinate geometry. 2.3 Converting parametric equations into Cartesian equations. 2.4 Finding the area under a curve given by parametric equations. **Summary of Key Points**	 Exercise 2A Exercise 2B Exercise 2C Exercise 2D **Mixed Exercise 2E**
3 to 4 Lessons 3.1, 3.2, 3.3	**3. Sequences and series** 3.1 the binomial expansion for a positive integral index. 3.2 Using the binomial expansion to expand $(a + bx)^n$ 3.3 Using partial fractions with the binomial expansion. **Summary of Key Points**	 Exercise 3A, Exercise 3B Exercise 3C **Mixed Exercise 3D**

5 to 6 Lessons 4.1, 4.2 4.3, 4.4 4.5	4. **Differentiation** 4.1 Differentiating functions given parametrically. 4.2 Differentiating relations which are implicit. 4.3 Differentiating the function a^x 4.4 Differentiation and rates of change. 4.5 Simple differential equations. **Summary of Key Points**	 Exercise 4A Exercise 4B Exercise 4C Exercise 4D Exercise 4E **Mixed Exercise 4F**
9 to 10 Lessons 6.1, 6.2, 6.3, 6.4 & 6.5 6.6 6.7 6.8 6.9 6.10 6.11	**5. Integration** 6.1 Integrating standard functions 6.2 Integrating using the reverse chain rule. 6.3 Using trig identities in integration. 6.4 Using partial fractions to integrate expressions. 6.5 Using standard patterns to integrate expressions. 6.6 Integration by substitution. 6.7 Integration by parts. 6.8 Numerical integration.	 Exercise 6A Exercise 6B Exercise 6C Exercise 6D Exercise 6E Exercise 6F Exercise 6G Exercise 6H

	6.9 Integration to find areas and volumes.	Exercise 6I
	6.10 Using integration to solve differential equations.	Exercise 6J
	6.11 Differential equations in context.	Exercise 6K
	Summary of Key Points	**Mixed Exercise 6L**
6 to 7 Lessons 5:1 & 5.2 5.3 & 5.4 5.5 & 5.6 5.7 5.8 5.9 & 5.10	**6. Vectors** 5.1 Vector definitions and vector diagrams.	Exercise 5A
	5.2 Vector arithmetic and the unit vector.	Exercise 5B
	5.3 Using vectors to describe points in 2 or 3 dimensions.	Exercise 5C
	5.4 Cartesian components of a vector in 2 dimensions.	Exercise 5D
	5.5 Cartesian components of a vector in 3 dimensions.	Exercise 5E
	5.6 Extending 2 dimensional vector results to 3 dimensions.	Exercise 5F
	5.7 The scalar product of 2 vectors.	Exercise 5G
	5.8 The vector equation of a straight line.	Exercise 5H
	5.9 Intersecting straight line vector equations.	Exercise 5I
	5.10 The angle between 2 straight lines.	Exercise 5J
	Summary of Key Points	**Mixed Exercise 5K**