	Recommended teaching hours
Core	**95 hours**
Topic 1: Stoichiometric relationships	**13.5**
1.1 Introduction to the particulate nature of matter and chemical change	
1.2 The mole concept	
1.3 Reacting masses and volumes	
Topic 2: Atomic structure	**6**
2.1 The nuclear atom	
2.2 Electron configuration	
Topic 3: Periodicity	**6**
3.1 Periodic table	
3.2 Periodic trends	
Topic 4: Chemical bonding and structure	**13.5**
4.1 Ionic bonding and structure	
4.2 Covalent bonding	
4.3 Covalent structures	
4.4 Intermolecular forces	
4.5 Metallic bonding	
Topic 5: Energetics/thermochemistry	**9**
5.1 Measuring energy changes	
5.2 Hess's Law	
5.3 Bond enthalpies	
Topic 6: Chemical kinetics	**7**
6.1 Collision theory and rates of reaction	
Topic 7: Equilibrium	**4.5**
7.1 Equilibrium	

Topic 8: Acids and bases **6.5**

8.1 Theories of acids and bases

8.2 Properties of acids and bases

8.3 The pH scale

8.4 Strong and weak acids and bases

8.5 Acid deposition

Topic 9: Redox processes **8**

9.1 Oxidation and reduction

9.2 Electrochemical cells

Topic 10: Organic chemistry **11**

10.1 Fundamentals of organic chemistry

10.2 Functional group chemistry

Topic 11: Measurement and data processing **10**

11.1 Uncertainties and errors in measurement and results

11.2 Graphical techniques

11.3 Spectroscopic identification of organic compounds

Additional higher level (AHL) 60 hours

Topic 12: Atomic structure **2**

12.1 Electrons in atoms

Topic 13: The periodic table—the transition metals **4**

13.1 First-row d-block elements

13.2 Coloured complexes

Topic 14: Chemical bonding and structure **7**

14.1 Covalent bonding and electron domain and molecular geometries

14.2 Hybridization

Topic 15: Energetics/thermochemistry **7**

15.1 Energy cycles

15.2 Entropy and spontaneity

Topic 16: Chemical kinetics **6**

16.1 Rate expression and reaction mechanism

16.2 Activation energy

Topic 17: Equilibrium **4**

17.1 The equilibrium law

Topic 18: Acids and bases **10**

18.1 Lewis acids and bases

18.2 Calculations involving acids and bases

18.3 pH curves

Topic 19: Redox processes **6**

19.1 Electrochemical cells

Topic 20: Organic chemistry **12**

20.1 Types of organic reactions

20.2 Synthetic routes

20.3 Stereoisomerism

Topic 21: Measurement and analysis **2**

21.1 Spectroscopic identification of organic compounds