

# Edexcel A-Level Chemistry Revision Courses

EACH COURSE IS COVERED IN 1 DAY

## Course 1 – Atomic Structure, The Periodic Table and The Mole

Atomic structure
Electronic configurations & Ionisations Energies
Bonding, Intermolecular Forces, structure and properties
The Periodic Table & Periodicity
Group 2 & Group 7
Redox
The Mole, amount of substance & Empirical formulae

## Course 2 – Basic Organic Chemistry and Basic Organic Analysis

Basic organic chemistry
Alkanes, fractional distillation & refining
Alkenes and addition polymers
Halogenoalkanes
Alcohols
Basic organic analysis – Mass spectroscopy and IR Spectroscopy

## Course 3 – Physical Chemistry

Energetics
Equilibria, Le Chatelier's Principle and $K_c$ Expressions
Kinetics (Rates of Reaction)
The Ideal Gas Equation ( $PV=nRT$ )

#### **Course 4 – Advanced Organic Chemistry and Advanced Organic Analysis**

Aldehydes and Ketones
Oxidising and Reducing Agents in organic chemistry
Carboxylic acids, acyl chlorides and esters
Benzene and Aromatic chemistry
Polymers
Optical Isomerism and Chirality
Amines, amino acids & proteins
Advanced Organic synthesis
Advanced organic analysis – NMR spectroscopy and Chromatography

#### **Course 5 – Advanced Physical Chemistry**

Rate Equations, Rate constants, Arrhenius and Activation Energies
Acids, Bases, pH and Buffers
Thermodynamics – Born Haber Cycles, Entropy & Free Energy

#### **Course 6 – Electrochemistry, Transition Elements and Aqueous Chemistry**

Transition Elements
Electrode Potentials and Electrochemistry/Cells
Reactions of ions in aqueous solution