

Online Chemistry Tutoring Course Outline

Modul	Branch	Topics	Learning Components	Practical / Activities
Module 1	General Chemistry	Introduction to Chemistry	Overview, scope, importance, scientific method	Virtual lab tour, interactive safety quiz
Module 2	General Chemistry	Matter, Measurement & Units	States of matter, SI units, accuracy & precision	Measurement exercises, density calculation simulation
Module 3	General Chemistry	Atomic Structure	Atomic models, isotopes, electronic configuration	Atomic structure animations, interactive quizzes
Module 4	General Chemistry	Periodic Table & Trends	Groups, periods, atomic radius, ionization energy	Periodic table games, element property exercises
Module 5	General Chemistry	Chemical Bonding	Ionic, covalent, metallic bonds, VSEPR, hybridization	Bond modeling tool, virtual molecule builder
Module 6	General Chemistry	Stoichiometry	Mole concept, balancing equations, empirical/molecular formula	Interactive stoichiometry problems, titration simulation
Module 10	Organic Chemistry I	Introduction to Organic Chemistry	Nomenclature, functional groups	Interactive flashcards, group discussion
Module 20	Organic Chemistry II	Advanced Functional Groups	Alcohols, ketones, aldehydes, acids, amines	Virtual organic synthesis lab, quizzes