Faculty	Natural sciences
Home Department	Chemistry
Module Topic	General Chemistry
Generic Module Name	Chemistry 124
Alpha-numeric Code	**CHE124**
NQF Level	5
NQF Credit Value	15
Duration	Semester
Proposed semester to be offered	Second Semester
Programmes in which the module will be offered	BSc (Chemical Sciences) (3019,3220); BPharm (3305); BSc (Applied Geology) (3011, 3214); BSc (Physical Sciences) (3120,3233)
Year level	1
Main Outcomes	On completion of this module students should be able to: • Apply the following chemical concepts and principles to qualitatively engage with real-world phenomena or examples: the accepted language and conventions for naming simple compounds and communicating about their chemical properties and behaviour; the forces acting between particles in matter that influence properties and behaviour; the factors that influence chemical stability; the forces that drive chemical change; and the factors that control the rate at which chemical change takes place. • Solve quantitative chemistry problems, both in familiar and novel contexts. • Conduct simple scientific investigations, including the collection, handling and interpretation of experimental data. • Conduct research using the library, the web and other sources of information. • Reference sources of information correctly. • Use the internet and computer-based word-processing, spreadsheet, and presentation software to complete tasks. • Begin to recognise the relationship of chemistry to society, technology and the environment. • Begin to develop life-long learning capabilities and to see learning about chemistry in a wider context. • Present clear, well-structured arguments using the content of this module to describe and explain the properties and behaviour of matter. • Work productively in co-operative learning groups.
Main Content	• Intermolecular forces, liquids and solids • Solutions and their behaviour • Chemical kinetics: The rates of chemical reactions • Principles of reactivity: chemical equilibria, cqueous equilibria, including acid-base and solubility equilibria, and electron transfer reactions • Introductory concepts in Organic Chemistry, including nomenclature, physical properties, and representation of structure of: alkanes, alkenes, alkynes, alkyl halides, alcohols, aldehydes and ketones, and carboxylic acids and their derivatives

	• An introduction to reactivity with reference to substitution, addition, elimination and oxidation of organic substrates. • An introduction to isomerism with reference to geometric, cis-trans, E,Z and R,S isomers/enatiomers. • An introduction to stability with reference to ring strain, and the relative stabilities of alkenes and carboniumions.			
Pre-requisite modules	None			
Co-requisite modules	None			
Prohibited module Combination	None			
Breakdown of Learning Time	**Hours**	**Timetable Requirement per week**		**Other teaching modes that does not require time-table**
Contact with lecturer / tutor:	50	*Lectures p.w.*	3	
Assignments & tasks:	10	*Practicals p.w.*	1	
Practicals:	30	*Tutorials p.w.*	1	
Tutorials:	0			
Tests & Examinations:	15			
Selfstudy:	45			
Other:	**0**			
Total Learning Time	**150**			
Methods of Student Assessment	Continuous Assessment (CA): 60% Final Assessment (FA): 40%			
Assessment Module type	Continuous and Final Assessment (CFA)			