

<b>Faculty</b>	Natural Sciences
<b>Home Department</b>	Chemistry
<b>Module Topic</b>	General Chemistry
<b>Generic Module Name</b>	Chemistry 124
<b>Alpha-numeric Code</b>	<b>CHE124</b>
<b>NQF Level</b>	5
<b>NQF Credit Value</b>	15
<b>Duration</b>	Semester
<b>Proposed semester to be offered</b>	Second Semester
<b>Programmes in which the module will be offered</b>	BSc (Chemical Sciences) (3019, 3220); BPharmacy (3305); BSc (Applied Geology) (3011, 3214); BSc (Physical Science) (3120, 3233)
<b>Year level</b>	1
<b>Main Outcomes</b>	<p>On completion of this module students should be able to:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Solve quantitative chemistry problems, both in familiar and novel contexts.</li> <li>• Conduct simple scientific investigations, including the collection, handling and interpretation of experimental data.</li> <li>• Conduct research using the library, the web and other sources of information.</li> <li>• Reference sources of information correctly.</li> <li>• Use the internet and computer-based word-processing, spreadsheet, and presentation software to complete tasks.</li> <li>• Begin to recognise the relationship of chemistry to society, technology and the environment.</li> <li>• Begin to develop life-long learning capabilities and to see learning about chemistry in a wider context.</li> <li>• Present clear, well-structured arguments using the content of this module to describe and explain the properties and behaviour of matter.</li> <li>• Work productively in co-operative learning groups.</li> </ul>
<b>Main Content</b>	<ul style="list-style-type: none"> <li>• 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</li> <li>• An introduction to reactivity with reference to substitution, addition, elimination and oxidation of organic substrates.</li> <li>• An introduction to isomerism with reference to geometric, cis-trans, E,Z and R,S isomers/enantiomers.</li> <li>• An introduction to stability with reference to ring strain, and the relative stabilities of alkenes and carbonium ions.</li> <li>• An introduction to organic reaction mechanisms.</li> <li>• An introduction to carbohydrates, lipids and proteins</li> <li>• An introduction to polymer chemistry</li> </ul>
<b>Pre-requisite modules</b>	None

<b>Co-requisite modules</b>	None			
<b>Prohibited module Combination</b>	None			
<b>Breakdown of Learning Time</b>	<b>Hours</b>	<b>Timetable Requirement per week</b>		<b>Other teaching modes that does not require time-table</b>
<i>Contact with lecturer / tutor:</i>	50	<i>Lectures p.w.</i>	3	
<i>Assignments &amp; tasks:</i>	10	<i>Practicals p.w.</i>	1	
<i>Practicals:</i>	30	<i>Tutorials p.w.</i>	1	
<i>Assessments:</i>	15			
<i>Selfstudy:</i>	45			
<i>Other:</i>	0			
<b>Total Learning Time</b>	<b>150</b>			
<b>Methods of Student Assessment</b>	Continuous Assessment (CA): 60% Final Assessment (FA): 40%			
<b>Assessment Module type</b>	Continuous and Final Assessment (CFA)			