

# CHEMISTRY – MAJOR (SCIENCE) – BACHELOR OF SCIENCE (HONOURS)

## CHEM-M-BSH

**Subject:** Administered by the Department of Chemistry.

**Plan:** Consists of 72.00 units as described below.

**Program:** The Plan, alone, or in combination with a Minor in another subject, and with sufficient electives to total 120.00 units, will lead to a Bachelor of Science (Honours) Degree.

Requirements for this program have been modified. Please consult the [2021-2022 Calendar](#) for the previous requirements.

Code	Title	Units
<b>1. Core</b>		
<b>A. Complete the following:</b>		
CHEM 112	General Chemistry	6.00
<b>B. Complete 3.00 units from the following: 3.00</b>		
MATH 110	Linear Algebra	
MATH 111	Linear Algebra	
MATH 112	Introduction to Linear Algebra	
<b>C. Complete the following:</b>		
CHEM 211	Main Group Chemistry	3.00
CHEM 212	Principles of Chemical Reactivity	3.00
CHEM 213	Introduction to Chemical Analysis	3.00
CHEM 221	Material, Solutions, Interfaces	3.00
CHEM 222	Methods of Structure Determination	3.00
CHEM 223	Organic Reactions	3.00
<b>D. Complete the following:</b>		
CHEM 311	Mechanistic Organic Chemistry	3.00
CHEM 312	Transition Metal Chemistry	3.00
CHEM 313	Quantum Mechanics	3.00
CHEM 321	Instrumental Chemical Analysis	3.00
CHEM 322	The Chemical Bond: Computation and Spectroscopy	3.00
CHEM 323	Biological Chemistry	3.00
CHEM 397	Experimental Chemistry	6.00
<b>E. Complete the following:</b>		
CHEM 497	Research Project	6.00
<b>2. Option</b>		
<b>A. Complete 3.00 units from the following: 3.00</b>		
	CHEM at the 400-level	
<b>3. Supporting</b>		
<b>A. Complete 6.00 units from the following: 6.00</b>		
PHYS 104	Fundamental Physics	

PHYS 106	General Physics	
PHYS 115 & PHYS 116	Introduction to Physics I and Introduction to Physics II	
<b>B. Complete 6.00 units from the following:</b>		<b>6.00</b>
MATH 120	Differential and Integral Calculus	
MATH 121	Differential and Integral Calculus	
MATH 123 & MATH 124	Differential and Integral Calculus I and Differential and Integral Calculus II	
<b>Electives</b>		
Elective Courses		48.00
<b>Total Units</b>		<b>120.00</b>

## 4. Notes

A. Students wishing to continue to graduate studies in chemistry should consider as electives at least 6.00 further units in chemistry at the 300- and 400-level (including 300-level and 400-level BCHM offerings).

B. A maximum of 6.00 units from courses offered by other Faculties and Schools may be counted toward the program and/or Plan requirements. This includes courses in BMED, COMM, GLPH, LAW, NURS and courses in the Faculty of Engineering and Applied Science.