

Program Code – SC5

Program Name – Bachelor of Science

First Year			
Semester 1	Course Code	Course Name	Course Rules
	SCBIO1010	Principles of Biology	PR: SCCHM1001 EX: BIOGC1722 & SCCOR1100
	SCCHM1001	Chemistry 1	EX: CHMGC1011 or SCCHE1011
	SCCOR1300	Scientific Practice	EX: ENCOR1015, MATHS1000, MATGC1010
	SCENV1502	Environmental Studies	EX: ENVGC1022 & ENVGC1711 & SCGEO1102
Semester 2			
	SCCOR1200	Scientific Communication	EX: SCCOR1001 & SCIGC101 & SCMED1010
	STATS1000	Statistical Methods	EX: SCIGC1020
	SCCHM1002	Chemistry 2	EX: CHMGC1022 or SCCHE1012
		1 st Level Elective	
Second Year			
Semester 1	Course Code	Course Name	Course Rules
		1 st – 3 rd Level Elective	
		2 nd – 3 rd Level Elective	
		Major Specialisation	
		Minor Specialisation	
Semester 2			
		2 nd – 3 rd Level Elective	
		2 nd – 3 rd Level Elective	
		Major Specialisation	
		Minor Specialisation	

Third Year			
Semester 1	Course Code	Course Name	Course Rules
		2 nd – 3 rd Level Elective	
		2 nd – 3 rd Level Elective	
		Major Specialisation 1	
		Minor Specialisation 1	
Semester 2			
		2 nd – 3 rd Level Elective	
		3 rd Level Elective	
		Major Specialisation 1	
		Minor Specialisation 1	

Specialisation Elective options:

Semester 1 - SCBCH3001 Lifespan Nutrition

Semester 1 & 2 - SCCOR3001 Research Project

Semester 1 & 2 - SCCOR3011 Science Internship

Semester 2 – SCMOL3010 Advanced methods in Biotechnology

Semester 2 - SCMIC3003 Clinical Microbiology

Glossary

Semester: designated teaching period.

PR: Pre-requisite, a course/s that must be completed prior to undertaking another course.

CO: Co-requisite, a course/s that must be completed simultaneously, or prior to, undertaking another course.

EX: Exclusion, a course/s that may not be taken.

Additional Information

This program structure applies to students commencing from 2019. Students who commenced prior to 2019 should refer to the continuing enrolments page.

The second and third years of this program consist of the majors, minors and electives selected by the students. Please refer to the document below for assistance with selecting your 1st Level Electives for your second semester of first year.

Bachelor of Science Major and Minor Sequences

Biochemistry

Biochemistry is a laboratory based discipline that explores the fundamental essence of life. It explores the structure and function of biological molecules, the molecular interactions occurring inside cells, and communication between cells, with a particular emphasis on changes associated with health and disease.

Jobs	Diagnostic labs, health research, education, forensic science labs
Combines well with	Biotechnology, Chemistry, Food Science, Health & Nutrition, Microbiology
Major core courses	SCBIO1010, SCCHM1002, SCBCH2001, SCBCH2002, SCMOL2001
Select 3 of the following	SCMOL3001, SCCHM3001, SCCHM3004, SCCOR3001
Minor core courses	SCBIO1010, SCCHM1002
Select 2 of the following	SCBCH2001, SCBCH2002, SCMOL2001

Biological Science

Biological science provides students with an opportunity to combine several areas of interest and is particularly useful for students seeking to achieve a broad scientific qualification.

Jobs	Education, science communication
Combines well with	Ecology, Food Science, Health and Nutrition, Microbiology
Major core courses	SCBIO1010, SCBIO1020
Select 3 of the following	SCMED2010 & SCMED3020, SCMOL2010 & SCMOL3001, SCMIC2001 & SCMIC3003, SCBCH2002 & SCMED3010, SCVET2001 & SCVET3001, SCENV2100 & SCENV2101
Minor core courses	SCBIO1010, SCBIO1020
Select 1 of the following	SCMED2010 & SCMED3034, SCMOL2010 & SCMOL3001, SCMIC2001 & SCMIC3003, SCBCH2002 & SCMED3010, SCVET2001 & SCVET3001, SCENV2100 & SCENV2101

Biotechnology

Biotechnology explores the use of biological molecules and living systems to create new, energy efficient, methods to manufacture products and provide services, such as diagnosis and treatment of disease, bioremediation and waste treatment, improved plant and animal production.

Jobs	Diagnostic research labs, biotech companies, forensic science labs
Combines well with	Biochemistry, Chemistry, Food Science, Microbiology
Major core courses	SCBIO1010, SCCHM1002, SCBCH2001, SCMIC2001, SCMOL2001
Select 3 of the following	SCMIC3002, SCMOL3010, SCMOL3002, SCCOR3001
Minor core courses	SCBIO1010, SCCHM1002, SCBCH2001, SCMOL2001

Chemistry

Chemistry is an enabling science that underpins all aspects of life. It is a laboratory based discipline that covers aspects as diverse as molecular synthesis, environmental chemistry and the use of instrumental techniques to identify and quantify compounds.

Jobs	Diagnostic labs, health research, education, forensic science labs
Combines well with	Biochemistry, Biotechnology, Environmental Restoration, Food Science
Major core courses	SCCHM1001, SCCHM1002, SCBCH2001, SCCHM2001, SCCHM2002, SCCHM3001, SCCHM3004. SCCHM3003
Minor core courses	SCCHM1001, SCCHM1002
Select 2 of the following	SCBCH2001, SCCHM2001, SCCHM2002

Earth Materials

This is a classical geology program, which focuses on composition of minerals and rocks and their role in energy production and economic uses, such as mining.

Jobs	Geological education, economic industries, field geology
Combines well with	Environmental Geoscience, Mineral Processing, Chemistry, Environmental restoration
Major course courses	SCCHM1003, SCGEO1103, SCGEO2112, SCGEO2102, SCGEO2103, SCGEO3102
Select 2 of the following	SCGEO2107, SCCHM2001, SCGEO3106, SCGEO3103
Minor core courses	SCGEO1103, SCGEO2101
Select 2 of the following	SCGEO3102, SCGEO2105, SCGEO2112, SCGEO2103

Ecology

Ecology studies the interactions of organisms and their environment. It provides students with the opportunity to explore the natural world through class-based learning and fieldwork, providing students with the necessary skills and knowledge to pursue a career in the environmental field. The conservation and management of species and ecosystems is a common thread linking all courses.

Jobs	Conservation science & management, environmental planner, consultants
Combines well with	Environmental Restoration, Biological Science, Environmental Geoscience
Major course courses	SCBIO1010, SCENV1002, SCENV2100, SCENV2101, SCENV2200, SCENV3110, SCENV3202, SCENV3203, SCENV3912
Minor core courses	SCBIO1010, SCENV1002, SCENV2100, SCENV2200

Environmental Geoscience

This sequence focuses on the development of sediments and soils, earth's water resources and the evolution and alteration of the land surface by both natural and anthropogenic processes.

Jobs	Environmental geology, soil management, land and water management, landscape restoration, technical geology
Combines well with	Ecology, Environmental Restoration, Earth Materials, Chemistry
Major course courses	SCENV1502, SCGEO1103, SCGEO2111, SCGEO2112, SCGEO2106, SCGEO3103
Select 2 of the following	SCGEO3106, SCGEO3112, SCGEO3113
Minor core courses	SCENV1502, SCGEO1103
Select 2 of the following	SCGEO2111, SCGEO2112, SCGEO2106

Environmental Restoration

With a focus on land and water resources, this sequence tackles some of the most pressing issues in ensuring sustainability of resources for future generations. Students will explore processes in the restoration and remediation of degraded land and water systems that will help shape our future.

Jobs	Land & water manager, landscape restoration, mine site rehabilitation
Combines well with	Ecology, Earth Materials, Mineral Processing
Major course courses	SCENV1502, SCSUS1500, SCENV2400, SCENV3120

Select 4 of the following	SCCOR3001, SCCHM2002, SCENV3501, SCENV3912, SCGEO2106
Minor core courses	SCSUS1500, SCCHM2002, SCENV2400 SCENV3120

Food Science

Food Science explores the science behind food to ensure food is safe, tasty, nutritious, and meets the needs and desires of consumers.

Jobs	Food manufacturing, quality assurance, quality control, product development
Combines well with	Biochemistry, Biotechnology, Health and Nutrition, Microbiology
Major course courses	SCCHM1002, SCFST1022, SCMIC2001, SCCHM2001, SCFST2023, SCMIC3002, SCFST3026, SCCHM3003
Minor core courses	SCCHM1002, SCFST1002
Select 2 of the following	SCMIC2001, SCCHM2001, SCFST2023

Health and Nutrition

Health and Nutrition provides students with an opportunity to develop an enhanced understanding of the key aspects that impact on our health, in both positive and detrimental ways.

Jobs	Nutritionist, education, science communication
Combines well with	Biochemistry, Biotechnology, Food Science, Microbiology
Major course courses	SCBIO1010, SCCHM1001, SCMIC2001, SCBCH2002, SCMED2011, SCBCH3001, SCMIC3002, SCMIC3003
Minor core courses	SCBIO1010, SCCHM1001, SCBCH2002, SCMED2011

Information Technology

Jobs	
Combines well with	
Minor core courses	ITECH1100, ITECH1103, ITECH2003, ITECH2004

Mathematics

Jobs	
Combines well with	
Major course courses	MATHS1001, MATHS1005, MATHS2016
Select 2 of the following	MATHS2003, MATHS2009 MATHS2012
	MATHS3001
Select 2 of the following	MATHS3007, MATHS3004, MATHS3002
Minor core courses (Calculus Stream)	MATHS1001, MATHS2106, MATHS1005
Select 1 of the following	MATHS2003, MATHS2009, MATHS2012
Minor core courses (Non-Calculus Stream)	MATHS1000 or SCCOR1300, STATS1000
Select 2 of the following	MATHS2003, MATHS2009, MATHS2012

Microbiology

Jobs	
Combines well with	
Major course courses	SCBIO1010, SCCHM1001, SCMIC2001, SCMOL2001, SCMIC3002, SCMIC3003, SCMOL3010, SCCOR3001
Minor core courses	SCBIO1010, SCCHM1001, SCMIC2001, SCMOL2001

Mineral Processing

Jobs	
Combines well with	
Major course courses	SCCHM1003, SCGEO1103, SCCHM2001, SCGEO2102, SCGEO2105, SCCOR3001, SCMET3100, SCMET3200
Minor core courses	SCCHM1003, SCGEO1103, SCMET3100, SCMET3200

Statistics (minor sequence only)

Food Science explores the science behind food to ensure food is safe, tasty, nutritious, and meets the needs and desires of consumers.

Jobs

Combines well with

Minor core courses SCCOR1300, STATS1000, STATS2101, STATS2100
