

Enrolment Program Structure

Program Code – SC5

Program Name – Bachelor of Science

(It is strongly recommended by the Faculty that students commencing online study enrol in a reduced load of two courses per semester with a maximum of three).

First Year			
Semester 1	Course Code	Course Name	Pre requisites
	SCBIO1010 OR SCBIO1020	Principles of Biology OR Systems Biology	EX: BIOGC1722 & SCCOR1100 EX: BIOGC1711 or SCMED1014
	SCCHM1001	Chemistry 1	EX: CHMGC1011 or SCCHE1011
	SCCOR1300	Scientific Practice	EX: ENCOR1015, MATHS1000, MATGC1010
		SCGEO or SCENV Elective	
Semester 2			
	SCCOR1200	Scientific Communication	EX: SCCOR1001 & SCIGC1010 & SCMED1010
	STATS1000	Statistical Methods	EX: SCIGC1020
		1 st Level Elective	
		1 st Level Elective	
Second Year			
Semester 1			
		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	Pre requisites
		2 nd – 3 rd Level Elective	
		2 nd – 3 rd Level Elective	
		Major Specialisation 1	
		Major Specialisation 1	
Semester 2			
		2 nd – 3 rd Level Elective	
		3 rd Level Elective	
		Major Specialisation 1	
		Major Specialisation 1	

Additional Information

This structure applies to all students

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.

Staff members available for consultation regarding your electives are majors and minors are also listed in this document.

Credit Transfer

If you have previously completed studies at a TAFE Certificate IV or Diploma level, or at University, you MAY be eligible to obtain credits for these prior studies.

If you wish to apply for credit transfer, please request this via email to info@federation.edu.au prior to enrolling, and include:

- your name and Student ID
- copies of your results AND
- course outlines.

Glossary

Semester – designated teaching period.

Pre-requisite – a course or courses that must be completed prior to undertaking another course.

Major/Minor – the main subject area of study completed as part of a degree.

Level (i.e. first, second, third) – introductory, intermediate and advanced level course.

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
For advice contact	Greg Davis, Jenny Mosse, Mark Myers

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, SCMOL2010, SCMIC2001, SCBCH2002, SCVET2001, SCENV2100
Minor core courses	SCBIO1010, SCBIO1020
Select 1 of the following	SCMED2010, SCMOL2010, SCMIC2001, SCBCH2002, SCVET2001, SCENV2100
For advice contact	Scott Nankervis, Morgan Wallace, Wendy Wright

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
For advice contact	David Bean, Phill Brook-Carter, Andrew Greenhill

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
For advice contact	Alison Green, Barbie Panther

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	SCENV1502, 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, SCGEO3103
For advice contact	Nicole Cox, Ander Guinea, Haydn Swan

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, SCENV2200, SCENV3110, SCENV3202, SCENV3912
Minor core courses	SCBIO1010, SCENV1002, SCENV2100, SCENV2200
For advice contact	Grant Palmer, Simon Cook, Fiona Hogan

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
For advice contact	Ander Guinea, Nicole Cox, Steve Carey

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, SCCHM2002, SCENV3501, SCENV3120, SCGEO2106, SCENV3912
Minor core courses	SCSUS1500, SCENV2400, SCENV3100, SCENV3120
For advice contact	Singarayer Florentine, Jess Reeves, Grant Palmer, Wendy Wright

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
For advice contact	David Bean, Janee Hoch, Kamal Sayed Rasavi

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
For advice contact	David Bean, Janee Hoch, Andrew Greenhill