



Bachelor of Science (International students)

Program code	Entry requirements	Prerequisites
1634	6.5	NIL
Available at	IELTS (Academic) (more)	Assumed knowledge
Gold Coast Campus, Nathan Campus	CRICOS code	Any General or Applied English subject (Units 3&4, C)
Duration	027473M	General Mathematics or Mathematical Methods (Units 3&4, C)
3 years full-time	Commencing in	Apply Now
Credit points	Trimester 1, Trimester 2 and Trimester 3	
240		
Indicative fee		
\$39,000.00* per year (more)		
* 2024 indicative annual fee		

Degree requirements: Students who started Trimester 2 - 2022

For Domestic and those International students not required to complete the English Language Enhancement course

For the award of *Bachelor of Science (BSc)*, you must successfully complete 240 credit points, made up of the core courses AND

- 60 credit points for a major and 80 credit points of free-choice electives **OR**
- 60 credit points for a major, 60 credit points for a second major and 20 credit points of free-choice electives **OR**
- 70 credit points for the Physics major and 70 credit points of free-choice electives **OR**
- 70 credit points for the Physics major and 60 credit points for the Applied Mathematics major and 10 credit points free-choice elective.

For International students required to complete the English Language Enhancement course

For the award of *Bachelor of Science (BSc)*, you must successfully complete 240 credit points, made up of the core courses AND

- 10 credit points for the English Language Enhancement course (5903LHS); AND
- 60 credit points for a major and 70 credit points of free-choice electives **OR**
- 60 credit points for a major and 60 credit points for a second major and 10 credit points of free-choice electives **OR**
- 70 credit points for the Physics major and 60 credit points of free-choice electives **OR**
- 70 credit points for the Physics major and 60 credit points for the Applied Mathematics major.

Other program requirements

You must successfully complete:

- no more than 100 credit points of Level 1 courses (the first digit of a course code denotes the level);
- at least 60 credit points of Level 3 courses or higher.

This degree may be awarded **with Distinction** where a student achieves a minimum program GPA of 6.5 with no failed courses. The words "This award was achieved with Distinction" will be recorded on the testamur.

Australian Qualifications Framework (AQF) Level and Type

The [Australian Qualifications Framework](#) (AQF) is the national policy for regulated qualifications in Australian education and training. This qualification is accredited as an AQF Level 7 - Bachelor Degree.

English Language Enhancement

All undergraduate International students are required to complete an **English Language Enhancement Course** unless specific criteria are met as specified in Section 5.0 [Qualifications Procedure](#).

The following course must be completed in the first trimester of study:

- **5903LHS Language and Communication for Sciences**

Advice regarding the requirement to complete the English Language Enhancement Course is available via the *myGriffith* portal (in the To Do List).

Students whose first language is English are not permitted to undertake this course.

Program learning outcomes

Program learning outcomes

Program Learning Outcomes communicate to the community the value of the Griffith educational experience as benchmarked against national qualification standards.

Program Learning Outcomes for this award describe the knowledge, skills and the application of knowledge and skills you will acquire through studying the Griffith program of your choice.

Course list: Students starting Trimester 2 - 2022

Course offering information in program structures is a guide only. Please check the actual offering information in the Course Catalogue.

Students must check the prerequisite and incompatible requirements before selecting any course within this program.

English Language Enhancement course

Students required to undertake the English Language Enhancement course must complete 5903LHS in their first trimester of study.

The English Language Enhancement course is to be taken in place of a Free-choice elective in your program.

Trimester	Course code	Requirement	Course title	CP
Tri 1,2 or 3	5903LHS	English Enhancement	Language and Communication for Sciences	10

Year 1

You must select **80 credit points** from the following Level 1 courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	1001NSC	Listed Elective	Human Biology: from Cells to Systems (Clinical Science major)	10
Tri 1	1007ENV	Listed Elective	Introduction to Marine Science (Marine Biology major)	10
Tri 2	1014NSC	Listed Elective	Fundamentals of Biochemistry (Clinical Sciences major / Microbiology major/Biochemistry and Molecular Biology major Nathan only)	10
Tri 1,3	1041SCG	Listed Elective	Biological Systems (Biochemistry and Molecular Biology major / Clinical Science major / Geography major / Marine Biology major / Microbiology major / Wildlife Biology major)	10
Tri 1,3	1023SCG	Listed Elective	Chemistry I (Biochemistry and Molecular Biology major / Chemistry major / Geography major / Marine Biology major / Wildlife Biology major) (Gold Coast)	10
			OR	
Tri 1,3	1021SCG	Listed Elective	Chemistry 1A (Biochemistry and Molecular Biology major/Chemistry major/Geography major/Marine Biology major/Wildlife Biology major/Clinical Sciences major / Microbiology major) (Nathan)	10
Tri 1,3	1201SCG	Listed Elective	Linear Algebra (Applied Mathematics major/ Physics major)	10

Trimester	Course code	Requirement	Course title	CP
Tri 2	1042SCG	Listed Elective	Genetics and Evolutionary Biology (Biochemistry and Molecular Biology major / Clinical Sciences major / Marine Biology major / Microbiology major / Wildlife Biology major)	10
Tri 1,3	1015SCG	Listed Elective	Quantitative Reasoning (Biochemistry and Molecular Biology major / Chemistry major / Clinical Sciences major / Data Science major / Geography major / Marine Biology major / Microbiology major / Wildlife Biology major)	10
Tri 1,2	1031SCG	Listed Elective	Physics 1A (Physics major)	10
Tri 1,3	1043SCG	Listed Elective	Introduction to Environmental Sustainability (Geography major / Marine Biology major / Wildlife Biology major)	10
Tri 2	1044SCG	Listed Elective	Earth Systems (Geography major / Wildlife Biology major)	10
Tri 2	1024SCG	Listed Elective	Chemistry II (Biochemistry and Molecular Biology major / Chemistry major) (Gold Coast only)	10
			OR	
Tri 2	1022SCG	Listed Elective	Chemistry 1B (Biochemistry and Molecular Biology major / Chemistry major / Clinical Sciences major / Microbiology major) (Nathan campus only)	10
Tri 2	1032SCG	Listed Elective	Physics 1B (Physics major) (see Note 1)	10
Tri 2,3	1014SCG	Listed Elective	Statistics (Biochemistry and Molecular Biology major / Microbiology major / Chemistry major / Data Science major / Geography major / Marine Biology major / Wildlife Biology major)	10
Tri 2,3	1202SCG	Listed Elective	Calculus I (Applied Mathematics major / Chemistry major / Physics major)	10
Tri 1,2	1811ICT	Listed Elective	Programming Principles (Data Science major)	10
Tri 2	1024ENG	Listed Elective	Intro to Digital and Spatial Analysis	10
Tri 1,2 or 3	1017SCG	Listed Elective	Foundation Mathematics (see Note 2)	10
Tri 1	1088LHS	Listed Elective	First Peoples	10

Note 1: Students undertaking 1032SCG Physics 1B must complete 1202SCG Calculus I.

Note 2: Students entering the program WITHOUT the assumed knowledge of Senior Secondary Syllabus of Mathematical Methods (or equivalent) are recommended to complete 1017SCG Foundation Mathematics in their first trimester of study. This will be considered a first year elective course. 1201SCG Linear Algebra can be completed in Year 2 in place of an elective or free-choice elective.

Years 2 and 3

You must complete one of the following options:

Trimester	Course code	Requirement	Course title	CP
Tri 1,2			Major	60
			AND	
Tri 1,2,3			Free-choice electives	80
			OR	
Tri 1,2			Major	60
			AND	
Tri 1,2			Second major	60
			AND	
Tri 1,2,3			Free-choice electives	20
			OR	
Tri 1,2			Physics major	70
			AND	
Tri 1,2,3			Free-choice electives	70
			OR	
Tri 1,2			Physics major	70
			AND	
Tri 1,2			Second major	60
			AND	
Tri 1,2,3			Free-choice elective	10

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,2	3992NSC_Y1	Core to Program	Science Capstone	10
			AND	
Tri 1,2	3992NSC_Y2	Core to Program	Science Capstone	10
			OR	
Tri 2	3892ENV	Core to Program	Environmental Capstone	20
			OR	
Tri 1,2,3	3900ESC	Core to Program	Work Integrated Learning Placement	20

Majors (11 available)

Applied Mathematics Major

Applied Mathematics

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1201SCG	Recommended Prereq	Linear Algebra (see Note 1)	10
Tri 2,3	1202SCG	Recommended Prereq	Calculus I	10

Note 1: Students who successfully completed Senior Secondary Syllabus of Mathematical Methods (or equivalent) should complete **1201SCG Linear Algebra**. Students who successfully completed Senior Secondary Syllabus of General Mathematics only (or equivalent) will complete **1017SCG Foundation Mathematics** in their first trimester of study and complete **1201SCG Linear Algebra** in their second trimester of study. If you complete **1017SCG Foundation Mathematics**, this will then be considered a first year elective course.

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	2201NSC	Core to Major	Linear Algebra and Applications	10
Tri 1	2205NSC	Core to Major	Calculus II	10
Tri 1	2202NSC	Core to Major	Numerical Methods	10
Tri 2	2204NSC	Core to Major	Introduction to Mathematical Modelling	10
Tri 1	3201NSC	Core to Major	Advanced Differential Equations and Modelling	10
Tri 1	3203NSC	Core to Major	Complex Analysis and Applications	10

Science Majors

Archaeology (Nathan)

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,3	1041SCG	Recommended Prereq	Biological Systems	10
Tri 1	1088LHS	Recommended Prereq	First Peoples	10
Tri 2	1044SCG	Recommended Prereq	Earth Systems	10
Tri 2	1042SCG	Recommended Prereq	Genetics and Evolutionary Biology	10
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2303ENV	Core to Major	Zoology	10
Tri 1	2416ENV	Core to Major	Environmental Anthropology	10
Tri 1	2006ESC	Core to Major	Archaeology: Discovering the Human Past	10
Tri 2	2061ESC	Core to Major	Artefacts in Archaeology	10
Tri 1	3067ESC	Core to Major	Great Debates in Archaeology	10
Tri 2	3065ESC	Core to Major	Topics in Archaeology	10

Biochemistry and Molecular Biology

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,3	1041SCG	Recommended Prereq	Biological Systems	10
Tri 1,3	1023SCG	Recommended Prereq	Chemistry I (Gold Coast)	10
			OR	
Tri 1,3	1021SCG	Recommended Prereq	Chemistry 1A (Nathan)	10
Tri 2	1014NSC	Recommended Prereq	Fundamentals of Biochemistry (Nathan) (see Note 1)	10
			OR	
Tri 2			Listed first year course (Gold Coast)	10
Tri 2	1042SCG	Recommended Prereq	Genetics and Evolutionary Biology	10
Tri 2	1024SCG	Recommended Prereq	Chemistry II (Gold Coast)	10
			OR	
Tri 2	1022SCG	Recommended Prereq	Chemistry 1B (Nathan)	10
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10

Note 1: 1014NSC Fundamentals of Biochemistry is a prerequisite for 2005NSC Protein Science and 2013NSC_Y1&Y2 Biotechniques Laboratory. Nathan based students will need to take this course before moving to second year major courses.

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2005NSC	Core to Major	Protein Science (Nathan)	10
			OR	
Tri 1	2008MSC	Core to Major	Structural Biochemistry (Gold Coast)	10
Tri 2	2013NSC	Core to Major	Biotechniques Laboratory (Nathan)	10
			OR	
Tri 2	2018NSC	Core to Major	Biosciences Laboratory Skills (Gold Coast)	10
Tri 1	2003NSC	Core to Major	Metabolism (Nathan)	10
			OR	
Tri 2	2011MSC	Core to Major	Metabolism (Gold Coast)	10
Tri 2	2012NSC	Core to Major	Molecular Biology (Offered Nathan & Gold Coast campus from 2023)	10
			OR	
Tri 1	3014MSC	Core to Major	Molecular Biology (Gold Coast) (not offered from 2023)	10
Tri 1,2	3001NSC	Core to Major	Molecular Cell Biology (Nathan)	10
			OR	
Tri 1	3016MSC	Core to Major	Macromolecular and Cellular Biochemistry (Gold Coast)	10

You must complete 10 credit points from the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3009NSC	Elective to Major	Biomedical Sciences Laboratory (offered at Nathan)	10
Tri 2	3012MSC	Elective to Major	Clinical Biochemistry (offered at Gold Coast)	10
Tri 2	3012NSC	Elective to Major	Infectious Disease (offered at Nathan)	10
			OR	
Tri 2	3013MSC	Elective to Major	Infectious Disease (offered at Gold Coast)	10
Tri 2	3022MSC	Elective to Major	Molecular Medicine (offered at Gold Coast)	10
Tri 1	3030NSC	Elective to Major	Applied Bioinformatics (offered at Nathan)	10

Chemistry

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1023SCG	Recommended Prereq	Chemistry I (Gold Coast)	10
			OR	
Tri 1,3	1021SCG	Recommended Prereq	Chemistry 1A (Nathan)	10
Tri 1,3	1201SCG	Recommended Prereq	Linear Algebra (Nathan) (see Note 1)	10
			OR	
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning (Gold Coast)	10
Tri 2	1024SCG	Recommended Prereq	Chemistry II (Gold Coast)	10
			OR	
Tri 2	1022SCG	Recommended Prereq	Chemistry 1B (Nathan)	10
Tri 2,3	1202SCG	Recommended Prereq	Calculus I	10
			OR	
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10

Note 1: Students who successfully completed Senior Secondary Syllabus of Mathematical Methods (or equivalent) should complete **1201SCG Linear Algebra**. Students who successfully completed Senior Secondary Syllabus of General Mathematics only (or equivalent) will complete **1017SCG Foundation Mathematics** in their first trimester of study and complete **1201SCG Linear Algebra** in their second trimester of study. If you complete **1017SCG Foundation Mathematics**, this will then be considered a first year elective course.

You must complete 40 credit points from the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2103NSC	Elective to Major	Organic Chemistry (Nathan)	10
			OR	
Tri 1	2014MSC	Elective to Major	Organic Chemistry (Gold Coast)	10
Tri 2	2209ENV	Elective to Major	Environmental Chemistry (Nathan)	10
			OR	
Tri 1	2203ENV	Elective to Major	Environmental Chemistry and Monitoring (Gold Coast)	10
Tri 1	2101NSC	Elective to Major	Inorganic Chemistry (Nathan)	10
			OR	
Tri 2	2208ENV	Elective to Major	Inorganic Chemistry (Gold Coast)	10
Tri 2	2102NSC	Elective to Major	Spectroscopic and Molecular Analysis	10
Tri 2	2106NSC	Elective to Major	Physical and Analytical Chemistry (Nathan)	10
			OR	
Tri 2	2202ENV	Elective to Major	Physical and Analytical Chemistry (Gold Coast)	10

You must complete 20 credit points from the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3431ENV	Elective to Major	Water Pollution Chemistry (Nathan)	10
			OR	
Tri 1	3201ENV	Elective to Major	Aquatic Chemistry and Pollution (Gold Coast)	10
Tri 1	3105NSC	Elective to Major	Advanced Organic Chemistry	10
Tri 1	3103NSC	Elective to Major	NMR and Structural Chemistry (not offered from 2021)	10
			OR	
Tri 1	3225ENV	Elective to Major	NMR in Biological Systems	10
Tri 2	3102NSC	Elective to Major	Advanced Analytical Chemistry (Nathan)	10
			OR	
Tri 2	3202ENV	Elective to Major	Advanced Analytical Chemistry (Gold Coast)	10

Clinical Sciences (Nathan)

This major is offered on the Nathan campus only

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,3	1041SCG	Recommended Prereq	Biological Systems	10
Tri 1,3	1021SCG	Recommended Prereq	Chemistry 1A (Nathan)	10
			OR	
Tri 1,3	1023SCG	Recommended Prereq	Chemistry I (Gold Coast)	10
Tri 1	1001NSC	Recommended Prereq	Human Biology: from Cells to Systems (Nathan only)	10
Tri 2	1014NSC	Recommended Prereq	Fundamentals of Biochemistry (Nathan only)	10
Tri 2	1042SCG	Recommended Prereq	Genetics and Evolutionary Biology	10
Tri 2	1022SCG	Recommended Prereq	Chemistry 1B (Nathan)	10
			OR	
Tri 2	1024SCG	Recommended Prereq	Chemistry II (Gold Coast)	10

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	2013NSC	Core to Major	Biotechniques Laboratory (Nathan)	10
			OR	
Tri 2	2018NSC	Core to Major	Biosciences Laboratory Skills (Gold Coast)	10
Tri 1	2005NSC	Core to Major	Protein Science (Nathan)	10
			OR	
Tri 1	2008MSC	Core to Major	Structural Biochemistry (Gold Coast)	10
Tri 1	2007NSC	Core to Major	Human Anatomy and Physiology 1	10
Tri 2	2002NSC	Core to Major	Human Anatomy and Physiology 2 (Nathan)	10
Tri 1	3009NSC	Core to Major	Biomedical Sciences Laboratory (Nathan)	10
Tri 2	3014NSC	Core to Major	Advanced Physiology (Nathan)	10

Data Science

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,2	1811ICT	Recommended Prereq	Programming Principles	10
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10

You must complete 30 credit points from the following second year courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2291ENV	Elective to Major	Applied Data Science	10
Tri 1,2,3	2814ICT	Elective to Major	Data Management	10
Tri 1,3	2107ENV	Elective to Major	Introduction to Geographic Information Systems	10
Tri 1	2031ICT	Elective to Major	Data Analytics Methods	10
Tri 2	2030ICT	Elective to Major	Introduction to Big Data Analytics	10

You must complete 30 credit points from the following third year courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3030ICT	Elective to Major	Data Analytics	10
Tri 1	4030ICT	Elective to Major	Big Data Analytics and Social Media (not offered from 2023)	10
			OR	
Tri 1,2,3	3032ICT	Elective to Major	Big Data Analytics and Social Media	10
Tri 2	3033ESC	Elective to Major	Environmental Data Analytics	10
Tri 2	3031ICT	Elective to Major	Applied Data Mining	10

Geography

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,3	1041SCG	Recommended Prereq	Biological Systems	10
Tri 1,3	1021SCG	Recommended Prereq	Chemistry 1A (Nathan)	10
			OR	
Tri 1,3	1023SCG	Recommended Prereq	Chemistry I (Gold Coast)	10
Tri 1,3	1043SCG	Recommended Prereq	Introduction to Environmental Sustainability	10
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10
Tri 2	1044SCG	Recommended Prereq	Earth Systems	10

You must complete 40 credit points from the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	2107ENV	Elective to Major	Introduction to Geographic Information Systems	10
Tri 1	2071ENV	Elective to Major	Soils and Geomorphology (offered at Nathan only)	10
Tri 1	2416ENV	Elective to Major	Environmental Anthropology	10
Tri 2	2209ENV	Elective to Major	Environmental Chemistry (Nathan)	10
			OR	
Tri 1	2203ENV	Elective to Major	Environmental Chemistry and Monitoring (Gold Coast)	10
Tri 2	2221ENV	Elective to Major	Environmental Politics and Policy (not offered in 2020, 2021, 2022 and 2023)	10
			OR	
Tri 2	2313AFE	Elective to Major	Environmental and Energy Economics	10
			OR	
Tri 1,3	2004GIR	Elective to Major	The Government Business Nexus: Intervening, Lobbying and Responding	10
Tri 2	2281ENV	Elective to Major	Economics and the Environment	10
Tri 2	2304ENV	Elective to Major	Rivers and Catchments (offered at Nathan only)	10
Tri 2,3	2212ENV	Elective to Major	Ecotox and Impact Assessment (offered online)	10

You must complete 20 credit points from the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3431ENV	Elective to Major	Water Pollution Chemistry (Nathan)	10
			OR	
Tri 1	3201ENV	Elective to Major	Aquatic Chemistry and Pollution (Gold Coast)	10
Tri 1	3307ENV	Elective to Major	Environmental and Social Futures (not offered in 2021)	10
			OR	
Tri 1,3	4118ENV	Elective to Major	Polycymaking and Planning for Climate Change	10
Tri 2	3441ENV	Elective to Major	Land Degradation and Catchment Management (offered at Nathan only)	10
Tri 2	3306ENV	Elective to Major	Environmental Management	10
Tri 2	3119MED	Elective to Major	Environmental Toxicology and Risk Assessment (offered at Gold Coast only)	10
Tri 2	3418ENV	Elective to Major	Spatial Modelling (not offered from 2021)	10
			OR	
Tri 2	3033ESC	Elective to Major	Environmental Data Analytics	10

Marine Biology (Gold Coast)

This major is available on the Gold Coast campus only.

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,3	1041SCG	Recommended Prereq	Biological Systems	10
Tri 1,3	1023SCG	Recommended Prereq	Chemistry I	10
			OR	
Tri 1,3	1021SCG	Recommended Prereq	Chemistry 1A (from 2021)	10
Tri 1	1007ENV	Recommended Prereq	Introduction to Marine Science	10
Tri 1,3	1043SCG	Recommended Prereq	Introduction to Environmental Sustainability	10
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10
Tri 2	1042SCG	Recommended Prereq	Genetics and Evolutionary Biology	10

You must complete 40 credit points from the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2291ENV	Elective to Major	Applied Data Science	10
Tri 1	2804ENV	Elective to Major	Coastal Environments	10
Tri 2	2305ENV	Elective to Major	Marine Megafauna and Planetary Health	10
Tri 2	2603ENV	Elective to Major	Ecology (Gold Coast) (not offered from 2023)	10
			OR	
Tri 2	2051ENV	Elective to Major	Ecology (NA and GC from 2023)	10
Tri 2,3	2212ENV	Elective to Major	Ecotox and Impact Assessment (offered online)	10

You must complete 20 credit points from the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	3801ENV	Core to Major	Estuarine Ecology (Gold Coast)	10
Tri 2	3332ENV	Core to Major	Marine Conservation and Resource Management	10
Tri 1	3805ESC	Core to Major	Coral Reefs	10

Microbiology (Nathan)

This major is available on the Nathan campus only.

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,3	1041SCG	Recommended Prereq	Biological Systems	10
Tri 1,3	1021SCG	Recommended Prereq	Chemistry 1A (Nathan)	10
			OR	
Tri 1,3	1023SCG	Recommended Prereq	Chemistry I (Gold Coast) (from 2021)	10
Tri 2	1014NSC	Recommended Prereq	Fundamentals of Biochemistry (Nathan)	10
Tri 2	1042SCG	Recommended Prereq	Genetics and Evolutionary Biology	10
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10
Tri 2	1022SCG	Recommended Prereq	Chemistry 1B (Nathan)	10
			OR	
Tri 2	1024SCG	Recommended Prereq	Chemistry II (Gold Coast) (from 2021)	10

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 2	2013NSC	Core to Major	Biotechniques Laboratory (Nathan)	10
			OR	
Tri 2	2018NSC	Core to Major	Biosciences Laboratory Skills (Gold Coast) (from 2021)	10
Tri 1	2005NSC	Core to Major	Protein Science (Nathan)	10
			OR	
Tri 1	2008MSC	Core to Major	Structural Biochemistry (Gold Coast) (from 2021)	10
Tri 1	2008NSC	Core to Major	General Microbiology (Nathan)	10
Tri 2	2010NSC	Core to Major	Applied Microbiology (Nathan)	10
Tri 2	3018NSC	Core to Major	Microbiology Laboratory (Nathan)	10
Tri 2	3020NSC	Core to Major	Techniques in Molecular Microbiology (Nathan)	10

Wildlife Biology

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1015SCG	Recommended Prereq	Quantitative Reasoning	10
Tri 1,3	1041SCG	Recommended Prereq	Biological Systems	10
Tri 1,3	1023SCG	Recommended Prereq	Chemistry I (Gold Coast)	10
			OR	
Tri 1,3	1021SCG	Recommended Prereq	Chemistry 1A (Nathan)	10
Tri 1,3	1043SCG	Recommended Prereq	Introduction to Environmental Sustainability	10
Tri 2	1042SCG	Recommended Prereq	Genetics and Evolutionary Biology	10
Tri 2,3	1014SCG	Recommended Prereq	Statistics	10
Tri 2	1044SCG	Recommended Prereq	Earth Systems	10

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2291ENV	Core to Major	Applied Data Science	10
Tri 1	2303ENV	Core to Major	Zoology	10
Tri 2	2051ENV	Core to Major	Ecology (NA and GC from 2023)	10
			OR	
Tri 2	2603ENV	Core to Major	Ecology (Gold Coast) (not offered from 2023)	10
Tri 2	2702ENV	Core to Major	Botany	10
Tri 1	3606ENV	Core to Major	Conservation Biology	10
Tri 2	3308ENV	Core to Major	Emerging Topics in Conservation	10

Physics Major

Physics

You must complete the following foundation courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1,3	1201SCG	Recommended Prereq	Linear Algebra (see Note 1)	10
Tri 1,2	1031SCG	Recommended Prereq	Physics 1A	10
Tri 2,3	1202SCG	Recommended Prereq	Calculus I	10
Tri 2	1032SCG	Recommended Prereq	Physics 1B	10

Note 1: Students who successfully completed Senior Secondary Syllabus of Mathematical Methods (or equivalent) should complete **1201SCG Linear Algebra**. Students who successfully completed Senior Secondary Syllabus of General Mathematics only (or equivalent) will complete **1017SCG Foundation Mathematics** in their first trimester of study and complete **1201SCG Linear Algebra** in their second trimester of study. If you complete **1017SCG Foundation Mathematics**, this will then be considered a first year elective course.

You must complete the following courses:

Trimester	Course code	Requirement	Course title	CP
Tri 1	2304NSC	Core to Major	Statistical and Solid State II (not offered from 2021)	10
			OR	
Tri 2	2307ESC	Core to Major	Analytical and Statistical Mechanics	10
Tri 1	2302NSC	Core to Major	Modern Physics Laboratory	10
Tri 1	2305NSC	Core to Major	Quantum Mechanics, Relativity and Elementary Particles	10
Tri 2	2301NSC	Core to Major	Electromagnetism and Optics	10
Tri 1	3301NSC	Core to Major	Quantum Physics III	10
Tri 2	3304NSC	Core to Major	Physics Laboratory III	10
Tri 2	3303NSC	Core to Major	Physics of Solids and Nanoscale Structures (Not offered from 2022)	10
			OR	
Tri 2	3309ESC	Core to Major	Condensed Matter Physics	10

Electives (1 available)

Free-choice electives (Science)

You may select free-choice electives from the list below or any **Undergraduate free-choice elective/s** offered across the University provided prerequisites are met. If you require guidance, please liaise with your Program Director.

Trimester	Course code	Requirement	Course title	CP
Tri 1	2006ESC	Free-choice Elective	Archaeology: Discovering the Human Past	10
Tri 2	2002NSC	Free-choice Elective	Human Anatomy and Physiology 2	10
Tri 1	2000MSC	Free-choice Elective	Molecular Genetics	10
Tri 1	2003NSC	Free-choice Elective	Metabolism	10
Tri 2	2003MSC	Free-choice Elective	Fundamentals of Microbiology	10
Tri 1	2005NSC	Free-choice Elective	Protein Science	10
Tri 2	2007MSC	Free-choice Elective	Microbiology	10
Tri 1	2007NSC	Free-choice Elective	Human Anatomy and Physiology 1	10
Tri 1	2008MSC	Free-choice Elective	Structural Biochemistry	10
Tri 1	2008NSC	Free-choice Elective	General Microbiology	10
Tri 2	2010NSC	Free-choice Elective	Applied Microbiology	10
Tri 2	2012NSC	Free-choice Elective	Molecular Biology	10
Tri 2	2013NSC	Free-choice Elective	Biotechniques Laboratory (Nathan)	10
			courseLineOperator	
Tri 2	2018NSC	Free-choice Elective	Biosciences Laboratory Skills (Gold Coast)	10
Tri 1,2 or 3	2043IBA	Free-choice Elective	Innovation, Creativity and Entrepreneurship	10
Tri 2	2051ENV	Free-choice Elective	Ecology	10
Tri 2	2061ESC	Free-choice Elective	Artefacts in Archaeology	10
Tri 1	2071ENV	Free-choice Elective	Soils and Geomorphology	10
Tri 1	2101NSC	Free-choice Elective	Inorganic Chemistry (Nathan)	10
			courseLineOperator	
Tri 1	2208ENV	Free-choice Elective	Inorganic Chemistry (Gold Coast)	10
Tri 2	2102NSC	Free-choice Elective	Spectroscopic and Molecular Analysis	10
Tri 1	2103NSC	Free-choice Elective	Organic Chemistry (Nathan)	10
			courseLineOperator	
Tri 1	2014MSC	Free-choice Elective	Organic Chemistry (Gold Coast)	10

Trimester	Course code	Requirement	Course title	CP
Tri 2	2106NSC	Free-choice Elective	Physical and Analytical Chemistry	10
Tri 1,3	2107ENV	Free-choice Elective	Introduction to Geographic Information Systems	10
Tri 2	2201NSC	Free-choice Elective	Linear Algebra and Applications	10
Tri 2	2202ENV	Free-choice Elective	Physical and Analytical Chemistry	10
Tri 1	2202NSC	Free-choice Elective	Numerical Methods	10
Tri 1	2203ENV	Free-choice Elective	Environmental Chemistry and Monitoring (Gold Coast)	10
			courseLineOperator	
Tri 2	2209ENV	Free-choice Elective	Environmental Chemistry (Nathan)	10
Tri 2	2204NSC	Free-choice Elective	Introduction to Mathematical Modelling	10
Tri 1	2205NSC	Free-choice Elective	Calculus II	10
Tri 1,3	2004GIR	Free-choice Elective	The Government Business Nexus: Intervening, Lobbying and Responding	10
Tri 2	2251ENV	Free-choice Elective	Animal Diversity (Nathan) (not offered from 2021)	10
			courseLineOperator	
Tri 1	2303ENV	Free-choice Elective	Zoology	10
Tri 2	2702ENV	Free-choice Elective	Botany	10
Tri 2	2281ENV	Free-choice Elective	Economics and the Environment	10
Tri 1	2291ENV	Free-choice Elective	Applied Data Science	10
Tri 2	2301NSC	Free-choice Elective	Electromagnetism and Optics	10
Tri 1,2	2302NSC	Free-choice Elective	Modern Physics Laboratory	10
Tri 2	2304ENV	Free-choice Elective	Rivers and Catchments	10
Tri 1,2	2304NSC	Free-choice Elective	Statistical and Solid State II (not offered from 2021)	10
Tri 2	2307ESC	Free-choice Elective	Analytical and Statistical Mechanics	10
Tri 2,3	2305ENV	Free-choice Elective	Marine Megafauna and Planetary Health	10
Tri 1	2305NSC	Free-choice Elective	Quantum Mechanics, Relativity and Elementary Particles	10
Tri 1	2416ENV	Free-choice Elective	Environmental Anthropology	10
Tri 1	2804ENV	Free-choice Elective	Coastal Environments	10
Tri 2	2803ENV	Free-choice Elective	Marine Biodiscovery	10

Trimester	Course code	Requirement	Course title	CP
Tri 2,3	2212ENV	Free-choice Elective	Ecotox and Impact Assessment (offered online)	10
Tri 2	2810ICT	Free-choice Elective	Software Technologies	10
Tri 2	2703ICT	Free-choice Elective	Web Application Development (not offered from 2026)	10
Tri 1,2	3001NSC	Free-choice Elective	Molecular Cell Biology (Nathan)	10
			courseLineOperator	
Tri 1	3016MSC	Free-choice Elective	Macromolecular and Cellular Biochemistry (Gold Coast)	10
Tri 1	3004MSC	Free-choice Elective	Immunology (Gold Coast)	10
Tri 1	3007NSC	Free-choice Elective	Immunology (Nathan)	10
Tri 1	3006MSC	Free-choice Elective	Clinical Microbiology	10
Tri 1	3009NSC	Free-choice Elective	Biomedical Sciences Laboratory	10
Tri 2	3012MSC	Free-choice Elective	Clinical Biochemistry	10
Tri 2	3012NSC	Free-choice Elective	Infectious Disease (offered at Nathan campus)	10
			courseLineOperator	
Tri 2	3013MSC	Free-choice Elective	Infectious Disease (offered at Gold Coast)	10
Tri 2	3014NSC	Free-choice Elective	Advanced Physiology	10
Tri 2	3018NSC	Free-choice Elective	Microbiology Laboratory	10
Tri 2	3020NSC	Free-choice Elective	Techniques in Molecular Microbiology	10
Tri 2	3022MSC	Free-choice Elective	Molecular Medicine	10
Tri 2,3	2034IBA	Free-choice Elective	Griffith Innovation Challenge	10
Tri 2	3102NSC	Free-choice Elective	Advanced Analytical Chemistry (Nathan)	10
			courseLineOperator	
Tri 2	3202ENV	Free-choice Elective	Advanced Analytical Chemistry (Gold Coast)	10
Tri 1	3103NSC	Free-choice Elective	NMR and Structural Chemistry (Nathan) (not offered from 2021)	10
Tri 1	3225ENV	Free-choice Elective	NMR in Biological Systems	10
Tri 1	3105NSC	Free-choice Elective	Advanced Organic Chemistry	10
Tri 2	3119MED	Free-choice Elective	Environmental Toxicology and Risk Assessment	10
Tri 1	3201ENV	Free-choice Elective	Aquatic Chemistry and Pollution (Gold Coast)	10
			courseLineOperator	

Trimester	Course code	Requirement	Course title	CP
Tri 1	3431ENV	Free-choice Elective	Water Pollution Chemistry (Nathan)	10
Tri 1	3201NSC	Free-choice Elective	Advanced Differential Equations and Modelling	10
Tri 1	3203NSC	Free-choice Elective	Complex Analysis and Applications	10
Tri 2	3204NSC	Free-choice Elective	Advanced Numerical Methods	10
Tri 1	3241ENV	Free-choice Elective	Quantitative Ecology (not offered from 2021)	10
Tri 1	3301NSC	Free-choice Elective	Quantum Physics III	10
Tri 2	3309ESC	Free-choice Elective	Condensed Matter Physics	10
Tri 2	3304NSC	Free-choice Elective	Physics Laboratory III	10
Tri 2	3306ENV	Free-choice Elective	Environmental Management	10
Tri 1	3307ENV	Free-choice Elective	Environmental and Social Futures	10
Tri 2	3308ENV	Free-choice Elective	Emerging Topics in Conservation	10
Tri 2	3332ENV	Free-choice Elective	Marine Conservation and Resource Management	10
Tri 2	3441ENV	Free-choice Elective	Land Degradation and Catchment Management	10
Tri 1	3606ENV	Free-choice Elective	Conservation Biology (not offered from 2021)	10
Tri 1	3801ENV	Free-choice Elective	Estuarine Ecology	10
Tri 2	3030NSC	Free-choice Elective	Applied Bioinformatics (offered from 2021)	10
Tri 1	3804ENV	Free-choice Elective	Marine Ecosystem Modelling	10
Tri 1,2 or 3	3911ESC	Free-choice Elective	Work Integrated Learning Special Topic	10
Tri 1,2 or 3	3922ESC	Free-choice Elective	Research Special Topic	10
Tri 1	3003NSC	Free-choice Elective	Neuroscience	10