

PROGRAM PLAN


BACHELOR OF SCIENCE/ BACHELOR OF LAW (HONOURS)


PROGRAM OPTION:
Full time

START DATE:
Semester 1, 2018-2020

LOCATION:
Newcastle

This Program Plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek advice from your Program Advisor to ensure you remain on track.

 [PROGRAM HANDBOOK](#)

 [COURSE HANDBOOK](#)

NAME:

STUDENT NO.:

COURSE STATUS KEY

C = Completed

En = Enrolled

NS = Not Started

YEAR 1	SEMESTER 1	SCIE1001 Professional Science Thinking	SCIE1002 Multidisciplinary Labs	LAWS1010 Legal System and Method I	LAWS1020 Torts I	SEMESTER 2	MAJOR 1000 level	DIRECTED MATH 1000 level	LAWS1011 Legal System and Method II	LAWS1021 Torts II
	SEMESTER 2	SCIE2001 Professional Employment Skills	LAWS4001 Constitutional Law	MAJOR 1000 level	MAJOR 2000 level	SEMESTER 1	SCIE2002 Interdisciplinary Challenges	LAWS2030 Criminal Law and Procedure	STAT1070 Statistics for the Sciences	MAJOR 2000 level
YEAR 2	SEMESTER 1	LAWS3040 Contracts I	SCIE3001A Transdisciplinary Capstone: Planning and Implementing	MAJOR 3000 level	MAJOR 3000 level	SEMESTER 2	LAWS3041 Contracts II	SCIE3001B Transdisciplinary Capstone: Implementing and Communicating	MAJOR 3000 level	MAJOR
	SEMESTER 2	LAWS4003 Civil Procedure	LAWS4007 Professional Conduct	DIRECTED 5000 level	DIRECTED 5000 level	SEMESTER 1	LAWS4002 Administrative Law	LAWS4011 Property	DIRECTED 5000 level	DIRECTED 5000 level
YEAR 3	SEMESTER 1	LAWS4004 Evidence	LAWS4010 Equity and Trusts	DIRECTED 5000 level	DIRECTED 5000 level	SEMESTER 2	LAWS4012 Public International Law	LAWS4005 Company Law	DIRECTED 5000 level	DIRECTED 5000 level
	SEMESTER 2									

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To be eligible to graduate make sure you have completed 400 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- Core courses – 230 units.
- Science Major – 80 units (see Pathway A for Major sequences for individual requirements).
- Directed courses – 90 units. Refer to the Bachelor of Science [Program Handbook](#) for the list of 1000 level Directed MATH courses and refer to the Bachelor of Science/Bachelor of Laws (Honours) Program Handbook for the list of 5000 level directed courses.
- To find out which 1000 Directed MATH courses you should enroll into, please see [Enrolling in Maths](#).
- The duration of this program is 5 years full time study (40 units per semester).
- The maximum time to complete this program is 10 years.



Some courses have assumed knowledge and/or requisites, please refer to the individual [Course Handbook](#). Please refer to the [Program Handbook](#) for specific information on program structure. If you are intending varying from this program plan please seek advice from your [Program Advisor](#).

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BIOLOGY MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

BIOL1001: Molecules, Cells and Organisms
BIOL1002: Organisms to Ecosystems

DIRECTED COURSES – 2000 LEVEL

Complete 30 units from:

BIOL2020: Animal Physiology and Development
BIOL2050: Molecular Genetics
BIOL2090: Microbial Biology
BIOL2220: Plant Cell Development

DIRECTED COURSES – 3000 LEVEL

Complete 30 units from:

BIOL3020: Reproductive Physiology and Development
BIOL3090: Molecular Biology
BIOL3100: Microbiology
BIOL3330: Plant Development and Physiology

CHEMISTRY OF ADVANCED MATERIALS MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

CHEM1010: Introductory Chemistry I
CHEM1020: Introductory Chemistry II
CHEM2110: Analytical Chemistry
CHEM2210: Inorganic Chemistry
CHEM2410: Physical Chemistry
CHEM3410: Energy and Structure

DIRECTED COURSES – 3000 LEVEL

Complete 20 units from:

CHEM3210: Metal Complexation, Structure and Reactivity
CHEM3560: Materials Chemistry: Solids and Semiconductors
CHEM3580: Polymers and Colloids

ENVIRONMENTAL AND ANALYTICAL CHEMISTRY MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

CHEM1010: Introductory Chemistry I
CHEM1020: Introductory Chemistry II
CHEM2110: Analytical Chemistry
CHEM2610: Environmental Chemistry I

DIRECTED COURSES – 2000 LEVEL

Complete 10 units from:

CHEM2201: Analytical and Medicinal Chemistry
GEOS2060: Soil Properties and Processes

DIRECTED COURSES – 3000 LEVEL

Complete 30 units from:

CHEM3110: Instrumental Chemical Analysis
CHEM3570: Spectroscopic Characterisation of Compounds
ENVS3004: Ecotoxicology
ENVS3007: Environmental Remediation

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MEDICINAL AND ORGANIC CHEMISTRY MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

CHEM1010: Introductory Chemistry I
CHEM1020: Introductory Chemistry II
CHEM2210: Inorganic Chemistry
CHEM2310: Organic Chemistry
CHEM3310: Molecular Organic Synthesis
CHEM3550: Medicinal and Biological Chemistry

DIRECTED COURSES – 2000 LEVEL

Complete 10 units from:

CHEM2110: Analytical Chemistry
CHEM2201: Analytical and Medicinal Chemistry

DIRECTED COURSES – 3000 LEVEL

Complete 10 units from:

CHEM3110: Instrumental Chemical Analysis
CHEM3580: Polymers and Colloids

EARTH SCIENCES MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

GEOS1040: Earth's Dynamic Systems
GEOS1050: Earth Processes and Products

DIRECTED COURSES – 2000 LEVEL

Complete 30 units from:

GEOS2050: River Basin Processes
GEOS2060: Soil Properties and Processes
GEOS2080: Earth Science Field Course
GEOS2161: Spatial Science
GEOS2170: Optical Mineralogy
GEOS2190: Structural Geology
GEOS2200: Earth's Sedimentary Rocks & Environments

DIRECTED COURSES – 2000 LEVEL

Complete 30 units from:

ENVS3007: Environmental Remediation
GEOS3110: Igneous Petrology and Crustal Evolution
GEOS3160: Energy Resources
GEOS3170: Resource and Exploration Geology
GEOS3220: Coastal Environments and Processes
GEOS3250: Advanced Spatial Science
GEOS3280: Global Change and the Rise of Modern Environments
GEOS3330: Tectonics
GEOS3340: Climate Change and Resource Management

BIODIVERSITY AND CONSERVATION MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

ENVS1001: Environmental Science Concepts & Methods
ENVS1003: Environmental Values and Ethics
ENVS3003: Conservation Biology
ENVS3004: Ecotoxicology
ENVS3005: Animal Behaviour
MARI3330: Marine Fisheries Biology and Management

DIRECTED COURSES – 2000 LEVEL

Complete 20 units from:

ENVS2004: Ecology
ENVS2005: Management of Australian Flora
ENVS2006: Ecology and Management of Wildlife

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MARINE AND COASTAL SCIENCE MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

MARI1000: Our Oceans
MARI2300: Marine Biology
MARI2500: Coastal and Marine Ecosystem Services *
MARI3300: Integrated Coastal Ecosystems
MARI3320: Ecological Methodology

DIRECTED COURSES – 1000 LEVEL

Complete 10 units from:

ENVS1001: Environmental Science Concepts & Methods
ENVS1003: Environmental Values and Ethics

DIRECTED COURSES – 3000 LEVEL

Complete 20 units from:

ENVS3005: Animal Behaviour
MARI3410: Coral Reef Biology, Ecology and Sustainability
ENVS3400: Advanced Research Project
ENVS3009: Advanced Water Science and Resource Management

* Note: Please refer to the transition arrangements on the [Program Handbook](#).

SUSTAINABLE RESOURCE MANAGEMENT MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

ENVS1001: Environmental Science Concepts & Methods
ENVS1003: Environmental Values and Ethics
ENVS2009: Catchment and Water Resource Management
ENVS3001: Integrated Impact Assessment
ENVS3003: Conservation Biology
SRMT3040: Community Resource Management
SRMT3060: Restoration Ecology

DIRECTED COURSES

Complete 10 units from:

ENVS2005: Management of Australian Flora
ENVS2006: Ecology and Management of Wildlife

GEOGRAPHY MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

GEOG1020: Introduction to Human Geography
GEOS1040: Earth's Dynamic Systems
GEOS2161: Spatial Science
GEOS3250: Advanced Spatial Science

DIRECTED COURSES – 2000 LEVEL

Complete 10 units from:

ENVS2002: Environmental Legislation & Planning
ENVS2008: The Sustainable Society
GEOG2080: Cities and Regions
GEOG2130: Geographies of Development
GEOS2050: River Basin Processes
GEOS2080: Earth Science Field Course
SOCS2400: Applied Social Research

DIRECTED COURSES – 3000 LEVEL

Complete 30 units from:

ENVS3001: Integrated Impact Assessment
ENVS3006: Sustainability: Theory and Practice
ENVS3007: Environmental Remediation
GEOG3090: Society and Space
GEOG3240: Globalisation: Cities, Economies
GEOG3300: Rethinking Development
GEOG3330: Work Integrated Learning in Development Studies and Human Geography
GEOS3220: Coastal Environments and Processes
GEOS3280: Global Change and the Rise of Modern Environments
GEOS3340: Climate Change and Resource Management

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MATHEMATICS MAJOR

MATH1110 does not count towards the Mathematics major. Instead, MATH1110 is the minimum level of previous mathematical knowledge required before commencing Mathematics major courses.

COMPULSORY COURSES

Complete the following compulsory courses:

MATH2310: Calculus of Science and Engineering

MATH2320: Linear Algebra

PAIRED DIRECTED COURSES

Choose a pair from either:

[MATH1120 and MATH2340]; or [MATH1210 and MATH1220].

Pair chosen depends on mathematical background. Students who completed MATH1120 or MATH1210 as their Mathematics Directed course can count this towards their Major

MATH1120: Mathematics for Engineering, Science and Technology 2

MATH1210: Mathematical Discovery 1

MATH1220: Mathematical Discovery 2

MATH2340: Linearity and Continuity

DIRECTED COURSES – 3000 LEVEL

Complete 40 units from:

MATH3010: Logic and Set Theory

MATH3120: Algebra

MATH3170: Number Theory

MATH3242: Complex Analysis

MATH3800: Optimisation

MATH3820: Numerical Methods

STATISTICS MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

STAT2000: Applied Statistics and Research Methods

STAT2010: Fundamentals of Statistics

STAT2020: Predictive Analytics

DIRECTED COURSES – 1000 LEVEL

Complete 10 units from:

ENGG1003: Introduction to Procedural Programming

INFT1004: Introduction to Programming

SENG1110: Object Oriented Programming

DIRECTED COURSES – 3000 LEVEL

Complete 40 units from:

STAT3010: Statistical Inference

STAT3030: Generalised Linear Models

STAT3040: Time Series Analysis

STAT3100: Systems Thinking for an Integrated Workforce

STAT3120: Applied Bayesian Methods