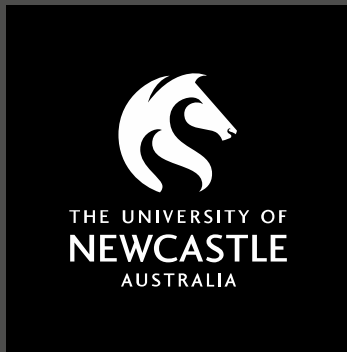


BACHELOR OF SCIENCE

DISCIPLINE ELECTIVE PATHWAYS - CALLAGHAN



These pathways have been created to provide guidance for Bachelor of Science students wishing to specialise in a second discipline area with their elective courses.

Each pathway has been selected to complement the content of the Bachelor of Science program with consideration of requisites. Please note that these pathways are suggestions only and will not be noted formally on the final degree certificate.

Students are welcome to enrol in any elective provided that they satisfy the requisites, and they adhere to the rules regarding maximum number of 1000 level courses in their program. For a full list of UON courses, visit the [course handbook](#).



BIOLOGICAL SCIENCES

ANIMAL AND PLANT BIOLOGY		CELL AND MOLECULAR BIOLOGY		MICROBIOLOGY	
Complete the following		Complete the following		Complete the following	
BIOL1001	Molecules, Cells and Organisms	BIOL1001	Molecules, Cells and Organisms	BIOL1001	Molecules, Cells and Organisms
BIOL1002	Organisms to Ecosystems	BIOL1002	Organisms to Ecosystems	BIOL1002	Organisms to Ecosystems
BIOL2220	Plant Adaptation to Climate Change	BIOL2050	Molecular Genetics	BIOL2090	Microbial Biology
BIOL3020	Animal Physiology, Reproduction and Development	BIOL3090	Molecular Biology	BIOL3100	Microbiology

CHEMISTRY

CHEMISTRY

Complete the following

CHEM1010 Introductory Chemistry I

CHEM1020 Introductory Chemistry II

Complete 20 units from the following

CHEM2110 Applied Analytical Chemistry

CHEM2210 Materials Chemistry

CHEM2310 Organic Chemistry

CHEM2410 Physical Chemistry

CHEM3110 Instrumental Chemical Analysis

CHEM3310 Molecular Organic Synthesis

CHEM3410 Energy and Materials

EARTH SCIENCE

EARTH SCIENCE

Complete the following

GEOS1040 Earth: The Dynamic Planet

GEOS1050 Earth Processes and Products

Complete 20 units from the following

GEOS2050 Catchments and Climate

GEOS2060 Soil Properties and Processes

GEOS2080 Earth Science Field Course

GEOS2161 Spatial Science

ENVS3007 Environmental Remediation

GEOS3220 Coastal Environments and Processes

GEOS3250 Advanced Spatial Science

GEOS3340 Climate Change and Resource Management

ENVIRONMENTAL SCIENCE

BIODIVERSITY AND CONSERVATION		SUSTAINABLE RESOURCE MANAGEMENT		EXTENDED ENVIRONMENTAL REMEDIATION	
Complete 10 units from the following		Complete the following		Complete the following	
ENVS1001	Environmental Science Concepts and Methods	ENVS1001	Environmental Science Concepts and Methods	BIOL1002	Organisms to Ecosystems
ENVS1003	Environmental Values and Ethics	ENVS1003	Environmental Values and Ethics	ENVS2006	Ecology and Management of Wildlife
Complete 30 units from the following		ENVS2009	Catchment and Water Resource Management	GEOS2060	Soil Properties and Processes
ENVS2004	Ecology	Complete 10 units from the following		SRMT3060	Restoration Ecology
ENVS2005	Management of Australian Flora	ENVS2005	Management of Australian Flora		
ENVS2006	Ecology and Management of Wildlife	ENVS2006	Ecology and Management of Wildlife		
ENVS3005	Animal Behaviour	ENVS2008	The Sustainable Society		

GEOGRAPHY

GEOGRAPHY	
Complete the following	
GEOG1020	Introduction to Human Geography
GEOS1040	Earth: The Dynamic Planet
GEOS2161	Spatial Science
Complete 10 units from the following	
GEOG2080	Cities and Regions
GEOG2130	Geographies of Development

LIVING UNIVERSE

LIVING UNIVERSE	
Complete the following	
BIOL1002	Organisms to Ecosystems
GEOS1040	Earth: The Dynamic Planet
PHYS2100	Introduction to Astronomy
SCIE2019	Astrobiology: Life Beyond our Planet

MATHEMATICS AND STATISTICAL SCIENCES

MATHEMATICS		STATISTICS	
This elective pathway has been designed for those who have completed MATH1110 as their Mathematics Directed course.		Complete the following	
Complete the following		STAT1300	Fundamentals of Statistics
MATH1120	Mathematics for Engineering, Science and Technology 2	STAT2000	Applied Statistics and Research Methods
MATH2310	Calculus of Science and Engineering	STAT2020	Predictive Analytics
MATH2340	Linearity and Continuity 1	Complete 10 units from the following	
Complete 10 units from the following		ENGG1003	Introduction to Procedural Programming
MATH2242	Complex Analysis	INFT1004	Introduction to Programming
MATH2350	Linearity and Continuity 2	SENG1110	Object Oriented Programming

PHYSICS

PHYSICS

Complete the following

PHYS1210 Advanced Physics I

PHYS1220 Advanced Physics II

Choose 20 units from below

PHYS2111 Classical Physics 1

PHYS2112 Classical Physics 2

PHYS2211 Modern Physics 1

PHYS2212 Modern Physics 2

PHYS3111 Biophysics

PHYS3112 Photonics

PHYS3212 Nanomaterials

PSYCHOLOGICAL SCIENCE

PSYCHOLOGICAL SCIENCE

Complete the following

PSYC1010 Psychology Introduction 1

PSYC1020 Psychology Introduction 2

PSYC2300 Cognitive Psychology

PSYC2400 Biological Psychology