

Bachelor of Environmental Science

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The Faculty offers a four-year Bachelor of Environmental Science degree. This degree is normally awarded with Honours at the end of four years. The BEnvSc degree is intended to give students a broadly based scientific education that will assist them to gain employment in areas related to environmental assessment, planning and management. In the last decade many new jobs requiring specialisation in the analysis of environmental problems have opened up in Australia. These cover a wide variety of different types of activities which range from research in industry, Universities and CSIRO, to policy analysis, enactment and enforcement within government and the civil service (including government departments and agencies such as Sydney Water, primary industries, Department of Environment and Climate Change, National Parks and Wildlife Services, and local government).

In the first and second years of the degree students are provided with basic "building blocks" of Science in the form of introductory biology, chemistry, geography, geology and physics, as well as incorporating the "language" of Science through introductory mathematics and statistics.

The first and second year programs are normally common to all strands. In the third and fourth years of the BEnvSc degree program, students select to specialise in one of four strands: Earth Sciences (Geology), Land Resources (Geography), Life Sciences (Biology) or Environmental Chemistry. During the fourth year students undertake a major research project carried out in collaboration with an outside organisation (usually a government department or business organisation) in order to gain practical work experience.

Note: See Sections 4 and 6 for general information on Credit Points, Subjects, Pre-requisites etc. and Sections 3.3.1, 3.3.2 and 3.3.3 for information on teaching staff and their research interests.

Entry to Degree Program

Students should ensure that they take Chemistry and Mathematics (2 Unit) at high school. Students enrolled in the BSc who have attained the required standard in the designated subjects may be considered for transfer to the BEnvSc at the end of 1st year.

COMMON 1st YEAR PROGRAM		cps	Session
Autumn Session			
BIOL104	Evolution, Biodiversity and Environment	6	1
CHEM101	Chemistry 1A	6	1
EESC101	Planet Earth	6	1
EESC103	Landscape Change and Climatology	6	1
Spring Session			
BIOL103	Molecules, Cells and Organisms	6	2
CHEM102	Chemistry 1B	6	2
EESC102	Earth Environments and Resources	6	2
EESC104	The Human Environment: Problems and Change	6	2
Total		48	
Alternate Summer Sessions (2010/2011, 2012/2013)			
MATH151	General Mathematics 1A*	6	3

* Required if entering the program without at least HSC Mathematics Band 4 or equivalent

COMMON 2nd YEAR PROGRAM		cps	Session
Autumn Session			
BIOL251	Principles of Ecology and Evolution	6	1
EESC203	Biogeography and Environmental Change	6	1
PHIL256	Ethics and the Environment	6	1
PHYS233	Introduction to Environmental Physics	6	1
Spring Session			
CHEM214	Analytical and Environmental Chemistry	6	2
EESC202	Soils, Landscapes and Hydrology	6	2
EESC204	Introductory Spatial Science	6	1,2
STAT252	Statistics for the Natural Sciences	6	2
Total		48	

3rd and 4th Year – Specialisation in one of four strands:

- (1) **Land Resources**
- (2) **Earth Sciences**
- (3) **Life Sciences**
- (4) **Environmental Chemistry**

3rd Year – LAND RESOURCES STRAND		cps	Session
Autumn Session			
EESC303	Fluvial Geomorphology and Sedimentology	8	1
STS300	The Environmental Context	8	1
Spring Session			
EESC208	Environmental Impact of Societies	6	2
EESC302	Coastal Environments: Process and Management	8	2
ENVI491	Environmental Science and Systems	8	2
<i>Plus two of the following:</i>			
EESC201	Earth's Inferno	6	1
EESC206	Discovering Downunder: A Geography of Australia	6	2
EESC304	Geographic Information Science	8	2
EESC305	Remote Sensing of the Environment	8	1
Total		50-54	

3rd Year – EARTH SCIENCES STRAND		cps	Session
Autumn Session			
EESC201	Earth's Inferno	6	1
EESC301	Plate Tectonics, Macrotopography and Earth History	8	1

STS300	The Environmental Context	8	1
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Spring / Summer Session

EESC306	Resources and Environments	8	2
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ENVI491	Environmental Science and Systems	8	2
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EESC250	Field Geology	6	3
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Plus one of the following:

EESC208	Environmental Impact of Societies	6	2
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EESC304	Geographic Information Science	8	2
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EESC305	Remote Sensing of the Environment	8	1
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50-52

3rd Year - LIFE SCIENCES STRAND

cps

Session

Autumn Session

BIOL240	Functional Biology of Plants and Animals	6	1
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BIOL351	Conservation Biology	8	1
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STS300	The Environmental Context	8	1
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Spring Session

BIOL241	Biodiversity: Classification and Sampling	6	2
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BIOL356	Marine and Terrestrial Ecology	8	2
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ENVI491	Environmental Science and Systems	8	2
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Plus one of the following:

BIOL212	Introductory Microbiology and Immunology	6	*
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BIOL213	Principles of Biochemistry	6	1
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BIOL332	Ecological and Evolutionary Physiology	8	1
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EESC304	Geographic Information Science	8	2
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EESC305	Remote Sensing of the Environment	8	1
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Total

50-52

* Not offered in 2009

3rd Year – ENVIRONMENTAL CHEMISTRY STRAND

cps

Session

Autumn Session

CHEM211	Inorganic Chemistry II	6	1
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CHEM212	Organic Chemistry II	6	1
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CHEM327	Environmental Chemistry	8	1
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STS300	The Environmental Context	8	1
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Spring Session

CHEM213	Molecular Structure, Reactivity and Change	6	2
ENVI491	Environmental Science and Systems	8	2
<i>Plus one of the following:</i>			
CHEM314	Instrumental Analysis ***	8	1
CHEM321	Organic Synthesis and Reactivity	8	2
CHEM340	Chemistry Laboratory Project	8	2
EESC304	Geographic Information Science	8	2
Total		50	

*** Students wishing to take CHEM314 should consult the Coordinator of Environmental Science at the start of 3rd year.

4th Year – COMMON FOR ALL STRANDS		cps	Session
Annual			
ENVI403	Research Report	24	A
Autumn Session			
ENVE385	Environmental Engineering	8	1
MGMT208	Introduction to Management for Professionals	6	1
Spring Session			
LAW380	Law for Environmental Managers	8	2
Total		46	

AWARD OF HONOURS FOR THE BEnvSc DEGREE

Honours is awarded on completion of the fourth year on academic performance assessed by calculating a weighted average mark (WAM) for a combination of 300-level and 400-level subjects.

For students who commenced before 2004 consult the Course Coordinator for the WAM calculation.

For students commencing from 2004, the WAM is based on all 300-level and 400-level subjects. The weighting, reflecting the level of the subject, will be 1 for 300-level and 4 for 400-level subjects.

The approved ranges of marks for the award of Honours grades are:

Honours Class I	80 to 100%
Honours Class II, Division 1	72.5 to less than 80%
Honours Class II, Division 2	65 to less than 72.5%
Pass degree	50 to less than 65%

The regulations governing the award of Honours and the formula used for the calculation of the final grade is set out in the Course Rules in the University's Online Course Handbook: www.uow.edu.au/handbook

Bachelor of Environmental Science (Advanced)

Students entering with at least 90 UAI or equivalent, can enrol in the Bachelor of Environmental Science (Advanced) degree. See Section 7.4 for details. Students can transfer to the Bachelor of Environmental Science (Advanced) degree from the BSc (Environment) or the Bachelor of Environmental Science after completing 72 credit points of study if they have obtained a distinction average.