

Environmental studies

Convener: Dr Peter Christoff (School of Anthropology, Geography and Environmental Studies)

Environmental studies at the University of Melbourne is amongst the top-ranking programs of its kind in Australia and New Zealand. Talented academic staff enjoy international recognition for their scholarship and original research, often conducted in collaboration with international colleagues and directed to project-based outcomes. Environmental studies combines a knowledge of natural environments with an understanding of how human societies work, in order to address a range of issues and problems concerned with environmental management. It addresses the biogeography and sustainability of environments, particularly as these are impacted upon by forces of development. Ecological and hydrological issues are addressed in the context of risk assessment and management approaches within regulatory frameworks. This versatile program enables students to gain practical and relevant experience in laboratory classes, group project work and field trips, including fieldwork research in China.

These activities and the excellent facilities and resources provided by the School of Anthropology, Geography and Environmental Studies (SAGES) ensure that students will obtain maximal benefits from their study. Students have the option of undertaking the specialist program and tailoring their course to specific environmental interests or vocational pursuits. The major in environmental studies can be used as a pathway to postgraduate study in landscape architecture or the articulated structure of higher degree study options at the University of Melbourne's Office for Environmental Programs. Graduates of environmental studies at the University of Melbourne gain the experience and qualifications required for professional careers with government agencies, regulatory bodies and in private industry with environmental consulting firms.

For information on the major in geography, see *Geography* (p.1).

Faculty of Arts requirements

Within the environmental studies program, only those subjects offered by the departments within the Faculty of Arts are arts-approved subjects. See *Arts-approved subject requirement* (p.4) for more information.

Prerequisites

The environmental studies program commences in first year. There are no prerequisites for first-year environmental studies subjects.

Students who have completed 50 points of first-year arts subjects other than those recommended below may apply to the environmental studies coordinator for second-year entry.

Requirements for a major

A major in environmental studies usually consists of nine 12.5-point subjects, totalling 112.5 points. It comprises:

- two first-year subjects from the list below (25 points); and
- seven second/third-year subjects in environmental studies totalling 87.5 points. These must include:
 - the program's two compulsory units:
 - 121-021 Environmental Politics and Management (p.4)
 - 121-028 Sustainable Development (p.5); and
 - at least two, and up to four, core subjects listed below; and
 - no more than two optional subjects listed below.

Environmental studies subjects

First year

Students must complete **two** of the following first-year subjects toward their environmental studies major:

First-year subjects	Sem.
Geography	
121-110 Famine in the Modern World (p.2)	1
121-172 Global Ecology and Biogeography (p.2)	2
Biology	
600-141 Biology of Cells and Organisms (p.1)	1
600-142 Genetics & The Evolution of Life (p.1)	2
Earth Sciences	
625-101 Earth Sciences - The Global Environment (p.1)	1

Second/third year

Students must complete the **two compulsory subjects**, and **between two and four core subjects**, towards their environmental studies major.

Students complete **no more than two optional subjects** towards their environmental studies major, and may choose **one** optional subject other than those listed below. The subject may be offered by SAGES or another department. It must be relevant to the student's program of study within the environmental studies major and approved by the environmental studies convener.

Compulsory subjects	Sem.
121-021 Environmental Politics and Management (p.4)	1
121-028 Sustainable Development (p.5)	2

Core subjects Sem.

Geography	Sem.
121-029 Environmental Hydrology B (p.5)	1
121-025 Biodiversity (p.4)	N/A

Students seeking a specialisation in ecology and/or biogeography within their environmental studies program are advised to enrol in at least one of:

654-204 Ecology: Individuals and Populations (p.2) or	1
606-204 Ecology: Communities and Ecosystems (p.1)	2

Students wishing to major in biogeography or ecology and wishing to proceed to 121-030 Applied Ecology in their third year should take at least one of these subjects in their second year. Students in this situation are advised to enrol in:

606-204 Ecology: Communities and Ecosystems (p.1)	2
121-432 Environmental Field Class (p.7)	N/A

One of these subjects may count towards a major in environmental studies.

121-033 Environmental Hydrology A (p.6)	1
121-017 Society and Environments (p.3)	2
121-022 Development and Urban Environments (p.4)	2
121-024 GIS and Remote Sensing in Geography (p.4)	2
121-030 Applied Ecology (p.6)	2

Students wishing to take a theory-only version of this subject are recommended to enrol in:

606-301 Applied Ecology (Theory) (p.2)	2
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This subject shares common content lectures and seminars but excludes laboratory and field components. It will be accepted as a subject counting towards the major in geography and environmental studies.

121-071 Coastal Geomorphology (p.6)	1
121-222 Field Class in Geography (p.5)	1
121-310 Fluvial Geomorphology (p.6)	2
121-435 Environmental Management Systems (p.7)	1

Optional subjects Sem.

Geography	Sem.
121-433 China Field Class (p.6)	2
121-434 Fieldwork Research Project (p.7)	2
121-458 Australian Quaternary Environments (p.7)	2

Philosophy

161-014 Environmental Philosophy (p.4)	1
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Economics

316-324 Environmental Economics (p.4)	1
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Recommended subjects

The following subjects are recommended for students intending their major in environmental studies to encompass a general introduction to the field as an accompaniment to another major within the Faculty of Arts.

Recommended introductory subjects	Sem.
121-021 Environmental Politics and Management (p.4)	1
121-028 Sustainable Development (p.5)	2

The following subjects are recommended for students who seek vocational training in environmental studies. The subjects could be taken as part of a major in environmental studies taken alongside a major in geography specialising in physical geography.

Recommended subjects for a double major with geography Sem.

Geography	Sem.
121-021 Environmental Politics and Management (p.4)	1
121-028 Sustainable Development (p.5)	2
121-022 Development and Urban Environments (p.4)	2
121-432 Environmental Field Class (p.7)	N/A

and two additional subjects.

Alternatively, students planning a career in environmental studies should consider enrolling in the *Specialist program in environmental studies* (p.1).

Honours entry

The prerequisites for entry to fourth-year honours in environmental studies are:

- completion of all the requirements for the BA; and
- completion of a major in environmental studies; and
- an average grade of H2B or higher over the second/third-year subjects within the major.

Entry to honours must be approved by the environmental studies convener and the Faculty of Arts honours course adviser.

Honours requirements

Pure honours only

Environmental studies offers pure honours study only. Students must complete:

- 121-519 Environmental Studies Thesis (*p.2*) or 121-520 Environmental Studies Thesis (MYE) (*p.2*) (50 points); and
- 121-430 Environmental Studies Coursework (*p.3*) or 121-431 Environmental Studies Coursework (MYE) (*p.3*) (50 points).

Part-time honours is only permitted in exceptional circumstances, subject to approval by the Head of the School.

Further study

SAGES offers a range of postgraduate programs in environmental studies. These include:

- Graduate Certificate in Arts (Environmental Studies)
- Graduate Diploma in Arts (Environmental Studies)
- Postgraduate Diploma in Arts (Environmental Studies)
- MA (Environmental Studies) by research thesis only.

SAGES also offers PhD supervision to students undertaking research in a wide range of areas in environmental studies.

In addition, a major in environmental studies offers a pathway for students who wish to gain privileged entry into the Master of Landscape Architecture: see *Faculty of Architecture, Building and Planning (p.1)*.

Career opportunities

Graduates with a major in environmental studies can expect to find creative and useful employment in a wide variety of situations. Some of the most common opportunities are:

- as scientific, planning or education officers in government departments and authorities (Conservation and Natural Resources, Housing, Transport, Melbourne Water, and their interstate counterparts);
- in private environmental consultancy, planning or exploration firms;
- as teachers and lecturers in educational institutions;
- as planning and project officers for nature conservation bodies such as the Australian Conservation Foundation, the National Trust or Greenpeace;
- as environmental officers for major development companies such as BHP, oil companies or any number of smaller organisations;
- as environmental consultants to overseas nations either through aid programs or direct employment.

For more information

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Fourth-year subjects

121-519 Environmental Studies Thesis

Availability: 4th year

Credit points: 50

HECS-band: 1

Coordinator: Dr Barbara Downes

Prerequisites: Admission to the postgraduate diploma or fourth-year honours in environmental studies.

Contact: Regular contact with the supervisor (*Year long*).

Description: An original, supervised research project on a topic devised in consultation with members of the School of Anthropology, Geography and Environmental Studies and involving regular meetings with the supervisor/s.

Assessment: A thesis of 15 000 words.

121-520 Environmental Studies Thesis (MYE)

Availability: 4th year

Credit points: 50

HECS-band: 1

Coordinator: Dr Barbara Downes

Prerequisites: Mid-year admission to the postgraduate diploma or fourth-year honours in environmental studies.

Contact: Regular contact with the supervisor (*Semester 1, repeat 2*).

Description: An original, supervised research project on a topic devised in consultation with members of the School of Anthropology, Geography and Environmental Studies, and involving regular meetings with the supervisor(s).

Assessment: A thesis of 15 000 words.

121-532 Environmental Impact Assessment

Note: Formerly available as 121-532 Environmental Impact Assessment (applied). Students who have completed 121-532 are not eligible to enrol in this subject.

Availability: 4th year and postgraduate

Credit points: 12.5

HECS-band: 1

Coordinator: Dr Barbara Downes

Contact: Twenty-four contact hours in total plus fieldwork to be advised (*Semester 1*).

Description: This subject prepares students for environmental management roles by providing them with the principles of how human impacts on the environment might be detected and managed. The principles will be placed within the legal and social contexts of environmental impact assessment. At the completion of the subject, students should understand three aspects: prediction of the kind of changes that might occur with human activities; the design and implementation of proper monitoring programs that can detect changes; and assessment of those changes. Additionally, a strong emphasis is placed on the practical implementation of principles using a field-based approach.

Assessment: Individual reports, group assignments and essays totalling 5000 words.

121-421 Social Impact Assessment

Note: Formerly available as 121-004 Social Impact Assessment (theory). Students who have completed 121-004 are not eligible to enrol in this subject.

Availability: 4th year and postgraduate

Credit points: 12.5

HECS-band: 1

Coordinator: Dr Peter Christoff

Prerequisites: Admission to the postgraduate diploma or fourth-year honours in environmental studies.

Contact: Twelve 2-hour weekly seminars plus fieldwork to be advised (*Semester 2*).

Description: This subject focuses on the nature and range of the social impacts of development, including externalities, risk, benefit; procedures for assessing social impacts of development; the role of various political formations (the state, non-government organisations and grass roots action) in regulating the social impacts of development. The subject also deals with community consultation and dispute resolution, particularly in relation to the capacities of different sectors to deal with impacts and the relationship between economic restructuring and social impacts of development. The subject should provide students with the conceptual and technical skills to understand the relationship between society and development; assess the social impact of development; and identify the techniques needed to undertake social impact assessments.

Assessment: Individual and group reports equivalent to 5000 words.

121-422 Hydrology & Fluvial Geomorphology

Note: Strict enrolment deadlines apply to subjects taught during the Summer Semester. Any enrolment in, or withdrawal from, this subject for the Summer Semester must be made in line with HECS census dates, see page 7.

Availability: 4th year and postgraduate

Credit points: 12.5

HECS-band: 1

Coordinator: Assoc Prof B Finlayson & Prof T Mahon

Prerequisites: Entry to the postgraduate diploma in environmental studies or the masters program in the environment

Contact: Twenty-four hours intensive over one week consisting of lectures, practicals and fieldwork (*Summer semester*).

Description: This subject focuses on the hydrology and geomorphology of rivers with particular reference to their management for ecological benefits. Students are introduced to the principles of river hydrology and geomorphology as they govern the patterns of flows, the movement of sediment and the

behaviour of the channel. The subject is taught through a combination of lectures, practical classes (including computer-based data analysis) and fieldwork. Students will gain an insight and practical experience in the assessment of river condition and will be introduced to the issues surrounding the restoration of degraded rivers. This subject is aimed primarily at freshwater ecologists who wish to gain an understanding of the physical controls and behaviour of river systems.

Assessment: A 2-hour written examination and a case study report of up to 3000 words.

Prescribed texts: N Gordon, T A McMahon & B Finlayson, *Stream Hydrology: An Introduction for Ecologists*, John Wiley & Sons, 1992.

121-430 Environmental Studies Coursework

Note: Research modules are offered in intensive mode over summer. Students should consult Dr Ray Wyatt, the modules coordinator, for timetable details prior to the summer break in the year prior to their enrolment.

Availability: 4th year and postgraduate

Credit points: 50

HECS-band: 1

Coordinator: Dr Barbara Downes

Prerequisites: Admission to the postgraduate diploma or fourth-year honours in environmental studies.

Contact: Regular contact with the supervisor plus a total of 96 contact hours comprising: 12 hours of contact in each of two research methods modules (24 hours); twelve 1-hour formal contact sessions with the supervisor of the literature review (12 hours); 28 hours of formal seminars on research design, and philosophy and scope of the discipline; 24 hours of lectures and seminars in either 121-532 Environmental Impact Assessment (p.2) or 121-421 Social Impact Assessment (p.2); and 8 hours of oral project presentation (Year long).

Description: This subject comprises three components: a course of lectures and seminars on the principles and practice of environmental or social impact assessment; preparation of an extended review of the literature related to the subject matter of the student's individual thesis, covering both specific research in this area, and also the broader context within which the survey is situated; research methodology lectures and practical exercises covering two methodology areas chosen from the following list: SPSS or Introductory Statistics; GIS or Geocomputation; Research Planning or Managing Your Thesis or Planning a Fourth-Year Research Project; Ethics or Researching Vulnerable Groups; Storytelling and Narrative Analysis or Observation Methods; Survey Analysis; Questionnaire Design.

Assessment: A total of 20 000 words comprising a research proposal of 2000 words, a literature review of 6000 words, practical exercises on research methods for two elective modules totalling 5000 words, an essay and short seminar papers totalling 5000 words, two oral presentations (totalling 40 minutes) on research proposal and research results. Attendance at the School seminar series and other prescribed seminars is compulsory, as is completion of two methodology modules.

121-431 Environmental Studies Coursework (MYE)

Note: This subject is a mid-year entry version of 121-430 Environmental Studies Coursework (p.3). Research modules are offered in intensive mode over summer. Students should consult Dr Ray Wyatt, the modules coordinator, for timetable details in the year prior to enrolment.

Availability: 4th year and postgraduate

Credit points: 50

HECS-band: 1

Coordinator: Dr Barbara Downes

Prerequisites: Mid-year admission to the postgraduate diploma or fourth-year honours in environmental studies.

Contact: As for 121-430 Environmental Studies Coursework (p.3) (Semester 1, repeat 2).

Description: As for 121-430 Environmental Studies Coursework (p.3).

Assessment: As for 121-430 Environmental Studies Coursework (p.3).

