Environmental Science

Year and Campus:	2016
Coordinator:	Associate Professor Michael McCarthy (Botany)
Contact:	**Office for Environmental Programs** Ground Floor, Walter Boas Building (building 163) *Enquiries* Phone: 13 MELB (13 6352) Email: **13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)**
Overview:	Environmental Science is offered as a major field of study in the Master of Environment degree. The Environmental Science major will attract students seeking an interdisciplinary scientific perspective, for work largely in scientific and environmental careers. Graduates should be well placed to offer leadership through a solid understanding of environmental modelling, monitoring and assessment techniques, and application of technology. This major will provide an appreciation for the role of modelling in environmental science; an overview of the range of environmental models in use; the skills required to model environmental systems and processes; an introduction to the construction and mathematical analysis of environmental models; and a high level of ability to analyse and evaluate environmental issues.
Learning Outcomes:	Students who complete the Master of Environment will have: # Knowledge to undertake professional practice in environment or sustainability, including: # Skills for collaborative and creative problem solving in environmental practice, including: # Demonstrated capacity to: Upon completion of the Environmental Science major, students will be able to: # Describe major current global environmental challenges facing scientists and policy-makers; # Discuss the relevance of a range of scientific disciplines to environmental management including meteorology, ecology, toxicology, hydrology, geology and epidemiology; # Analyse the role of various evidentiary approaches to supporting science-based arguments including empirical observation and analysis, modelling and use of expert opinion; and Judge the merit of scientific arguments made in documents related to environmental policy
Structure & Available Subjects:	Students will be required to complete the two core subjects, plus choose three subjects from the compulsory specialisation subject list. Students must also take at least 12.5 points of subjects from the compulsory capstone subjects. Students must also undertake electives to make up the balance of the award. The selection of electives is made in consultation with the Environmental Science major coordinator. A list of subjects with special needs within this specialisation can be found at: **http://environment.unimelb.edu.au/courses/streams/environmental_science (http://environment.unimelb.edu.au/courses/streams/environmental_science)** To enter the 100 point Environmental Science major, students must have completed an Honours year in environmental science (or equivalent). Exceptions and suitability of these entry requirements are subject to the discretion of the major coordinator and the Office for Environmental Programs Selection Committee.
Subject Options:	**Core Subjects** Students are required to complete the subjects:

Subject	Study Period Commencement:	Credit Points:
MULT90004 Sustainability Governance and Leadership	March, July	12.50

EVSC90017 Global Environmental Change	Semester 1	12.50

Compulsory Subjects

and choose 3 subjects from the list of:

Subject	Study Period Commencement:	Credit Points:
EVSC90014 Environmental Risk Assessment	November	12.50
EVSC90020 Environmental Modelling	Semester 1	12.50
EVSC90016 Environmental Monitoring and Audit	Semester 2	12.50
EVSC90019 Graduate Seminar: Environmental Science	Semester 2	12.50

Compulsory Capstone Experience

Students are required to complete at least 12.5 points from the following subjects:

Subject	Study Period Commencement:	Credit Points:
EVSC90019 Graduate Seminar: Environmental Science	Semester 2	12.50
MULT90005 Interdisciplinarity and the Environment	Semester 2	12.50

Elective Subjects

plus undertake electives to make up the balance of the award. The recommended list of electives includes:

Subject	Study Period Commencement:	Credit Points:
ABPL90009 Participation and Negotiation	July	12.50
ABPL90032 Building Services and Operations	Semester 1	12.50
AGRI90057 Climate Change:Agric.Impacts&Adaptation	June, July	12.50
AGRI90066 Soil Science and Management	Semester 1	12.50
ATOC90002 Climate Affairs	Semester 2	12.50
ATOC90004 Current Topics in Atmospheric Science A	Semester 1, Semester 2	12.50
BOTA90005 Flora of Victoria	February	12.50
BUSA90403 Business Tools: Money People & Processes	Semester 2	12.50
BUSA90471 Business Tools: The Market Environment	Semester 1	12.50
CHEM90007 Environmental Chemistry	Semester 1	12.50
CHEM90008 Advanced Spectroscopy	Semester 1	12.50
CHEM90010 Advanced Chemical Applications 1	July	12.50
ECOL90001 Restoration Ecology	Not offered 2016	12.50
ECOL90002 Conservation Biology	Not offered 2016	12.50
ENEN90005 Environmental Management ISO 14000	Semester 2	12.50
ENEN90011 Energy Efficiency Technology	Semester 2	12.50
ENEN90027 Energy for Sustainable Development	Semester 1	12.50

ENEN90028 Monitoring Environmental Impacts	Semester 2	12.50
ENST70001 Environmental Research Proj (50 Long)	Semester 1, Semester 2	25
ENST90005 Environmental Policy	Semester 2	12.50
ENST90006 Environmental Research Review (12.5)	Semester 1, Semester 2	12.50
ENST90007 Environmental Research Project (25)	Semester 1, Semester 2	25
ENST90016 Environmental Research Project (50)	Semester 1, Semester 2	50
EVSC90001 Global Environment and Sustainability	February	12.50
EVSC90009 Problem Solving in Environmental Science	Semester 2	12.50
EVSC90015 Environmental Impact Assessment	Semester 1	12.50
FRST90016 Trees in a Changing Climate	November	12.50
FRST90021 Sustainable Forest Management	July	12.50
FRST90025 Bushfire & Climate	March	12.50
FRST90026 Bushfire & Biodiversity	March	12.50
FRST90032 Forests, Carbon and Climate Change	June	12.50
FRST90034 Ecological Restoration	September	12.50
GEOG90003 Integrated River & Catchment Management	Semester 1	12.50
GEOG90006 Fundamentals & Management of GIS	Not offered 2016	12.50
GEOL90005 Hydrogeology/Environmental Geochemistry	Semester 1	12.50
GEOM90008 Foundations of Spatial Information	Semester 1	12.50
HORT90003 Plants and the Urban Environment	Semester 1	12.50
MAST90044 Thinking and Reasoning with Data	Semester 1	12.50
MAST90045 Systems Modelling and Simulation	Semester 1	12.50
MULT90005 Interdisciplinarity and the Environment	Semester 2	12.50
MULT90012 Industry Project in Science	Not offered 2016	12.50
NRMT90002 Management of Plant and Animal Invasions	Semester 2	12.50
SCIE90004 Science in Context	Not offered 2016	12.50
SCIE90005 Ethics and Responsibility in Science	Semester 1	12.50
SCIE90007 E-Science	Not offered 2016	12.50
SKIL90004 Project Management in Science	Semester 1	12.50
VETS90016 Wildlife Management	Semester 1	12.50
SCIE90012 Science Communication	Not offered 2016	12.50
MAST90072 Data and Decision Making	Semester 1	12.50
MGMT90171 Leadership in Science	Semester 1	12.50
MKTG90022 Commercialisation of Science	Semester 2	12.50

	EVSC90019 Graduate Seminar: Environmental Science	Semester 2	12.50
	ENST90024 Environmental Research Project - 25 Long	Semester 1, Semester 2	12.50
	ENST90025 Environmental Industry Research (25)	Semester 1, Semester 2	25
	ENST90026 Environmental Industry Research: 25 Long	Semester 1, Semester 2	12.50
	ENST90020 Environmental Industry Research (50)	Semester 1, Semester 2	50
	ENST70002 Environmental Industry Research: 50 Long	Semester 1, Semester 2	25
	DEVT90002 Internship in Development	January, Semester 1, Semester 2	12.50
	DEVT90008 International Internship in Development	January, Semester 1, Semester 2	25
	GEOG90007 China Field Class PG	Semester 2	25
Links to further information:	http://www.environment.unimelb.edu.au/		
Notes:	Other subjects may be approved at the discretion of the coordinator.		
Related Course(s):	Master of Environment		