

Handbook 2020

Coursecode

G1062

GRADUATE DIPLOMA IN ENERGY AND THE ENVIRONMENT

Murdoch University

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Cancellation of Courses, Majors, Minors and Units

The University reserves the right to cancel, without notice, any course, major, minor or unit if the number of students enrolled falls below limits set by the University or in other unforeseen circumstances.

Alternative Formats

Handbook home page:

<http://handbook.murdoch.edu.au>

This publication can also be provided in alternative formats by contacting the Equity and Social Inclusion Office at Murdoch University

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Group	Course	Offerings
Graduate Coursework Degrees and Professional Doctorates		
Energy and the Environment	Graduate Diploma in Energy and the Environment (GradDipEnEnv)	<ul style="list-style-type: none"> • Murdoch campus (internal) • Murdoch campus (external) • International Online (Australia) ['INT-ONLINE'] (external) (International offshore students only)

ENERGY AND THE ENVIRONMENT

GRADUATE DIPLOMA IN ENERGY AND THE ENVIRONMENT (GRADDIPENENV)

Employment Prospects:

Graduates can expect to gain employment as sustainability, climate change or environmental officers in local government as well as in the corporate sector. Graduates can expect to gain employment in power generation companies, renewable energy manufacturing and installation companies, international aid organisations, government departments, energy efficiency and environmental consultancies, university and private industry research organisations.

Main Research Areas:

Renewable energy, remote area power supply systems, components and monitoring, energy management, solar cells, wind turbines, energy policy and economics, environmental impact assessment, climate change and carbon management.

Availability:

- Murdoch campus (internal)
Murdoch campus (external)
International Online (Australia) [‘INT-ONLINE’] (external) (International offshore students only)

Duration: 1 year full-time or part-time equivalent

Restriction: All graduate courses are subject to restriction.

Graduate Diploma in Energy and the Environment (GradDipEnEnv)

Further Study:

Students who successfully complete the Graduate Diploma may apply for direct admission to the one year Master of Environmental Science or direct admission to the second and final year of the Master of Renewable and Sustainable Energy.

Special Requirements:

This course is available to external students anywhere in the world who wish to study off campus by using on-line facilities. Assistance is provided by tutors, using telephone, email, or the Internet.

Environmental Engineering

This diploma is directed to the interface between energy and carbon studies and environmental impact assessment and is intended to provide graduate training for Australian and international professionals working, or wishing to work, in the areas of climate change management or sustainable energy and environmental management. There are two specialisations in this Diploma:

- Climate Change Management
- Energy, Emissions and Environment

Recent significant changes in the global climate change policy environment have meant a shift to a broader range of adaptation and mitigation practices to counter climate change. This is driving a demand for professionals with climate change skills across the Asia Pacific region and in Australia and the Climate Change Management Specialisation is designed in collaboration with industry to address this demand.

The Energy, Emissions and Environment is specifically targeted to address the ongoing demand for the use of sustainable energy and the need for environmental management of such projects. This specialisation is interdisciplinary in nature, consisting of units drawn from the areas of energy studies and environmental impact assessment. Students can complete the course with a focus upon the policy and/or the scientific aspects of the environmental management of the energy industry.

Admission Requirements (Onshore):

Recognised Bachelor's degree (AQF Level 7) or higher, or equivalent training, or professional experience in a related area.

Some of the units taken assume some prior knowledge, details of which are given in the description of each unit in the Handbook.

The most common of these is the high school Physics prerequisite for units such as Energy in Society, Energy Management and Energy Systems. Some students may therefore need to complete additional prerequisite units.

Course Codes: G1062

Climate Change Management Specialisation

Course Structure - 24 credit points

Core Units - 15 credit points

PEN502 Climate Change Impact Assessment - 3 points
MURDOCH: S1-internal, S1-external, S2-external

PEN503 Climate Change Adaptation and Resilience - 3 points
MURDOCH: S1-external, S2-internal, S2-external

PEN504 Greenhouse Gas Reporting and Life Cycle Assessment - 3 points
MURDOCH: S2-internal, S2-external

PEN597 Climate Change Science and Policy - 3 points
MURDOCH: S1-internal, S1-external

ENV680 Climate Change Adaptation: Ecosystems and Societies - 3 points
MURDOCH: S2-internal, S2-external

Specified Electives - 9 credit points

Energy Studies Units - 3 credit points

Select from the following:

PEN594 Energy Auditing and Management - 3 points
MURDOCH: S1-internal, S1-external

PEN592 Energy in Society - 3 points
MURDOCH: S1-internal, S1-external, S2-external

PEN598 Carbon Management - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

Environmental Science Units - 6 credit points

Select from the following:

ENV552 Comparative Environmental Policy and Law - 3 points
MURDOCH: S1-internal, S1-external

ENV536 Education for Sustainability - 3 points
MURDOCH: S2-internal, S2-external

ENV558 Environmental Monitoring - 3 points
MURDOCH: S2-internal, S2-external

ENV684 Modelling the Environment - 3 points
MURDOCH: S2-internal, S2-external

Energy, Emissions and Environment Specialisation

Course Structure - 24 credit points

Core Units - 3 credit points

PEN592 Energy in Society - 3 points
MURDOCH: S1-internal, S1-external, S2-external

Specified Electives - 21 credit points

Energy Studies Units - 9 or 12 credit points

Select 9 or 12 credit points from the following:

PEN594 Energy Auditing and Management - 3 points
MURDOCH: S1-internal, S1-external

PEN598 Carbon Management - 3 points
MURDOCH: S1-internal, S1-external, S2-internal, S2-external

PEN504 Greenhouse Gas Reporting and Life Cycle Assessment - 3 points

MURDOCH: S2-internal, S2-external

PEN590 Energy Systems - 3 points
MURDOCH: S2-internal, S2-external

PEN591 Energy Policy - 3 points
MURDOCH: S1-internal, S1-external

PEN597 Climate Change Science and Policy - 3 points
MURDOCH: S1-internal, S1-external

PEN593 Energy Economics - 3 points
MURDOCH: S2-internal, S2-external

Environmental Science Units - 9 or 12 credit points

Select 9 or 12 credit points from the following:

ENV557 Environmental Assessment and Management - 3 points
MURDOCH: S1-internal, S1-external

ENV552 Comparative Environmental Policy and Law - 3 points
MURDOCH: S1-internal, S1-external

ENV558 Environmental Monitoring - 3 points
MURDOCH: S2-internal, S2-external

ENV684 Modelling the Environment - 3 points
MURDOCH: S2-internal, S2-external

ENV616 Environmental Policy for the 21st Century - 3 points
MURDOCH:
S1-internal (quota of 30 places), S1-external (quota of 10
places)

ENV556 Principles of Environmental Impact Assessment - 3 points
MURDOCH: S1-internal, S1-external

ENV303 GIS for Environmental Management and Planning - 3
points
MURDOCH:
S2-internal (quota of 70 places), S2-external (quota of 20
places)

PREREQUISITES

Carbon Management (PEN598)

Enrolment in an Honours or Graduate-level course. Completion of either PEN597/OEENV599 Climate Change Science and Policy or PEN504 /OEENV504 Greenhouse Gas Reporting and Lifecycle Assessment or PEC632/PEN632 Greenhouse Science and Policy or PEC611/PEN611 Greenhouse Accounting and Life Cycle Assessment.

Climate Change Adaptation and Resilience (PEN503)

Enrolment in an Honours or Graduate-level course. Recommended PEN597 Climate Change Science and Policy and PEN504 Greenhouse Gas Reporting and Lifecycle Assessment.

Climate Change Adaptation: Ecosystems and Societies (ENV680)

Enrolment in a graduate-level course.

Climate Change Impact Assessment (PEN502)

Enrolment in an Honours or Graduate-level course. Recommended PEN597 Climate Change Science and Policy (may be concurrent enrolment).

Climate Change Science and Policy (PEN597)

Enrolment in an honours or graduate-level course.

Comparative Environmental Policy and Law (ENV552)

Enrolment in a graduate-level (AQF level 8) course.

Education for Sustainability (ENV536)

Enrolment in Graduate Certificate in Environmental Science or Graduate Certificate in Protected Area Administration or Graduate Diploma in Environmental Science or Bachelor of Marine Science or Master of Sustainable Development, or Doctor of Education, or Masters in Education, or Graduate Diploma in Education.

Energy Auditing and Management (PEN594)

Enrolment in the Graduate Certificate in Energy Studies, Graduate Certificate in Energy and Carbon Studies, Graduate Diploma in Energy Studies, Graduate Diploma in Energy and Carbon Studies, Graduate Diploma in Energy and the Environment, Master of Renewable Energy or Master of Renewable and Sustainable Energy

Energy Economics (PEN593)

Enrolment in an honours or graduate level course. Recommended PEC592/PEN592 Energy in Society (may be concurrent).

Energy Policy (PEN591)

Enrolment in an honours or graduate-level course. Recommended: PEC592/PEN592 Energy in Society and PEC593/PEN593 Energy Economics.

Energy Systems (PEN590)

Enrolment in the Graduate Certificate in Energy Studies, Graduate Certificate in Energy and Carbon Studies, Graduate Diploma in Energy Studies, Graduate Diploma in Energy and Carbon Studies, Graduate Diploma in Energy and the Environment, Master of Renewable Energy or Master of Renewable and Sustainable Energy and Master of Engineering.

Energy in Society (PEN592)

Enrolment in the Graduate Certificate in Energy Studies, Graduate Certificate in Energy and Carbon Studies, Graduate Diploma in Energy Studies, Graduate Diploma in Energy and Carbon Studies, Graduate Diploma in Energy and the Environment, Master of Renewable Energy or Master of Renewable and Sustainable Energy.

Environmental Assessment and Management (ENV557)

Enrolment in Bachelor Environmental Science or Bachelor Marine Science or Graduate Certificate in Environmental Assessment and Management or Graduate Certificate in Protected Area Administration or Graduate Diploma in Energy and the Environment or Graduate Diploma in Environmental Science.

Environmental Monitoring (ENV558)

Enrolment in Bachelor Environmental Science or Bachelor Marine Science or Graduate Certificate in Environmental Science or Graduate Certificate in Protected Area Administration or Graduate Diploma in Energy and the Environment or Graduate Diploma in Environmental Science.

Environmental Policy for the 21st Century (ENV616)

Enrolment in Master-level qualification or Graduate Diploma in Energy and the Environment.

GIS for Environmental Management and Planning (ENV303)

Completion of 24 points or enrolment in an appropriate graduate qualification.

Greenhouse Gas Reporting and Life Cycle Assessment (PEN504)

Enrolment in an Honours or Graduate-level course. Recommended PEN597 Climate Change Science and Policy (may be concurrent enrolment).

Modelling the Environment (ENV684)

Enrolment in Graduate Diploma in Energy and the Environment or Master of Environmental Science.

Principles of Environmental Impact Assessment (ENV556)

Enrolment in Bachelor Environmental Science or Bachelor Marine Science or Graduate Certificate in Environmental Assessment and Management or Graduate Diploma in Environmental Science or Graduate Diploma in Energy and the Environment or Master of Sustainable Development or Master of Public Policy and Management.