Master of Energy (MEnergy)

The Master of Energy (MEnergy) is an inter-faculty postgraduate degree that enables students with undergraduate backgrounds in engineering, science or commerce to undertake graduate studies in energy.

Who should take this programme?

Students who wish to develop expertise in any aspect of the energy industry (either technical, business or policy related) and who have completed a BE(Hons), BSc(Hons), or BCom(Hons), or have reached an equivalent attainment in engineering, science or commerce (eg. PGDip) (as approved by the Dean of Engineering) are eligible to apply for admission.

Manapouri turbines

Further Information

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www.engineering.auckland.ac.nz/master-of-energy

www.des.auckland.ac.nz

THE UNIVERSITY OF AUCKLAND
FACULTY OF ENGINEERING
Department of Engineering Science

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FACULTY OF ENGINEERING

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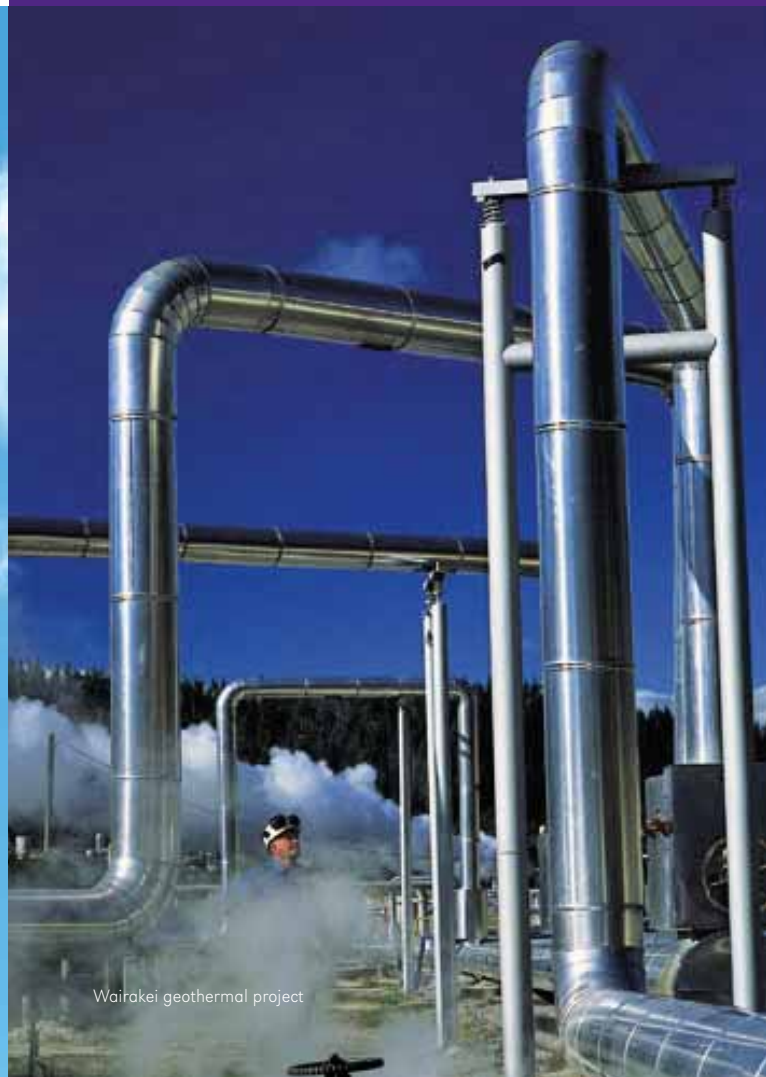

Wairakei geothermal project

Programme overview

All students complete two core courses that give an overview of business (ENERGY 721) and technology (ENERGY 722) issues. Students have a choice of completing a 90 point research thesis or a smaller 45 point research project.

In both cases the research will involve working on a problem relevant to industry and the project scope may include economic, environmental, regulatory and business issues, as well as technical matters.

Students who choose the smaller 45 point research project also take an additional three 15 point elective courses. The courses allow the student to concentrate on a particular energy form such as wind or geothermal, to take additional business courses, or to focus on sustainability/policy issues.

The 45 point research project can be taken as either a 15:30 point split (ENERGY 785) or a 30:15 point split (ENERGY 786) over two consecutive semesters.

The 90 point research thesis option is targeted at students who have previous experience in energy, through their undergraduate education or through work experience, and who have a clear research objective.

Programme design

With suitable choices of the three elective courses and the project topic the MEnergy can be designed to allow a student to concentrate on a particular field of energy. Some elective options are listed below.

Geothermal and petroleum engineering

Suggested electives:

GEOTHERM 601 Geothermal Resources and Their Use

GEOTHERM 602 Geothermal Energy Technology

GEOTHERM 603 Geothermal Exploration
(note this requires enrolment in GEOTHERM 601 and 602)

GEOTHERM 620 Geothermal Engineering
(note this requires enrolment in GEOTHERM 601 and 602)

GEOLOGY 703 Geothermal Geology

ENGSCI 745 Petroleum Engineering

Wind energy

Suggested electives:

MECHENG 711 Computational Fluid Dynamics

MECHENG 712 Aerohydrodynamics

MECHENG 714 Wind Engineering

Approved Electrical Engineering courses

Energy, sustainability and environment

Suggested electives (any three):

ENVENG 704 Sustainable Resource Management

ENVENG 750 Sustainable Engineering 2

ENVENG 751 Sustainable Technologies and Processes

ENVENG 752 Risk, LCA and Sustainability

ENVMGT 741 Social Change for Sustainability

ENVMGT 743 Environmental Policy

ENVMGT 744 Resource Management

ENVSCI 747 Current Issues in Sustainability

ENVSCI 701 Modelling of Environment and Social Systems

ENVSCI 711 Assessing Environmental Effects

GEOG 749 Climate and Society

Business/Economics/Management

Suggested electives:

CIVIL 701 Project Management 1

COMENT 702 IP and Legal Issues in Commercialisation

COMENT 703 Commercialisation of Science and Technology

ECON 783 Energy Economics

MGMT 737 Sustainability

SCIENT 701 Accounting and Finance for Scientists
(enrolment concession required)

Further business courses are available if a student has appropriate background.

Course availability

Students should consult Student Services Online for up to date information on elective course availability and timetabling. Other elective courses are possible within the regulations stipulated by The University of Auckland calendar. Elective enrolments are made on a case by case basis considering students' prior study and professional experience.

Research Masters

Semester One	Semester Two
ENERGY 787A - Research Thesis 30 points ENERGY 721 - Energy Resources 15 points ENERGY 722 - Energy Technology 15 points	ENERGY 787B - Research Thesis 60 points

Taught Masters

Semester One	Semester Two
Either	
ENERGY 785A - Research Project 15 points ENERGY 721 - Energy Resources 15 points ENERGY 722 - Energy Technology 15 points One elective course 15 points	ENERGY 785B - Research Project 30 points Two elective courses 30 points
or	
ENERGY 786A - Research Project 30 points ENERGY 721 - Energy Resources 15 points ENERGY 722 - Energy Technology 15 points	ENERGY 786B - Research Project 15 points Three elective courses 45 points

Apply

Online at www.auckland.ac.nz/applynow