

Thesis topics

Typical examples include:

- Develop a GIS-based landslide dambreak flood hazard map of Westland.
- GIS-based assessment of urban earthquake vulnerability.
- Alpine fault earthquake - improving disaster management and recovery.
- All-hazards vulnerability assessment of Arthur's Pass township.
- Acceptable options for managing tsunami hazard in Kaikoura.
- Guidelines for managing hazards on active alluvial fans.
- Drought and fire in Canterbury - disaster management and recovery.
- Vulnerability assessment and recovery - the effect of a major TVZ eruption on the wine industry, Waikato dairying, tourism and other businesses.

Examples of employment in NZ

- Hazards analyst/officer/manager, Regional/District/City Council
- Ministry of Civil Defence & Emergency Management; emergency management adviser, policy adviser
- Hazards analyst, Ministry for the Environment
- Hazards analyst, environmental/engineering consultancy
- Risk analyst; insurance or investment company

The Curriculum

Postgraduate Diploma: Coursework year only

BSc (Hons): Coursework year + dissertation (1 year)

MSc: Coursework year + thesis (2 years) or Thesis only (1 year)

PhD: Thesis only (3 years)

Coursework year:

4 core papers:

HAZM 401 Introduction to Hazards and Disasters

HAZM 403 Hazard and Disaster Investigations

ENCI 601 Risk Management

ENCI 462 Geographical Information Systems or equivalent

Optional papers available from a wide range in science, social science/sociology, education, political science, Maori studies, communication, engineering

Entry requirements

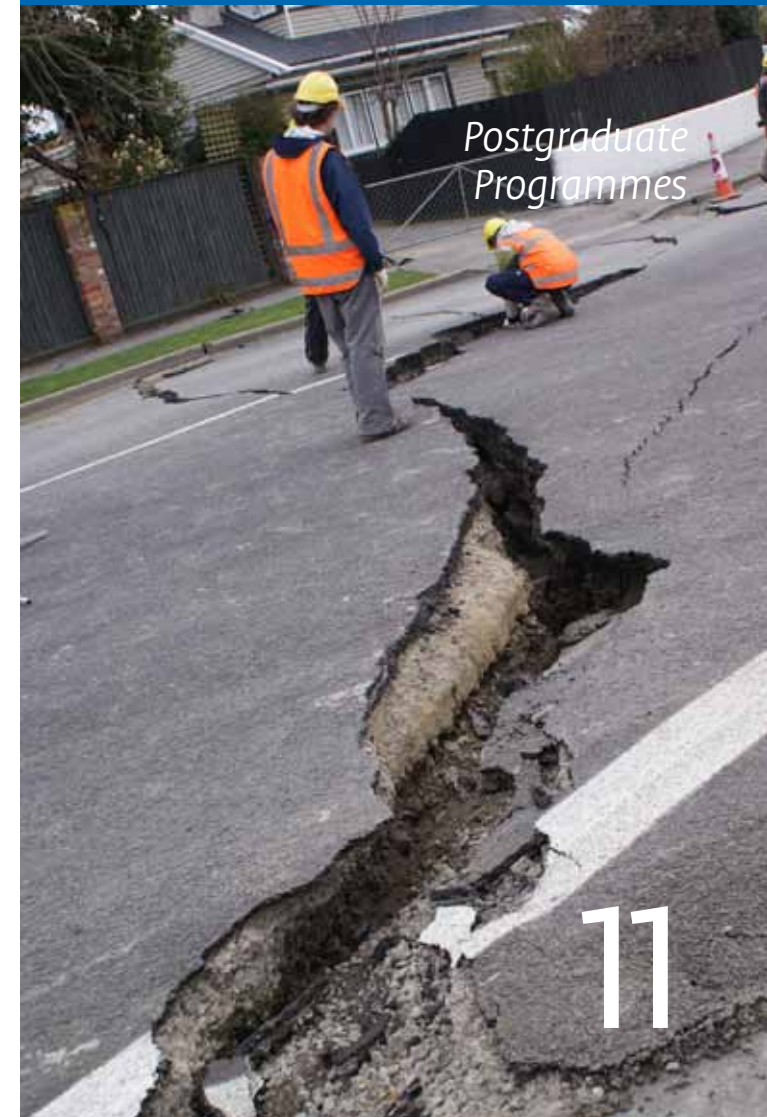
Degree in science or engineering; or with approval by course director.



For further information about the University of Canterbury's PGDipHAZM/BScHAZM/MScHAZM/PhDHAZM programme, including application details, please contact:

Assoc Prof Tim Davies
 Department of Geological Sciences
 University of Canterbury, Private Bag 4800, Christchurch 8020
 Tel: +64 3 364 2987 ext 7502 Fax: +64 3 364 2769
 Email: tim.davies@canterbury.ac.nz

www.geol.canterbury.ac.nz www.canterbury.ac.nz



Postgraduate
 Programmes

Postgraduate Programmes in Hazard & Disaster Management

Postgraduate Diploma - BSc (Hons) - MSc - PhD

Relevance

As society increasingly develops into areas affected by the natural physical processes of the Earth, disasters become more common and more damaging. Understanding of the social drivers of disasters is increasing, as are the opportunities to develop community resilience by risk management. These programmes aim to develop skills of hazard and disaster management through application of physical science to the interface between natural and human systems.

Graduate abilities

Independence of thought and learning.

Mastery of the concept that the origin of "natural" hazards and disasters is the vulnerability of humans and their facilities to the behaviour of natural (and human) systems, and analysis of the implications of this concept.

Ability to develop advanced knowledge of specific aspects of both natural and technological hazards and management situations (ability and motivation to learn).



Knowledge and understanding of natural system behaviours, and their responses to modification.

Ability to access and critically evaluate the current knowledge of hazard and disaster management.

Ability to work well in a group.

Understanding of human, technological and built environment system behaviour.

Advanced knowledge and skills in hazard and disaster investigation research, analysis and assessment, risk analysis and assessment and management, and vulnerability analysis and assessment in New Zealand (core professional competency).

Skills in investigating, solving and reporting a substantive hazard and disaster management problem in New Zealand (core professional competency).

Experience and skills in communicating hazard and disaster matters to a wide range of audiences (core professional competency).

High-level ability in planning, execution and reporting of original research.

Understanding of some of the difficulties of engagement between institutions and communities in developing hazard and disaster management plans.



These abilities will be developed by:

Case studies, to illustrate use of knowledge and skills in a particular real-life situation;

Lectures, providing information on specific topics in the context of the programme or to transfer appropriate information and explain common difficulties;

Individual student projects to develop independence of learning, analysis and synthesis, and reporting;

Group projects to develop organisational, discursive and communication abilities;

Tutorials and exercises to develop skills of understanding and use of knowledge in specific situations;

Field visits to develop investigation skills and to become acquainted with the experience of past hazard and disaster situations;

(except for PG Dip) A substantial original individual research project, reported by a dissertation or thesis.

