Course Title:	**Geohazards and Risk**
Course Code:	**GEOL704**
Descriptor Start Date:	**25/02/2019**
POINTS:	**15.00**
LEVEL:	**7**
PREREQUISITE/S:	**GEOL601**
COREQUISITE/S:	
RESTRICTION/S:	

LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

Total learning hours: 150

PRESCRIPTOR

An examination of geological hazards and risks, the natural processes that produce them and their impacts on the planet, the local environment and human society.

LEARNING OUTCOMES

1. Analyse and discuss the science and theory of geological hazards.
2. Analyse and discuss the full range of geohazards and extreme meteorological hazards .
3. Discuss the application of the concepts of hazard, risk, vulnerability, exposure and resilience.
4. Map hazards, interpret hazard data and produce geohazard maps.
5. Critically critique case studies of important geohazards.
6. Assess societal and environmental impacts of geohazards.
7. Discuss principles of management and mitigation of hazard and risk.
8. Demonstrate effective communication of geohazard and risk suitable for a general public audience.
9. Present work at the appropriate academic standard.
10. Demonstrate an understanding of safe practice.

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CONTENT

• Science of Geohazards including links to tectonics
• Global distribution of different types of Geohazards
• Historical Geohazards in terms of magnitude, impacts, and casualties: lessons learned
• Mapping and geospatial analysis of geohazards
• Concepts of hazard, risk, vulnerability, exposure, and resilience
• Earthquakes & Tsunamis: causes, different types, distribution, magnitude, measurement and monitoring, mitigation
• Fieldwork demonstrating aspects of Geohazard and risk and offering the development of Geohazard field based skills
• Landslides: causes, scales, location and distribution, mapping, measurement and monitoring, mitigation
• Floods, storms and cyclones: a focus on larger scale hazards. Causes, mapping, measurement, monitoring and mitigation
• Volcanic Hazards. A focus on the larger, more dangerous volcanic hazard types and explosive volcanoes. Mapping, measuring, monitoring, mitigation
• Case studies

LEARNING & TEACHING STRATEGIES

This course will be offered as a combination of lecturing, structured practical/field work, and student independent study. Students will be expected to read widely around the content identified in this descriptor and will use this reading to discuss the course content.

ASSESSMENT PLAN

Assessment Event	Learning Outcomes
Group Exercise	LO1, LO3, LO4, LO6, LO7, LO8, LO9
Field Based Exercise	LO1, LO3, LO4, LO9
Examination	LO1, LO2, LO3, LO4, LO5, LO6, LO7, LO8, LO9, LO10

Grade Map **MAP1**

A+ A A- Pass with Distinction
B+ B B- Pass with Merit
C+ C C- Pass
D Fail

Overall requirement/s to pass the course:

Students must achieve all learning outcomes in order to pass this course.

LEARNING RESOURCES

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For further information, contact: Te Ara Hauora A Putaiao - Faculty of Health & Environmental Science

Principal Programme:	**AK1041, Bachelor of Science**
Related Programme/s:	**AK1041 Bachelor of Science**

Disclaimer: Course descriptors may be amended between teaching periods/semesters