MODULE SPECIFICATION

Part 1: Information			
Module Title	Geotechnical Hazards		
Module Code	UBGMM8-15-3	Level	Level 6
For implementation from	2018-19		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Geography and Environmental Management
Department	FET Dept of Geography & Envrnmental Mgmt		
Contributes towards			
Module type:	Standard		
Pre-requisites	Geotechnics 2018-19		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Features: Module Entry Requirements: 60 credits at Level 2

Educational Aims: See Learning Outcomes.

Outline Syllabus: The syllabus includes:

Principal theories and concepts of hazard and risk.
Seismic hazards (other than earthquakes): soil liquefaction, landslides
Non seismic hazards: subsidence, ground failure, slope failure, creep, debris flows, permafrost.
Dam and reservoir failure.
Technological hazards, radioactive waste.
Geotechnical risk assessment and mitigation.
Desk study: aerial photography, geological maps, cross sections.
Ground investigation: preparation of hazard maps, technical reports.

Teaching and Learning Methods: Scheduled learning on this module includes lectures, demonstrations and practical classes. Fieldwork sessions will aid knowledge and skills development.

Independent learning includes hours engaged with essential reading, completion of practical work, assignment preparation and completion. These sessions constitute an average time as indicated:

Activity:
Contact time (lectures, field and laboratory sessions): 36 hours
Assimilation, development of knowledge and independent reading: 65 hours
Viva preparation: 24 hours
Coursework preparation: 25 hours
Total study time: 150 hours

This module is designed to run year long (long thin format). Students will receive, on average, 1-2 hours' contact time per week during the year. This is essentially a practical module but principles and concepts will be covered in lectures early in the course. Practical sessions, which will be introduced by demonstrations, will enable students to develop their skills in carrying out initial desk studies, using instruments, recording and analysing data. There will be a 4-day residential field visit towards the end of the module during which time students will work on a geotechnical problem for their summative assessment and apply skills and knowledge they have built up throughout the module. One-to-one support will be provided during practical and field sessions and via email.

Part 3: Assessment

Summative assessment:

Component A – Viva:
Students will be examined viva voce on the content and arguments put forward in their technical report.
This will assess the students' level of understanding of concepts, procedures and geotechnical hazards.
It will enable an exploration of the students' thinking and obtain clarification and enable arguments to be tested more deeply.
The viva can help students to extend their thinking and generate new ideas.

Component B – Technical report (1500 words):
The technical report will be submitted following the residential field excursion.
Students will carry out a desk study prior to the trip and will be given
formative feedback to help with the site assessment and the field study technical report.
The report will assess students' achievement and capabilities in the practical skills of field measurement and data collection.
It will indicate their ability to analyse and interpret data, their judgement and problem-solving skills and their literacy and presentation skills.

Formative work:
Formative work will be set during practical and field sessions for students' self assessment. Students will receive preparation exercises during practical sessions for the summative assessment that may include a mock viva.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Report - Component B		50 %	Technical report (1500 words)
Presentation - Component A	✓	50 %	Viva (30 mins)
Resit Components	**Final Assessment**	**Element weighting**	**Description**

Report - Component B		50 %	Technical report (1500 words)
Presentation - Component A	✓	50 %	Viva (30 mins)

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will be able to:

	Module Learning Outcomes
MO1	Appraise and interpret the fundamental behaviour under stress of rock and soil
MO2	Critically evaluate the concepts of hazard and risk and their interpretation in a geological context
MO3	Critically evaluate and use appropriate ground investigation and analysis techniques
MO4	Apply geological and geotechnical principles to the solution of complex geotechnical hazards
MO5	Describe and record geological materials and their properties in the field to current European standards
MO6	Research, plan and present results of a geotechnical hazard assessment, prepare technical reports and give presentations at a professional standard
MO7	Demonstrate independent engagement with academic literature

Contact Hours

Contact Hours	
Independent Study Hours:	
Independent study/self-guided study	114
Total Independent Study Hours:	114
Scheduled Learning and Teaching Hours:	
Face-to-face learning	36
Total Scheduled Learning and Teaching Hours:	36
Hours to be allocated	150
Allocated Hours	150

Reading List

The reading list for this module can be accessed via the following link:

https://uwe.rl.talis.com/index.html