

## Liverpool John Moores University

Title: NATURAL HAZARDS AND MITIGATION  
Status: Definitive  
Code: **6105NATSCI** (112604)  
Version Start Date: 01-08-2016

Owning School/Faculty: Natural Sciences & Psychology  
Teaching School/Faculty: Natural Sciences & Psychology

Team	Leader
Graham Sherwood	Y
Elizabeth Whitfield	
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**Academic Level:** FHEQ6      **Credit Value:** 24      **Total Delivered Hours:** 50  
**Total Learning Hours:** 240      **Private Study:** 190

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	22
Off Site	6
Practical	14
Workshop	6

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	exam	40	2
Report	Fld rpt	Field Report	30	
Report	Rep	Field Survey Report	30	

### Aims

*To provide students with an understanding of natural hazard characterization and mapping / monitoring strategies. To develop skills in the assessment and analysis of*

*those factors, both natural & related to human activity, that cause natural hazards. To consider and evaluate a range of hazard mitigation designs.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Explain and characterize a range of natural hazard processes including mass movement, coastal erosion, flooding, ground stability and tectonic hazards.
- 2 Assess the factors that cause natural hazards & propose an appropriate hazard monitoring or mitigation design.
- 3 Demonstrate practical skills in the analysis and mapping of hazards, including the analysis of laboratory data in quantitative analysis and application of Geographical Information Systems in mapping.
- 4 Critically evaluate a range of hazard mitigation designs.

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

EXAM	1	3	4	
Field report	1	2	3	4
Report	2	3		

## **Outline Syllabus**

*Global context of natural hazards. Site investigations. Slope instability. Hazard monitoring & mapping. Quantitative analysis of laboratory data. Quantitative risk assessment. Ground subsidence. Groundwater hazards. Flooding. Tectonic hazards. Hazard planning & mitigation strategies.*

## **Learning Activities**

The module integrates lectures with practical exercises and fieldwork.

## **Notes**

This module provides students with an insight into a range of natural hazard processes in a range of local and global contexts. The associated practicals and fieldwork will provide students with an understanding of the contexts and skills they would need for careers in ground surveying and geotechnical engineering.