

Liverpool John Moores University

Title: Evolution of Glacial, Fluvial and Karst Landscapes
Status: Definitive
Code: **6366SSLN** (123325)
Version Start Date: 01-08-2020

Owning School/Faculty: Sports Studies, Leisure and Nutrition
Teaching School/Faculty: Sports Studies, Leisure and Nutrition

Team	Leader
Timothy Stott	Y
David Larkin	
Adam Harmer	
Kaye Richards	

Academic Level: FHEQ6 **Credit Value:** 20 **Total Delivered Hours:** 41
Total Learning Hours: 200 **Private Study:** 159

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	22
Off Site	10
Online	4
Tutorial	4

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS 1	Essay (2000 words)	50	
Exam	AS 2	Exam	20	1
Report	AS 3	Field Report (1000 words)	30	

Aims

To allow students to understand the erosional and depositional processes operating

in glacial, fluvial and karst environments and to understand the cause of the geomorphic landscapes created by such processes.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically evaluate glacial processes and landforms over a range of timescales and synthesise the relationships between process and form
- 2 Critically evaluate fluvial processes and landforms over a range of timescales and synthesise the relationships between process and form
- 3 Critically evaluate how caves and karst landscapes form and be able to synthesise the relationships between surface limestone landscapes, the underground development of cave systems, past and current geological processes and the development of karst landscapes

Learning Outcomes of Assessments

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

Essay	1	2	3
Exam	1	2	3
Field Report	1	2	3

Outline Syllabus

Mass balance, glacier dynamics and the mechanisms of ice flow; the processes and landforms of glacial erosion; glacial debris transport and deposition; supraglacial, englacial and subglacial processes; landscapes of glacial deposition; glacial hydrological systems, processes and deposition; glaciogenic, glacial lake and glacio-marine processes, sediments and landforms; the drainage basin and how runoff and river flow is generated. It uses practical fieldwork to demonstrate modern techniques deployed by fluvial geomorphologists to investigate the processes and landforms in drainage basins. The impact of human activity on drainage basins.

Geomorphology of karst processes, including weathering of limestones; hydrology in karst areas, development of karren, pavements and glacio-karst landforms, development of cave systems (phreatic and vadose systems), flowstone formation, cave sedimentation.

Learning Activities

Lectures, fieldwork.

Notes

This module will allow students to understand the erosional and depositional processes operating in glacial, fluvial and karst environments and to understand the cause of the geomorphic landscapes created by such processes.