

Liverpool John Moores University

Title: CLIMATE CHANGE: CATCHMENTS AND OCEANS
Status: Definitive
Code: **5402NATSCI** (127325)
Version Start Date: 01-08-2021

Owning School/Faculty: Biological and Environmental Sciences
Teaching School/Faculty: Biological and Environmental Sciences

Team	Leader
Jonathan Dick	Y
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Jason Kirby	

Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 50
Total Learning Hours: 200 **Private Study:** 150

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	22
Practical	24
Workshop	4

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	blog	Blog posts on impact of climate change on the water cycle on a town of the students' choice (not Liverpool)	50	
Test	tests	Phase test on aspects of coastal and marine science in relation to climate change	50	

Aims

To provide students with an appreciation of fundamental processes that operate in (and link) catchments, riverine, coastal and marine environments in relation to climate change. To equip the students with the necessary skills and techniques that are used for monitoring and comprehending these changing environments.

Learning Outcomes

After completing the module the student should be able to:

- 1 Interpret and analyse the processes that act in catchments
- 2 Interpret and analyse the processes that act in coasts and oceans
- 3 Understand the impacts of climate change on catchments, coasts and oceans

Learning Outcomes of Assessments

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

blog posts	1	3
phase tests	2	3

Outline Syllabus

Hillslope and river hydrology, hyporheic, and ecohydrological processes in change. Flooding, Sea level rise. Coastal and oceanic processes in change including ecology and biogeochemistry.

Learning Activities

Lectures, practicals, and workshops. Laboratory, numerical, and GIS skills will be used to understand and interpret the affects of climate change on the aquatic/marine environments.

Notes

The module will examine two of the most important Earth surface domains. Theme 1 (Catchments) will focus on understanding how climate change affects catchment water balance and ecohydrology. Theme 2 (Oceans) will focus on how climate change will affect coasts, sea level, physics, biogeochemistry, and ecology.