

Liverpool John Moores University

Title: CLIMATE AND HUMAN EVOLUTION
Status: Definitive
Code: **4400NATSCI** (127320)
Version Start Date: 01-08-2021

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

Team	Leader
Chris Hunt	Y
Richard Jennings	

Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 60
Total Learning Hours: 200 **Private Study:** 140

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	25
Practical	25
Workshop	10

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	Rpt	Report based on practicals and work throughout the semester	60	
Test	Test	Online (Canvas) test	40	

Aims

This course aims to provide an introduction to the climate system, and the ways in which humans have interacted with, and adapted/evolved to their climates. It will cover a wide variety of timescales of human-climate interaction and evolution. It explores long and shorter -term patterns of human evolution and climate change,

examining the impact of climate instability and aridity upon resources and how well hominins adapted to changing environments of the past seven million years.

Learning Outcomes

After completing the module the student should be able to:

- 1 Use simple sedimentary and palaeontological indicators of climate change
- 2 Understand the patterns and processes of long-term climate change and evolution, and particularly of human evolution

Learning Outcomes of Assessments

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

Report	1	2
Online Tests	2	

Outline Syllabus

This course firstly sets out the duration of the geological timescale associated with human-climate interactions. It describes evidence of past environments (geomorphological, sedimentological, biological) and outlines the methods used to sample, date and reconstruct them. It define patterns, process and impacts of very long-term climate change (solar-driven, long-term orbital, geological-driven, astronomical impacts), long-term climate change (Milankovitch mechanisms, glacially-mediated and associated feedback processes, and volcanic processes), and shorter term climate change.

The course then explores how climate change shaped the evolution of new hominin adaptations, the origin and extinction of hominin species, and the emergence of our species, Homo sapiens. It also examines the role of climate change in the origins of farming and evaluates the impact of this major economic transition in human history upon the environment. This leads to discussion of the "Anthropocene" and to what degree humans are responsible for current climate change.

Learning Activities

Teaching will be delivered through lectures, practicals, and workshops.

Notes

Course on Climate and Human Evolution