Module Specification

Climate Change and Environmental Hazards

Version: 2023-24, v2.0, 21 Mar 2023

Contents

Part 1: Information

Module title: Climate Change and Environmental Hazards

Module code: UBGMTD-30-3

Level: Level 6

For implementation from: 2023-24

UWE credit rating: 30

ECTS credit rating: 15

Faculty: Faculty of Environment & Technology

Department: FET Dept of Geography & Envrnmental Mgmt

Partner institutions: None

Field: Geography and Environmental Management

Module type: Module

Pre-requisites: Climate Change: Tracing the Record 2023-24

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Module Entry requirements: 60 credits at level 2

Educational aims: See Learning Outcomes.

In addition to the Learning Outcomes, the educational experience may explore, develop, and practise but not formally discretely assess the following:

In-class discussions of emerging climate change science, and the policies for climate change mitigation and adaptation

Outline syllabus: The module is divided into three sections.

Part one – 'global warming' and Earth system science:

Magnitudes, rates and causes of recent (post AD1945) climate and environmental changes within the context of the Quaternary geological period.

The role of anthropogenic disruptions of key global biogeochemical cycles in the enhanced greenhouse effect

Earth systems science, Gaia and climate change

Part two – modeling future climate and environmental changes:

Approaches to modeling future changes: complexity and time scales

IPCC scenarios of future greenhouse emissions: political and economic uncertainties

Part three – future climate change: impacts and uncertainties

Uses output from climate models to identify key climate-related hazards

Indicative examples: heat waves, wildfires, hurricanes, avalanches, permafrost thaw, sea level rise, floods, droughts, vector-borne diseases

Critical evaluation of hazard impact mitigation and adaptation strategies

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning on this module includes lectures, computer-based sessions and individual formative feedback meetings.

Independent learning includes time engaged with reading, completion of formative work and preparation and completion of assessments.

Students will receive – on average - 3 hours' contact time per week.

This will be in a range of formats, including weekly keynote lectures or computer-based sessions, individual formative feedback meetings and support via e-mail.

The amount of time spent on activities in this module is shown below:

Activity Hours
Contact time 72
Assimilation and development of knowledge 120
Exam preparation 54
Coursework preparation 54
Total study time 300

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Contextualise recent and projected atmospheric greenhouse gas concentrations and climate change within geological timescales

MO2 Critically evaluate how variable understandings of Earth system feedbacks generate the current range of predictions for climate change and environmental hazards

MO3 Critically evaluate future scenarios of greenhouse gas emissions, climate change and climate change-related hazards

MO4 Demonstrate a sophisticated understanding of the key approaches to climate change-related hazard adaptation and mitigation

MO5 Demonstrate critical engagement with academic literature

MO6 Produce coherent written arguments that demonstrate an understanding of climate change science

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Total = 300

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/ubgmtd-30-3.html

Part 4: Assessment

Assessment strategy: Summative Assessment

Assessment Task 1: Examination (2 hours). Learning outcomes 2-6
Written examination
Timing: semester 2 examination period
Unseen question paper
Examines material covered throughout the academic year
Students will answer two questions from a choice of six

Answers will be assessed according to the following criteria:
1. Relevance of the content of the essay to the question set
2. Structure and organisation
3. Grounding in literature, and use of evidence and supporting material
4. Clarity, coherence and depth of argument
5. Standards of literacy and presentation

Assessment Task 2:
Individual essay. Learning outcomes 1, 2, 3, 5, 6

Equivalent to 3000 words
Topic: abrupt climate change during the Quaternary geological period and its application to future climate predictions and policies

Submission: end of semester 1

Essays will be assessed according to the following criteria:

Clear and succinct identification of the characteristics of the selected abrupt climate change event

Critical review of the causes of the onset of the abrupt event, based on peer-reviewed literature

Explanation of the contribution of palaeoclimate research to climate prediction models

Explanation of the contribution of palaeoclimate research to global climate change policy initiatives

Presentation and literacy

Formative work:

Formative questions will be set regularly for students' self assessment. Students will receive individual formative feedback on their essay drafts. Practice exam questions will be distributed during semester 2 and formative feedback given to students.

Assessment tasks:

Examination (First Sit)
Description: Examination (2 hours)
Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4, MO5, MO6

Written Assignment (First Sit)

Description: Individual essay (3000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO5

Examination (Resit)

Description: Examination (2 hours)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4, MO5, MO6

Written Assignment (Resit)

Description: Individual essay (3000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO5

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Geography {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2019-20