



Module Specification

21st Century Economic Geology

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Part 1: Information

Module title: 21st Century Economic Geology

Module code: UBGMNP-15-3

Level: Level 6

For implementation from: 2021-22

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Environment & Technology

Department: FET Dept of Geography & Environmental Mgmt

Partner institutions: None

Delivery locations: Frenchay Campus

Field: Geography and Environmental Management

Module type: Standard

Pre-requisites: None

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:

Students must have 60 credits at Level 2

Educational aims: See Learning Outcomes

Outline syllabus: Genetic classification of ore and mineral deposits.

Ore formation: magmatic, residual, sedimentary systems.

Metamorphic ore deposits.

Economic importance of metal deposits.

Industrial minerals, aggregates, salt.

Environmental aspects of exploitation of mineral energy resources.

An understanding of carbon capture and carbon storage.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning on this module includes lectures, demonstrations and practical classes. Local fieldwork sessions will aid knowledge and skills development

Independent learning includes hours engaged with essential reading, completion of practical work, assignment preparation and completion. These sessions constitute an average time as indicated below.

Activity (Hours)

Contact time (lectures, field and laboratory sessions) (36)

Assimilation, development of knowledge and independent reading (65)

Essay preparation (24)

Coursework preparation (25)

Total study time (150)

Students will receive, on average, 3 hours contact time per week. This will be predominantly in the form of lectures/practicals that will cover the principles and processes related to ore-forming minerals and carbon storage. There will be practical sessions to enable students to revise and improve their recognition skills and knowledge of the most common economic minerals plus map and graphics work to introduce some of the principles of and techniques.

Some sessions will take the form of tutorials for students to discuss site

interpretation and environmental aspects. There may also be local fieldwork or site visits. One-to-one support will be provided during practical sessions and via email.

Module Learning outcomes:

MO1 Review and explain the range of ore-forming processes and the systems that generate fossil fuels.

MO2 Identify and interpret the global locations of mineral resources and locations of carbon capture and carbon storage.

MO3 Critically evaluate the impact of mineral exploitation

MO4 Produce coherent written arguments that discuss sustainable and environmentally responsible management of economic resources

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://rl.talis.com/3/uwe/lists/F5000F32-D53A-8239-DEA1-CD4A679A9278.html?lang=en-US&login=1) via the following link <https://rl.talis.com/3/uwe/lists/F5000F32-D53A-8239-DEA1-CD4A679A9278.html?lang=en-US&login=1>

Part 4: Assessment

Assessment strategy: Summative assessment:

Component A – Written Assignment (1000 words). Learning outcomes 1-4.

Written assignment in essay format based on a choice of questions.

This will assess students' ability to research academic literature and apply it to interpretation of ore-forming reservoir processes and exploitation or there

understanding of carbon capture and storage.

Students will be able to demonstrate their understanding of key processes and discuss environmental impacts of exploitation.

Component B – Group Report (2000 words per group report). Learning outcomes 1-4.

Students will be based in groups to collect (data will be provided if students cannot collect their own data due to COVID-19) and analyse data and work together to determine the amount of remediation needed for an area. The group together will collect data and then distribute the data for analysis and come together to write up the report.

Groups will be between 2-3 people with a maximum of 650 - 1000 words per person. Students will be able to demonstrate that they can construct an argument and support it critically with references from academic literature.

Guidance on how to complete group work will be provided and students will be expected to attend timetabled sessions to share their progress with the work.

Students will be expected to complete individual peer assessment forms as part of the submission, as set out in the FET Group work policy. There will be one mark given per group if the peer assessment form indicate that the work was completed equally; if these forms indicate that one person has not completed the same amount of work the marks will be different for the people within the group.

Formative work:

Formative work will be set weekly during practical and tutorial sessions for students' self assessment. Students will receive preparation exercises including discussions during tutorials for the summative assessment.

Resit:

Component A – Written Assignment (1000 words). Learning outcomes 1-4.

Written assignment in essay format based on a choice of questions.

This will assess students' ability to research academic literature and apply it to interpretation of ore-forming reservoir processes and exploitation or their understanding of carbon capture and storage.

Students will be able to demonstrate their understanding of key processes and discuss environmental impacts of exploitation.

Component B – Report (1000 words). Learning outcomes 1-4.

Data will be given to the student to analyse and determine the amount of remediation needed for an area.

Students will be able to demonstrate that they can construct an argument and support it critically with references from academic literature.

The word count here is more than the first sit as this work is individual and not completed in a group.

Assessment components:

Written Assignment - Component A (First Sit)

Description: Written assignment in essay format based on choice of questions.
(1,000 words)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Written Assignment - Component B (First Sit)

Description: Report (2000 words)
(Groupwork)

Weighting: 50 %

Final assessment: No

Group work: Yes

Learning outcomes tested: MO1, MO2, MO3, MO4

Written Assignment - Component A (Resit)

Description: Written assignment in essay format based on choice of questions

(1000 words)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Written Assignment - Component B (Resit)

Description: Essay (1500 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested:

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Geology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2019-20

Geology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2019-20

Geology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2018-19