



## **Module Specification**

### **Geotechnics**

Version: 2023-24, v2.0, 18 Apr 2023

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## Part 1: Information

**Module title:** Geotechnics

**Module code:** UBGMLP-15-2

**Level:** Level 5

**For implementation from:** 2023-24

**UWE credit rating:** 15

**ECTS credit rating:** 7.5

**Faculty:** Faculty of Environment & Technology

**Department:** FET Dept of Geography & Environmental Mgmt

**Partner institutions:** None

**Field:** Geography and Environmental Management

**Module type:** Module

**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: 60 credits at Level 1

**Educational aims:** See Learning Outcomes.

**Outline syllabus:** The syllabus includes:

Rock types and properties, strength, cleavage, joints and faults.

Use of geological maps and cross sections.

Weathering and alteration products, properties of altered rocks.

Surficial deposits, soil formation and classification.

Soil properties, permeability, compaction, pore water pressure and seepage.

Engineering problems and solutions.

Ground investigation, geophysical methods.

Surveying principles, instruments and methods.

Site plans.

Global warming, sea-level change and future engineering challenges.

### **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:

Activity:

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

Assimilation, development of knowledge and independent reading: 64 hours

Report preparation: 50 hours

Total study time: 150 hours

Students will receive, on average, 3 hours' contact time per week during one Teaching Block. This will be predominantly in the form of practical sessions during which particular skills will be introduced by a demonstration and students will gain practical experience of using instruments by carrying out specific exercises. There will be local field excursions to examine different sites. Principles, essential theories, geotechnical problems and solutions will be introduced by short lectures. One-to-one support will be provided during field and practical sessions and via email.

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

**MO1** Apply basic knowledge of ground investigation techniques and demonstrate an understanding of mitigation strategies for difficult ground

**MO2** Undertake topographical surveys using theodolites or total stations

**MO3** Produce a scale plan of an area

**MO4** Interpret geological maps and cross sections to infer subsurface structures and assess impact on engineering projects

**MO5** Appraise soil characteristics and demonstrate skills in measuring soil permeability and compaction

**MO6** Demonstrate independent engagement with academic literature

**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://uwe.rl.talis.com/modules/ubgmlp-15-2.html) via the following link <https://uwe.rl.talis.com/modules/ubgmlp-15-2.html>

## **Part 4: Assessment**

**Assessment strategy:** Summative assessment

Assessment Task 1– Project report on a site investigation (2500 words equivalent): Students will be able to build up the information for this report throughout the module and receive formative feedback.

The assignment will examine students' application of knowledge gained from teaching on the course and their background reading.

Students will be able to demonstrate that they have practical skills to make geotechnical site investigations using appropriate instruments and methods. The report will include an interpretation of a site so students will be able to demonstrate their understanding of geological parameters and their engagement with academic literature.

Formative work:

Formative work will be set weekly during practical sessions for students' self assessment. Students will be given feedback that will build towards submission of the final project report.

**Assessment tasks:**

**Report (First Sit)**

Description: Project report (2500 words)

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6

**Report (Resit)**

Description: Project report (2500 words)

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested:

**Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Geology [Sep][SW][Frenchay][4yrs] - Not Running BSc (Hons) 2022-23

Geology [Sep][FT][Frenchay][3yrs] - Not Running BSc (Hons) 2022-23