



Module Specification

Civil Engineering Technology and Design

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Part 1: Information

Module title: Civil Engineering Technology and Design

Module code: UBGMKD-15-1

Level: Level 4

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: Not applicable

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

Ability to communicate design information in the form of calculations, drawings and

reports.

Ability to demonstrate a commitment to the safety of themselves and others during site visits and field work.

Outline syllabus: Hard Systems:

Geotechnical – eg. earthworks; retaining walls; foundations and sub-structures, including basements and ground stabilisation.

Infrastructure – eg. drainage; water supply; gas and electricity.

Buildings – eg. multi-storey and single storey; stability and disproportionate collapse; prefabrication.

Civil Structures – eg. bridges; tunnels; dams; flood defences.

Transport Systems – eg. road; rail; cycle.

Soft Systems:

Process of development.

Project management.

Ethics.

Sustainability.

Construction health & safety risk management.

Part 3: Teaching and learning methods

Teaching and learning methods: Students will receive – on average – 3 hours contact time per week. This will be in a range of formats, including weekly keynote lectures, tutorial or computer-based sessions, guided practicals, fieldwork, and case-studies, with virtual discussion groups and support via e-mail.

Worksheets will be provided, with subsequent tutorial sessions allowing formative feedback on the work.

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

Contact time: 36 hours

Assimilation and development of knowledge: 70 hours

Exam preparation: 20 hours

Coursework preparation: 24 hours

Total study time: 150 hours

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

MO1 Describe the materials, elements and processes that make up a variety of civil engineering systems in both the built and natural environments

MO2 Identify the inputs, outputs, mechanisms and controls of some of these processes

MO3 Analyse data to determine design solutions and quantify elements of civil engineering systems

MO4 Select appropriate standards and procedures for the design of common civil engineering systems

MO5 Apply a holistic engineering approach to the design of a civil engineering system, including consideration of health and safety, risk management, sustainability and ethical frameworks

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/ubgmkd-15-1.html) via the following link <https://uwe.rl.talis.com/modules/ubgmkd-15-1.html>

Part 4: Assessment

Assessment strategy: The module will be assessed by a combination of online assessment and a portfolio of case studies.

Online assessment. Learning outcomes 1 - 3.

A series of online tests will require students to demonstrate the solution to an engineering design problem.

Case study portfolio. Learning outcomes 4 and 5.

The coursework will require each student to develop a portfolio reflecting on key components of the module syllabus and their application to a case study. Students will build up this a portfolio of these throughout the module and will be encouraged to share some of them with the cohort including a group presentation for peer review.

Formative work:

Students will be encouraged to document their portfolios throughout the module, and these will be discussed in groups and verbal formative feedback will be provided by tutors.

Resit:

The resit strategy is the same as the first sit.

Assessment tasks:

Portfolio (First Sit)

Description: Case-study portfolio (equivalent to 2000 words)

Weighting: 60 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4, MO5

Online Assignment (First Sit)

Description: Series of online tests (2 hours overall)

Weighting: 40 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Portfolio (Resit)

Description: Case-study portfolio (equivalent to 2000 words)

Weighting: 60 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4, MO5

Online Assignment (Resit)

Description: Online test (2 hours)

Weighting: 40 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Civil Engineering {Apprenticeship-UWE} [Frenchay] BEng (Hons) 2023-24

Civil Engineering [Frenchay] BEng (Hons) 2023-24

Civil Engineering [Frenchay] BEng (Hons) 2023-24

Civil Engineering [Frenchay] MEng 2023-24

Civil Engineering [Frenchay] MEng 2023-24

Civil Engineering {Foundation} [Frenchay] BEng (Hons) 2022-23

Civil and Environmental Engineering {Foundation} [Sep][FT][Frenchay][4yrs] - Not
Running BEng (Hons) 2022-23

Civil and Environmental Engineering {Foundation} [Sep][SW][Frenchay][5yrs] - Not
Running BEng (Hons) 2022-23