MODULE SPECIFICATION

Part 1: Information			
Module Title	Civil Engineering Technology and Design		
Module Code	UBGMKD-15-1	Level	Level 4
For implementation from	2019-20		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Geography and Environmental Management
Department	FET Dept of Geography & Envrnmental Mgmt		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

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.

Cost modelling.

Sustainability.

Construction health & safety risk management.

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

Part 3: Assessment

The module will be assessed by a combination of an examination and a portfolio of case studies.

Component A - Examination. Learning outcomes 1 - 3.
The examination will require students to demonstrate the solution to an engineering design problem.

Component B – Case study portfolio. Learning outcomes 4 and 5.
The coursework will require each student to develop a portfolio reflecting on key components of the modulus syllabus. This will, where appropriate, incorporate information from site visits, industry speakers, published papers and, for students in relevant employment, their own work experience. 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. Lecturer led formative feedback will be given to help them develop a portfolio of case-studies for summative assessment.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Portfolio - Component B		50 %	Case-study portfolio (equivalent to 2000 words)
Examination - Component A	✓	50 %	Design examination (2 hours)
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Portfolio - Component B		50 %	Case-study portfolio (equivalent to 2000 words)
Examination - Component A	✓	50 %	Design examination (2 hours)

Part 4: Teaching and Learning Methods

Learning Outcomes

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

Module Learning Outcomes	Reference
Describe the materials, elements and processes that make up a variety of civil engineering systems in both the built and natural environments	MO1
Identify the inputs, outputs, mechanisms and controls of some of these processes	MO2
Analyse data to determine design solutions and quantify elements of civil engineering systems	MO3
Select appropriate standards and procedures for the design of common civil engineering systems	MO4
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	MO5

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	114
Total Independent Study Hours:	114
Scheduled Learning and Teaching Hours:	
Face-to-face learning	36
Total Scheduled Learning and Teaching Hours:	36
Hours to be allocated	150
Allocated Hours	150

Reading List

The reading list for this module can be accessed via the following link:

https://uwe.rl.talis.com/modules/ubgmkd-15-1.html

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Civil and Environmental Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19

Civil and Environmental Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2018-19