



MODULE SPECIFICATION

Part 1: Information			
Module Title	Structural Analysis		
Module Code	UBGMV9-15-2	Level	Level 5
For implementation from	2021-22		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Geography and Environmental Management
Department	FET Dept of Geography & Environmental Mgmt		
Module Type:	Standard		
Pre-requisites	Engineering Principles for Civil Engineering 2020-21, Mathematics for Civil and Environmental Engineering 2021-22		
Excluded Combinations	None		
Co-requisites	None		
Module Entry Requirements	None		
PSRB Requirements	None		

Part 2: Description
<p>Educational Aims: In this module you will develop the necessary knowledge, understanding and skills to analyse and solve problems relating to multi-variable structural systems of both statically determinate and indeterminate structure types.</p> <p>Outline Syllabus: You will cover:</p> <p>Internal loading functions.</p> <p>Qualitative analysis of frames and the use of computers.</p> <p>Elastic analysis of statically indeterminate structures (e.g. moment distribution method).</p> <p>Plastic analysis to calculate collapse loads of beams and frames.</p> <p>Arch Analysis.</p> <p>Moment redistribution.</p>

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Vibration.

Teaching and Learning Methods: The theory and concepts of the module will be taught by lectures, supported by tutorial sessions where the theory will be applied to set problems. Formative feedback will be provided on the students work in tutorial sessions.

Part 3: Assessment

The learning outcomes can be effectively demonstrated through the application of the taught theory to classical engineering problems. The use of an unseen written examination ensures that the work is individual.

Component A - Examination.
Exam (3 hours)

First Sit Components	Final Assessment	Element weighting	Description
Examination - Component A	✓	100 %	Examination (3 hours)
Resit Components	Final Assessment	Element weighting	Description
Examination - Component A	✓	100 %	Examination (3 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
	Understand the key difference between determinate and indeterminate structures and between plastic and elastic analysis with reference to equilibrium, compatibility and material properties	MO1
	Use qualitative methods to analyse determinate and indeterminate structures elastically	MO2
	Use quantitative methods to analyse determinate and indeterminate structures elastically	MO3
	Use plastic methods to analyse determinate and indeterminate structures	MO4
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

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	Total Scheduled Learning and Teaching Hours:	36
	Hours to be allocated	150
	Allocated Hours	150
Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p>https://uwe.rl.talis.com/modules/ubgmv9-15-2.html</p>	

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

- Civil and Environmental Engineering [Sep][SW][Frenchay][5yrs] MEng 2020-21
- Civil and Environmental Engineering [Sep][FT][Frenchay][4yrs] MEng 2020-21
- Civil and Environmental Engineering [Sep][SW][Frenchay][4yrs] BEng (Hons) 2020-21
- Civil and Environmental Engineering [Sep][FT][Frenchay][3yrs] BEng (Hons) 2020-21
- Civil and Environmental Engineering [Sep][PT][Frenchay][5yrs] BEng (Hons) 2019-20
- Civil and Environmental Engineering {Apprenticeship} [Sep][PT][Frenchay][5yrs] BEng (Hons) 2019-20
- Civil and Environmental Engineering {Foundation} [Sep][FT][Frenchay][4yrs] BEng (Hons) 2019-20
- Civil and Environmental Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2019-20
- Civil and Environmental Engineering [Sep][PT][Frenchay][7yrs] MEng 2019-20