MODULE SPECIFICATION

Part 1: Information			
Module Title	Structural Analysis		
Module Code	UBGMV9-15-2	Level	Level 5
For implementation from	2018-19		
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		
Contributes towards			
Module type:	Standard		
Pre-requisites	Engineering Principles for Civil Engineering 2018-19, Mathematics for Civil and Environmental Engineering 2018-19		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

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.

Outline Syllabus: You will cover:

Internal loading functions.

Qualitative analysis of frames and the use of computers.

Elastic analysis of statically indeterminate structures (e.g. moment distribution method).

Plastic analysis to calculate collapse loads of beams and frames.

Arch Analysis.

Moment redistribution.

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 be able to:

	Module Learning Outcomes
MO1	Understand the key difference between determinate and indeterminate structures and between plastic and elastic analysis with reference to equilibrium, compatibility and material properties
MO2	Use qualitative methods to analyse determinate and indeterminate structures elastically
MO3	Use quantitative methods to analyse determinate and indeterminate structures elastically
MO4	Use plastic methods to analyse determinate and indeterminate structures

Contact Hours

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/ubgmv9-15-2.html