



MODULE SPECIFICATION

Part 1: Information			
Module Title	Transport Infrastructure Engineering		
Module Code	UBGMFX-15-M	Level	Level 7
For implementation from	2020-21		
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	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: See Learning Outcomes</p> <p>Outline Syllabus: The syllabus includes:</p> <p>Identification of sources of information for design including specifications and standards, and site specific parameters</p> <p>Feasibility studies and route alignment</p> <p>Environmental impacts of transport infrastructure: calculation of road traffic noise</p> <p>Principles of geometric design and interactions between vehicles and the infrastructure</p> <p>Geometric design of highways and railways</p> <p>Highway pavement design</p> <p>Permanent way design</p>

STUDENT AND ACADEMIC SERVICES

Geotechnical engineering relating to transport infrastructure

Dealing with water in relation to transport infrastructure

Materials characteristics and selection for transport infrastructure

Maintenance of transport infrastructure assets

Teaching and Learning Methods: Students will be required to investigate and develop proposals for the design of problems in transport infrastructure engineering relating to a number of modes.

This will require individual working, but with the opportunities for peer support and review and for formative feedback on their proposals via the tutor.

Scheduled learning includes lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops and external visits.

Independent learning includes hours engaged with essential reading, design study preparation, assignment preparation and completion etc.

Contact with students may be in one of two forms: a) weekly or bi-weekly basis across a single semester; b) two blocks of three days each. The learning will be made up of the following number of hours:

Directed contact learning: 36 hours

Independent Study: 36 hours

Assessment, including preparation: 78 hours

Total: 150 hours

Part 3: Assessment

The strategy of the assessments is to ensure that students have analytical capability in transport infrastructure engineering, and that they are able to design various transport infrastructure artefacts. Hence, the assessment is divided into two parts; and examination and a coursework which includes a variety of design scenarios.

Students will present a report evaluating a portfolio of design exercises, to be included in the appendices to the report. The exam will require them to apply design principles to the solution of a range of transport infrastructure problems. Students will be allowed to take in a transport data handbook that they have annotated throughout the course. They will be provided with other necessary design information in the examination.

First Sit Components	Final Assessment	Element weighting	Description
Portfolio - Component B	✓	50 %	Design portfolio (2000 words plus appendices)
Examination (Online) - Component A		50 %	Online Examination
Resit Components	Final Assessment	Element weighting	Description
Portfolio - Component B	✓	50 %	Design portfolio (2000 words plus appendices)
Examination (Online) - Component A		50 %	Online Examination

STUDENT AND ACADEMIC SERVICES

Part 4: Teaching and Learning Methods																	
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th style="text-align: left;">Module Learning Outcomes</th> <th style="text-align: left;">Reference</th> </tr> </thead> <tbody> <tr> <td>Apply design principles and standards to transport infrastructure geometric design problems</td> <td>MO1</td> </tr> <tr> <td>Apply design principles and standards to transport infrastructure construction problems</td> <td>MO2</td> </tr> <tr> <td>Evaluate environmental impact of transport infrastructure</td> <td>MO3</td> </tr> <tr> <td>Synthesise specification and standards requirements and site conditions to identify and develop safe and sustainable options and final solutions for transport infrastructure design problems</td> <td>MO4</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Apply design principles and standards to transport infrastructure geometric design problems	MO1	Apply design principles and standards to transport infrastructure construction problems	MO2	Evaluate environmental impact of transport infrastructure	MO3	Synthesise specification and standards requirements and site conditions to identify and develop safe and sustainable options and final solutions for transport infrastructure design problems	MO4						
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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/ubgmfx-15-m.html</p>																

Part 5: Contributes Towards
This module contributes towards the following programmes of study: