



Module Specification

Street Network Planning and Design

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Part 1: Information

Module title: Street Network Planning and Design

Module code: UBGMLK-15-M

Level: Level 7

For implementation from: 2021-22

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Environment & Technology

Department: FET Dept of Geography & Environmental Mgmt

Partner institutions: None

Delivery locations: Frenchay Campus

Field: Geography and Environmental Management

Module type: Standard

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: See Learning Outcomes.

Outline syllabus: Principles of designing for movement for all road users (pedestrians, cyclists, public transport, private cars, goods vehicles)

Road safety principles, interventions and analyses including: collision prevention and reduction, road safety auditing, monitoring and statistical analysis.

Theory, modelling and design of traffic signal control junctions using both macroscopic and micro-simulation software.

Theory, modelling and design of priority junctions and roundabouts using both macroscopic and micro-simulation software.

Traffic flow and queuing theory and applications to link and junction design.

Part 3: Teaching and learning methods

Teaching and learning methods: This module is delivered through lectures, tutorials, workshops and site visits. Practical exercises will be conducted in workshops: these involve evaluating different junction designs using traffic modelling techniques. The exercises are linked to the coursework.

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

Independent learning includes hours engaged with tutorial work, essential reading, case 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

Module Learning outcomes:

MO1 Evaluate and design multi-modal networks, streets and junctions considering the needs of all users

MO2 Use manual methods and software to analyse and compare the capacity and performance of priority, roundabout and signal controlled junctions

MO3 Effectively apply theory to analyse traffic flow and queuing design problems

MO4 Evaluate and statistically analyse road safety problems and monitoring data

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

Part 4: Assessment

Assessment strategy: The strategy of the assessments is to ensure that students have skills in design, analysis and critical evaluation as applied to the planning and design of street networks, including links and junctions. The assessment comprises two linked coursework projects centred on open ended design problems.

These projects will involve (i) a strategic assessment of a section of transport network, with a focus on network planning and design; and (ii) detailed assessments of one or more links and junctions, involving software modelling and analyses of junction capacities including manual calculations, and critical evaluations of these outputs to support design recommendations.

The resits will follow the same framework and involve a resubmission against the same or slightly modified brief (where modifications are deemed necessary to ensure that students have worked independently for example).

Assessment components:

Portfolio - Component A (First Sit)

Description: Street network design portfolio (2,000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO4

Report - Component B (First Sit)

Description: Project report (2000 words plus appendices)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3

Portfolio - Component A (Resit)

Description: Design portfolio (2,000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO4

Report - Component B (Resit)

Description: Project report (2000 words plus appendices)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Transport [Sep][FT][Frenchay][1yr] MSc 2021-22

Transport Engineering and Planning [Sep][PT][Frenchay][2yrs] MSc 2021-22

Transport Engineering and Planning [Sep][FT][Frenchay][1yr] MSc 2021-22

Civil Engineering [Jan][FT][Northshore][4yrs] MEng 2018-19