



## **Module Specification**

### **Street Network Planning and Design**

Version: 2023-24, v3.0, 15 Jun 2023

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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:** 2023-24

**UWE credit rating:** 15

**ECTS credit rating:** 7.5

**Faculty:** Faculty of Environment & Technology

**Department:** FET Dept of Geography & Environmental Mgmt

**Partner institutions:** None

**Field:** Geography and Environmental Management

**Module type:** Module

**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 networks, streets and junctions for all road users (pedestrians, cyclists, public transport, private cars, goods vehicles) for all groups in society (considering e.g. age, gender, disability).

Placemaking and the role of street and junction design.

The design and application of street or junction auditing / surveying tools.

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

Approaches to designing and analysing priority, roundabout and traffic signal forms of junction control.

Traffic flow theory and applications to street 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 street and junction designs and include undertaking audits, developing geometric designs, undertaking manual calculations and building software models. The exercises are linked to the coursework project(s).

The self-study hours will include directed activities designed to consolidate student understanding of the principles and techniques introduced in class and the application of these principles and techniques to the coursework problems. These activities culminate in the preparation of the final outputs required for the coursework project(s).

The learning will be approximately 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:** On successful completion of this module students will achieve the following learning outcomes.

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

**MO2** Analyse and compare the performance and capacity of priority, roundabout and signal controlled junctions against design criteria

**MO3** Explain and apply traffic flow theory

**MO4** Evaluate road safety problems and propose road safety interventions

**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 (2 portfolios) will involve (i) a strategic evaluation of a section of transport network taking a holistic view to identify issues relating to e.g. level of provision for all modes of transport, road safety, placemaking; and (ii) the development of a design for 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 tasks:**

**Portfolio (First Sit)**

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

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO4

**Portfolio (First Sit)**

Description: Street and junction design portfolio (2000 words plus appendices)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

**Portfolio (Resit)**

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

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO4

**Portfolio (Resit)**

Description: Street and junction design portfolio (2000 words plus appendices)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

**Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Transport [Frenchay] MSc 2023-24

Transport [Frenchay] MSc 2023-24

Transport Engineering and Planning [Frenchay] MSc 2023-24

Transport Engineering and Planning [Frenchay] MSc 2023-24

Civil Engineering [Jan][FT][Northshore][4yrs] - Not Running MEng 2020-21