

Module Details	
Module Title:	Transportation Studies
Module Code:	CSE6004-A
Academic Year:	2019-20
Credit Rating:	10
School:	Department of Civil and Structural Engineering
Subject Area:	Civil and Structural Engineering
FHEQ Level:	FHEQ Level 6
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	Hours
Lectures	18
Tutorials	6
Directed Study	76

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims
To critically evaluate the design of road junctions and links, policy formulation, with reference to needs, funding, forecasts and sustainability . To design and evaluate maintenance requirements of transport infrastructure.

Outline Syllabus
Traffic survey techniques: Need for traffic engineering, collecting speed and traffic flow data and analysis and presentation of survey data. Design of Links: Speed flow theory, speed control including traffic calming and signing. Design of Priority Junctions: General and grade separated junctions, assessing capacity and accidents and use of PICADY. Design of Signal Control Junctions: Suitability and layout, signal design (saturation flow, cycle time, phases and delays).

Environmental Assessment: Need for sustainable roads, assessment methods and presentation at public enquires, Calculation of Road Traffic Noise. Transport Planning: Requirements, surveying, modelling, cost benefit and future transport needs and systems. Transport Infrastructure: Highway pavement design, maintenance, low noise surfaces

Learning Outcomes

1	critically evaluate the design of signals, priority junctions and road links in terms of capacity and safety; assess important environmental impacts; understand the need for transport planning and new forms of transport; evaluate materials and specifications for durable and sustainable highways.
2	acquire and interpret traffic flow, speed and accident data; use engineering methods to design simple priority and signal controlled junctions, assess noise impacts and road pavements
3	interpret and present data.

Learning, Teaching and Assessment Strategy

The theoretical background is developed in lectures and practised in tutorials, implemented in a computer design exercise and assessed by examination.

Mode of Assessment

Type	Method	Description	Length	Weighting
Summative	Examination - closed book	Exam	2 hours	100%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>.

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.