

Transportation Studies

Module Code:	CSE6004-A
Academic Year:	2018-19
Credit Rating:	10
School:	Department of Civil and Structural Engineering
Subject Area:	Civil and Structural Engineering
FHEQ Level:	FHEQ Level 6
Module Leader:	Dr Jaan Pu

Additional Tutors:

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	18
Tutorials	6
Directed Study	74
Examinations DO NOT USE	2

Availability Periods

Occurrence	Location/Period
IPA	INTI International College, Penang / Semester 1 (Sep - Jan)
IPA	INTI International College, Penang / Semester 2 (Feb - May)
IPA	INTI International College, Penang / Semester 3 (June - Oct)
IIA	INTI International University / Semester 1 (Sep - Jan)
INA	INTI International University, Nilai / Semester 1 (Sep - Jan)
INA	INTI International University, Nilai / Semester 2 (Feb - May)
INA	INTI International University, Nilai / Semester 3 (June - Oct)
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

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 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	Final Assess'
Summative	Examination - closed book	Exam	2 hours	100%	Yes

Legacy Code (if applicable)

ENG3016M

Reading List

To view Reading List, please go to [rebus:list](#).