Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	TRAFFIC AND TRANSPORT
Unit ID:	ENGIN3203
Credit Points:	15.00
Prerequisite(s):	Nil
Co-requisite(s):	Nil
Exclusion(s):	(ENCIV3340)
ASCED:	030909

Description of the Unit:

Road safety, traffic surveys, the hierarchy of roads (briefly), road network design, road capacity and level of service, traffic flow in residential streets, unsignalised intersection design, signalised intersection design for interface with arterial roads, pedestrian and bicycle facilities, planning and design for commercial vehicles, planning and design for public transport, local area traffic management, traffic impact analysis, land use planning process, environmental considerations and the application of advanced technology.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory						
Intermediate						
Advanced			✔			

Learning Outcomes:

On completion of the unit students will be able to:

Knowledge:

K1. Describe traffic and transport system and its elements.
K2. Recall the fundamental principles of intersection design.
K3. Describe the characteristics of traffic flow.
K4. Explain the interaction between environment and road transport system.

Skills:

S1. Undertake traffic surveys.
S2. Analyse and model traffic data.
S3. Design signal timing for an intersection.

Application of knowledge and skills:

A1. Analyse survey data and make predictions.
A2. Decide on road safety issues and suitability of road signs.

Unit Content:

Topics may include:

- Urban street system
- Traffic surveys
- Traffic flow theory
- Gap and queueing analysis
- Road safety
- Statistical analysis
- Road signs and pavement markings

- Intersection design
- Intersection control
- Road network and environmental impact
- Roadside environment

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, S1, S2, A1	Carry out an assessment on Traffic survey and flow theory	Coursework, Field work + numerical problems	10 - 30%
K1, K2, K3, S1, S2, S3 A2, A3	Carry out an assessment on gap analysis, road safety, road signs and intersection design and control	Coursework â€“ Essay + Numerical problems	10 - 40%
K1 â€“ K4, S1 â€“ S3	Assessment of all or part of the unit by examination.	Examination (3hrs)	40 - 60%

Adopted Reference Style:

Other (IEEE: Refer to the library website for more information)

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Fed Cite - referencing tool