



# Course Outline (Higher Education)

<b>School:</b>	School of Engineering, Information Technology and Physical Sciences
<b>Course Title:</b>	TRAFFIC AND TRANSPORT
<b>Course ID:</b>	ENGIN3203
<b>Credit Points:</b>	15.00
<b>Prerequisite(s):</b>	Nil
<b>Co-requisite(s):</b>	Nil
<b>Exclusion(s):</b>	(ENCIV3340)
<b>ASCED:</b>	030909

## Description of the Course :

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, etc.)

## 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 course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

## Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Advanced	■	■	✓	■	■	■

### Learning Outcomes:

On completion of the course 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.

#### Course 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

**Values:**

- V1.** Appreciate that the road traffic network is a complex system involving interaction between road users, vehicles and road infrastructure.
- V2.** Support active learning by application of traffic engineering principles to make educated decisions on road safety problems and environmental issues.

**Graduate Attributes**

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course			
		Learning Outcomes (KSA)	Code A. Direct B. Indirect N/A Not addressed	Assessment task (AT#)	Code A. Certain B. Likely C. Possible N/A Not likely
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1-K4, S1-S3	A	3	A
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	Not applicable	Not applicable	Not applicable	Not applicable
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	K1-K3, S1-S3, A1-A3	A	1, 2	B
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	K1-K3, S1-S3, A1-A3	B	1, 2	B

Graduate attribute and descriptor		Development and acquisition of GAs in the course			
		Learning Outcomes (KSA)	Code A. Direct B. Indirect N/A Not addressed	Assessment task (AT#)	Code A. Certain B. Likely C. Possible N/A Not likely
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	Not applicable	Not applicable	Not applicable	Not applicable

**Learning Task and Assessment:**

Learning Outcomes Assessed	Learning 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 " Essay + Numerical problems	10 - 40%
K1 " K4, S1 " S3	Assessment of all or part of the course by examination.	Examination (3hrs)	40 - 60%

**Adopted Reference Style:**

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