

Background and Aims

In this unit, you will gain an appreciation of the fundamentals of road safety engineering. The unit's prime aim is to show road safety engineers and other professionals how to plan, design and implement a range of engineering infrastructure (signs, signals, pavement markings, safety fittings etc.) with the aim of ensuring that the road system operates safely, efficiently and with a minimum of adverse impacts. It also demonstrates how good road layouts, traffic management, the control of moving traffic and parking can improve safety.

After completing this unit participants will:

- understand why road safety is important, how improvements can be achieved and who is doing the work,
- understand the complexity of the human/vehicle/road system and how the interrelationships work to influence safety,
- be able to undertake accident investigations, collect accident data and know what to look for in quality data,
- be able to analyse accident data, turn it into information and develop cost effective, practical counter measures,
- know how to be proactive in preventing accidents before they occur.

Details of the structure of the unit are provided over the page

Enrolment Options

Enrol as a single unit or as part of either the Graduate Certificate in Transport and Traffic, Postgraduate Diploma in Transport and Traffic, or Masters in Transport and Traffic.

Off-Campus Study Mode

This unit is offered by Off-Campus (distance education) and there is no requirement for participants to attend lectures. Study guides, comprising a comprehensive set of course notes, are sent following enrolment. Further support is provided through a unit web site and via e-mail. The lecturer is available to answer questions and to provide assistance as necessary throughout the semester. Assistance can be arranged by email, facsimile, mail, telephone or through the discussion groups on the unit web site. Assessment comprises two assignments and an examination (worldwide exam venues are available).

Unit Co-ordinator



Peter Daly is the author and developer of this unit and is currently a Chief Engineer, Traffic and Roads at RACV. Prior to joining RACV he was a Lecturer in the Department of Civil

Engineering and ITS at Monash University where he taught and undertook research in road safety engineering, traffic engineering and transport planning. Peter is also a director of a specialist consultancy and has worked in Australia and overseas, providing expert witnessing, safety appraisals and road safety education services. Peter is currently President of the ITE, Australia and New Zealand Section.

Enrolment or General Course Enquiries:

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Structure

The unit is structured around 12 topics which are generally associated with one week of study

Topic	<i>After completing this topic, participants will:</i>
1. A context for road safety	<ul style="list-style-type: none"> • have an understanding of the road safety problem facing Australia • appreciate the benefits gained by considering road safety within an overall strategic context
2. Road safety and the law	<ul style="list-style-type: none"> • be able to explain the concept of duty of care • be able to outline the role of the law in road safety
3. A complex system	<ul style="list-style-type: none"> • be able to name the various components of the driver task and explain how drivers process information • be able to identify the information needs of drivers and articulate design measures to ensure this information is delivered
4. Safety management systems	<ul style="list-style-type: none"> • be able to discuss the concepts of “cure”, “cause” and “blame” • be able to outline general road safety strategies and effective programs.
5. Collection and use of road crash information	<ul style="list-style-type: none"> • be able to differentiate between data and information • be able to list and describe the main sources of crash data, their limitations, interactions and availability, • be able to describe how data is accessed and used by road safety practitioners
6. Finding the problem	<ul style="list-style-type: none"> • be able to explain the underlying basis of detective approach to accident identification • be able to list and discuss the five generic steps involved in applying the detective approach to road safety investigation
7. Treatment of hazardous locations	<ul style="list-style-type: none"> • be able to diagnose crash patterns from crash data • be able to propose countermeasures based on underlying crash patterns
8. Assessment of countermeasures	<ul style="list-style-type: none"> • be able to identify the economic costs and benefits of crash treatments • understand the importance of countermeasure monitoring and evaluation
9. Road design for safety	<ul style="list-style-type: none"> • recognise various road design elements and document their effects on road safety • be able to provide quantitative ranges of accepted design values for these elements
10. Road environment safety	<ul style="list-style-type: none"> • recognise the contribution of the road environment to safe mobility • be able to assess appropriate treatments for individual roadside hazards
11. Vulnerable road users	<ul style="list-style-type: none"> • be able to explain why vulnerable road users differ from other road users • recognise and discuss shortcomings in design practice which affect vulnerable road users
12. Road safety audit	<ul style="list-style-type: none"> • be able to describe the differences between accident investigation and road safety audit • be able to undertake a limited road safety audit