

CIV5316: Fundamentals of Urban Public Transport

Background and Aims

This unit covers urban public transport planning from a range of perspectives including policy, demand/markets and supply/operations and infrastructure. Policy analysis is designed to provide an understanding of the strategic, institutional and political context within which public transport services are provided. This is to illustrate the diverse and often conflicting objectives which drive the development and planning of services. Demand/market analysis aims to introduce students to the range of markets and market drivers which influence the use of public transport services. Supply/operations and infrastructure analysis provides an overview of the types of services which are provided and the operational, engineering and technology issues which govern their effective deployment.

After completing this unit participants will have knowledge and understanding of:

- understanding of the framework within which public transport planning and management is conducted and the foundations of public transport policy
- appreciation of the nature and trends of public transport markets, and the sensitivity of these markets to both external influences and public transport service changes
- knowledge of the performance, impacts and costs of various public transport systems, services and modes and the factors influencing improvements to these systems
- appreciation of the issues relevant to selecting a particular public transport mode for a particular transport task
- understanding of the factors to be considered in conducting demand and operational analysis in public transport

Details of the structure of the unit are provided on the following 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



Graham Currie holds the Chair in Public Transport at The Institute of Transport Studies (Monash) where he researches and provides training in public transport planning. He has over 27 years experience as a public transport planner and has

worked for some of the worlds leading operators including as a planner at London Transport and a demand modeller on the Midland Metro Light Rail Project in the UK. Graham has been an independent consultant specialising in the Public Transport planning and service development area for over 20 years. He has led numerous public transport consulting and research projects in all states and territories of Australia as well as assignments in Europe, Asia and North America. He is a world bank accredited consultant and has led several assignments training public transport planners throughout China. Graham has specialised in planning public transport systems for major events and has led planning and review studies for the Atlanta, Sydney and Athens summer Olympic games. As Australasia's first Chair in Public Transport, Professor Currie's role is to develop research and education in the public transport profession.

Enrolment or General Course Enquiries:

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Structure

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

Topic	<i>After completing this topic, participants will:</i>
1. An Introduction to Urban Public Transport Planning	<ul style="list-style-type: none"> • Understand the historical context as a major influence on current and future transit planning • Understanding that separate and often conflicting objectives define transit planning • Appreciate strategic frameworks and processes for public transport planning • Be aware of some of the current emerging issues
2. Market Perspectives	<ul style="list-style-type: none"> • Have a broad understanding of the types of users and their major concerns and issues • Understand existing patronage levels within the context of historical trends • Understand typical behaviour patterns and be aware of user perceptions and attitudes • Appreciate the most important factors affecting patronage
3. Demand Forecasting	<ul style="list-style-type: none"> • Understand why forecasting is important and the process of market change • Understand the process for market forecasting and • Be able to apply simple forecasting methods • Have a broad understanding of the factors affecting the quality of forecasts
4. Performance Assessment	<ul style="list-style-type: none"> • Understand the importance of performance management & viewpoints taken on its use • Understand the characteristics and processes involved in an effective performance monitoring • Be able to assess appropriate measures to assess performance • Have experience in applying a transit performance management database
5. Financial and Economic Analysis	<ul style="list-style-type: none"> • Understand the issues associated with costing public transport services • Be able to apply costing models to estimate costs of new services • Be able to apply simple transit resource costing analysis • Understand the basics of financial and economic appraisal of public transport projects
6. Regulation, Contracting, Competition & Ownership	<ul style="list-style-type: none"> • An understanding of public transport competition, ownership, regulation & contracting issues • Understand the models adopted for introducing competition and contestability into transit • Understand the basics of contract design • Be aware of the contemporary performance of competition models in transit
7. Transit and Land Use	<ul style="list-style-type: none"> • Understand relationships between land use density, urban form and public transport • Understand how public transport has acted to influence land use • Understand the principles of transit oriented development • Be aware of urban design considerations associated with public transport
8. Service Route and Network Planning	<ul style="list-style-type: none"> • Understand the principles of the 'family' of transit mode types • Be aware of the issues associated with transit mode selection • Be aware of transit planning issues associated with network design and structure • Understand approaches to transit route, service and schedule planning
9. On Road Public Transport Design	<ul style="list-style-type: none"> • Understand the fundamentals of bus planning • Be aware of the issues associated with managing the mixed traffic interface • Understand the principles and outcomes of Bus Rapid Transit • Understand the principles of streetcar planning and design
10. Rail Service Design, Operations & Planning	<ul style="list-style-type: none"> • Understand the fundamental characteristics of urban railways • Be aware of the issues associated with new rail system design • Understand the principles of short range planning for railways
11. Intelligent Transport Systems in Transit	<ul style="list-style-type: none"> • Understand ITS developments in transit including potential benefits • Be aware of fare policy issues in transit • Understand the general field of fare collection technology developments in transit
12. Transit Futures	<ul style="list-style-type: none"> • Have a broad understanding of the field of advanced transportation systems • Be aware of demand responsive transit opportunities in transit system development • Understand new influences on travel futures and how these may affect transit • Be aware of future visions for transport and how transit systems may fit within this