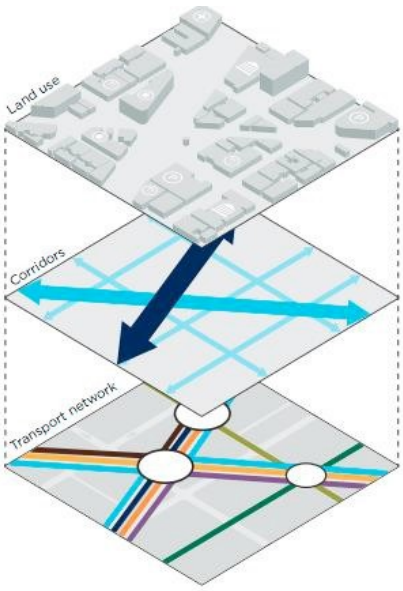
UNSW SYDNEY | Australia's Global University

Built Environment

PLAN2007
City Building: Transport & Infrastructure

Richard Shepherd



3+ Abbreviated Course Outline – T1

Disclaimer

This abbreviated course outline is indicative of the outcomes, delivery and assessment. While Course Learning Outcomes will remain constant, other details may be subject to change. The full and most accurate course outline will be available in Moodle.

1. COURSE STAFF

Course Convenor	Assoc. Prof. Hoon Han
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2. COURSE DETAILS

Credit Points: 6 UoC

Learning Activity	Hours per week
Lecture	3
Computer Lab	2

Description

The nexus between transport and land use planning has been a longstanding focus of interest for city planners, in terms of understanding patterns of mobility, determining the need for appropriate transport infrastructure ensuring planning frameworks optimise the benefits to both local communities and the wider city of transport and other infrastructure networks and future investment.

In recent years, interest in maximising the strategic synergies between infrastructure expenditure and urban growth, development and renewal has become increasingly framed by the notion of ‘city building’. The reassertion of strategic planning interests in the role that urban infrastructure projects play in ‘city building' are acting to reposition the role of the planner, and demand a range of skills that help tie these large financial (and political) commitments more coherently to considerations of city productivity, efficiency and equity.

This course introduces students to the centrality of transport and infrastructure considerations both within strategic and statutory contexts. The ongoing pipeline of major transport infrastructure projects in Australian cities offer an excellent lens through which to consider the increasingly integrative role planners play in key city shaping activities which have social, economic and environmental as much as mobility outcomes.

Program Learning Outcomes (PLOs)

The Program Learning Outcomes from Planning addressed in this course are:

1. Apply critical thinking skills and synthesise complex information in order to address multi-scalar challenges and perspectives shaping space and place
2. Demonstrate a rigorous and integrated understanding of concepts and principles of urban planning and their practical application
3. Demonstrate cultural awareness, environmental and social responsibility, and a respect for diversity
4. Demonstrate professional and ethical conduct and personal accountability consistent with the expectations of the planning profession and the community when engaged in planning roles and activities

Alignment of Course Learning Outcomes (CLOs), Program Learning Outcomes (PLOs), and Assessment

CLO #	CLO Statement	PLO #	Assessment(s)
CLO 1	Relate the important interactions between transport, land use and the urban environment and the role of infrastructure in these interactions.	1,2,3	1,2,3,4
CLO 2	Appreciate the complexity of infrastructure improvement, particularly through the lens of transport	1,2,3	1,2,3,4
CLO 3	Show a level of critical thinking in the field through exposure to various approaches to modelling and demonstrating transport problems and their application, and explore justifications and methods of delivering major infrastructure to address these problems	1,2,3	1,2,3,4
CLO 4	Appreciate the range of data and techniques that can be used for infrastructure analysis and justification, and of the various techniques for this analysis	1,2,3,4	1,2,3,4
CLO 5	Better appreciate the complexity of the urban transport task and delivery of major infrastructure within metropolitan Sydney	1,2,3,4	1,2,3,4

3. ASSESSMENT

Assessment task	Weight	CLOs Assessed	PLOs Assessed	Due Date
1. Tutorials	25%	1,2,3,4,5	1,2,3,4	Wednesdays in week after tutorial ends (variable)
2. Labs	15%	1,2,3,4,5	1,2,3,4	Friday Week 6
3. Individual assignment	25%	1,2,3,4,5	1,2,3,4	Friday Week 7
4. Group Assignment	35%	1,2,3,4,5	1,2,3,4	Friday Weeks 9 +10

<u>Assessment requirements:</u>

- Assignments will be structured to test the full range of student skills and theoretical concepts explored in this course, as well as practical skills required in the effective practice of planning.
- Students are expected to attend 100% of all scheduled classes. The learning, feedback and assessment descriptions that occur within classes are invaluable to student progress. Failure to attend scheduled classes often results in students missing the opportunity to develop the capabilities expected to be demonstrated within assignment work. A roll may be taken in some courses and it is your responsibility to ensure that your name and signature are recorded.
- In order to pass the course, students must gain a mark of at least 50% in the course overall.
- All assignments must be completed. Final results will not be issued until all components have been submitted.

Assessment criteria

You will be assessed on how well you meet the requirements for each component of each assessment task. Your assignments should be professional and meet the highest standards of written presentation, with minimal grammar, spelling or punctuation errors. Marking criteria include:

- **Minimum presentation requirements**: appropriate length; referencing and bibliography; layout.
- **Format**: clear structure and logical organisation of argument; writing quality; spelling and punctuation; inclusion of appropriate figures, tables and illustrations.
- **Problem and methodology**: clarity and conciseness of expression; strength/coherence of argument and explanation; use of relevant literature; use of supporting examples/case studies; ultimately answers the question(s) posed.
- **Intellectual contribution**: quality of critical thinking where required; treatment of theoretical-conceptual framework where appropriate.

Relationship between assessment and course learning outcomes

Assessment task content has been chosen not only to assess students' grasp of material presented in the course, but also to allow them to focus on particular areas of interest. The rationale of the tutorial sessions and assessments is to assess students' understanding of material covered in the lectures, and application to specific tasks. The individual assignment is a more detailed, reflective focus on a particular piece of city-building infrastructure.

The group assignment draws upon key strategic issues and challenges discussed in the lectures and applies them in the context of a transport planning example. Groups will be expected to apply their critical thinking skills.

Students will be encouraged to read extensively around the subject area to support material from lectures in the preparation of assignments.

4. WEEKLY COURSE SCHEDULE

Week	Learning Activity	Submissions	Related CLOs
1	- Introduction to Course & Lecturers - Assessment Outline - Transport Modes - History of Transport and City Building		1,2,3,4,5
2	- The role of modelling and manipulation of data - Modelling tasks from regions to infrastructure - Transport modelling use in Sydney	1	3,4
3	- Introduction to GIS - Role of GIS Labs - Introduction to transport/land use economics	1	1,2,3,4
4	- Interchange design and function - Public Transport infrastructure - The public transport experience	1	1,2,5
5	- Strategic frameworks - Justifying infrastructure provision - Concepts of service planning	1	1,2,5
6	- Origins of Transit Oriented Development - Key traits of TOD - The 5 Ds - TOD in Australia	2	3,4
7	- Infrastructure Optioneering and Evaluation - Role of infrastructure projects in shaping cities - City building and planning - Shaping Sydney – the role of infrastructure	3	1,2,3,4,5
8	- Freight infrastructure - Planning for freight - The changing role of the customer - Planning for the customer		1,2,3,4,5
9	- Urban sustainability & transport - Funding projects - Delivering projects - Economic realisation of transport benefits - Integrating local development and transport modes - Economic development and land use in Sydney	4	1,2,3,4,5
10	- Regional transport & infrastructure planning - Future modes and planning challenges - Assessment 4: Student presentations - Course conclusion	4	1,2,3,4,5