

CIVL 4010 TRANSPORTATION ENGINEERING

Credit Points 10

Legacy Code 300982

Coordinator Dharma Hagare ([https://directory.westernsydney.edu.au/search/name/Dharma Hagare/](https://directory.westernsydney.edu.au/search/name/Dharma%20Hagare/))

Description This unit provides students with the course material that will assist them with the execution of Civil Engineering Construction and Urban Development / Town Planning projects. The unit mainly focuses on the planning, design and construction of transportation facilities for urban and rural areas. Students will have an opportunity to implement the skills learnt using a case of a subdivision development.

School Eng, Design & Built Env

Discipline Transport Engineering

Student Contribution Band HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 4 subject

Pre-requisite(s) CIVL 1001 AND
ENGR 2016 AND
EART 4001

Incompatible Subjects CIVL 2005 - Infrastructure Engineering

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Apply principles involved in the design, construction and maintenance of both small and large transportation networks comprising of both roadways and railway tracks.
2. Analyse and design transportation hubs and intersections for allowing efficient traffic flow.
3. Analyse sustainable transport systems and facilities for both rural and urban areas.
4. Apply available design tools and guidelines for transportation network design.
5. Create and contribute to productive and efficient teams for designing and evaluating efficient transportation systems.

Subject Content

1. Transportation planning and major networks design.
2. Traffic theory and intersections design.
3. Road network design for residential area.
4. Estimation of design traffic loads.
5. Design of carriageways, pavements and associated drainage facilities.
6. Application of design principles for the design of a subdivision.
7. Design and maintenance of railway tracks.
8. Sustainability of transportation systems and facilities, and their evaluation.
9. Use of relevant design and drawing software.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are

regularly updated, where there is a difference your Learning Guide takes precedence.

Item	Length	Percent	Threshold	Individual/ Group Task
Tutorial and quiz participation.	Weekly	10	N	Individual
Major Project (2 reports)	15,000 words equivalent for the entire group of 4 members. The report will include drawings, calculation sheets, tables and figures. Actual write-up can be about 25%.	30	N	Group
Final exam	3 hours	60	N	Individual

Teaching Periods