

# CIVL 7008 ADVANCED WASTE MANAGEMENT

**Credit Points** 10

**Legacy Code** 301017

**Coordinator** Zuhaib Siddiqui ([https://directory.westernsydney.edu.au/search/name/Zuhaib Siddiqui/](https://directory.westernsydney.edu.au/search/name/Zuhaib%20Siddiqui/))

**Description** This subject covers sources, identification and characterisation of solid and hazardous waste generated from the community. Sustainable management of waste incorporating minimisation, recycle, recovery and disposable options is discussed. Also, atmospheric pollutants and their control, greenhouse gases and their impact on climate change are examined.

**School** Eng, Design & Built Env

**Discipline** Water and Sanitary Engineering

**Student Contribution Band** HECS Band 2 10cp

Check your fees via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Postgraduate Coursework Level 7 subject

## Restrictions

Students must be enrolled in a postgraduate program

## Learning Outcomes

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

1. Evaluate the technologies available for controlling the major atmospheric pollutants.
2. Systematically evaluate the drivers for climate change and discuss their impact at global level.
3. Classify the solid and hazardous waste produced and analyse its transportation and disposal options.
4. Apply risk assessment principles to manage hazardous waste in a sustainable way.
5. Apply advanced tools such as, life cycle analysis, to locate and design landfill sites for both urban and rural areas.
6. Assess waste disposal options, and recovery and recycling of materials in terms of triple bottom line objectives.

## Subject Content

1. Solid and hazardous waste classification, transportation and processing.
2. Treatment and disposal options for solid and hazardous waste.
3. Risk assessment and management as applied to hazardous waste.
4. Landfill site location and design, and its sustainable management.
5. Contaminant transport and accumulation.
6. Waste disposal options and recovery and recycling of materials, and their assessment against triple bottom line criteria.
7. Atmospheric pollutants and their control.
8. Climate change and its mitigation.

## 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.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Participation	1 hour per quiz	15	N	Individual	N
Report	4,000 words including tables, figures and pictures	30	N	Group	N
Report	2,000 words including figures, tables and pictures	5	N	Group	N
Final Exam	3 hours	50	N	Individual	N

Teaching Periods

## Autumn (2025)

### Parramatta City - Macquarie St

#### On-site

**Subject Contact** Zuhaib Siddiqui ([https://directory.westernsydney.edu.au/search/name/Zuhaib Siddiqui/](https://directory.westernsydney.edu.au/search/name/Zuhaib%20Siddiqui/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=CIVL7008\\_25-AUT\\_PC\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL7008_25-AUT_PC_1#subjects))