CIVL 4011 WASTE MANAGEMENT

Credit Points 10

Legacy Code 300994

Coordinator Dharma Hagare (https://directory.westernsydney.edu.au/search/name/Dharma Hagare/)

Description Sustainable waste management, to reduce climate impact, is an important consideration for any student who is getting trained as an engineer. In this subject students will identify and characterise sources of atmospheric, solid and hazardous waste generated from the community. Students will then focus on sustainable management of waste incorporating minimisation, recycle, recovery and disposable options as well as greenhouse gases and their impact on climate change.

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/) page.

Level Undergraduate Level 4 subject

Pre-requisite(s) CIVL 2002

Learning Outcomes

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

1. Identify the major atmospheric pollutants and the technologies available for their control.
2. Examine 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. Use sound engineering principles 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, reuse/ recovery 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	5,000 words including figures, tables and pictures	30	N	Group	N
Report	1,000 words including tables, figures and pictures	5	N	Group	N
Final Exam	3 hours	50	N	Individual	N

Teaching Periods

Sydney City Campus - Term 2 (2024)

Sydney City

On-site

Subject Contact Eileen An (https://directory.westernsydney.edu.au/search/name/Eileen An/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=CIVL4011_24-SC2_SC_1#subjects)

Sydney City Campus - Term 1 (2025)

Sydney City

On-site

Subject Contact Eileen An (https://directory.westernsydney.edu.au/search/name/Eileen An/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL4011_25-SC1_SC_1#subjects)

Sydney City Campus - Term 3 (2025)

Sydney City

On-site

Subject Contact Eileen An (https://directory.westernsydney.edu.au/search/name/Eileen An/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL4011_25-SC3_SC_1#subjects)