



School of Civil and Environmental Engineering

Term 2, 2021

CVEN4104

OBJECTIVES

The objectives of this course are to:

- Introduce the history and drivers of sustainability in construction, as well as sustainability policies, programs, and incentives in Australia
- Teach how to use life cycle assessment tools to quantify sustainability for decision making
- Introduce major green rating schemes in Australia
- Provide insight into the sustainable construction design, materials and energy solutions with lower environmental impacts as well as the circular economy in construction
- Demonstrate high-impact case studies of practising sustainability and circular economy in construction

List of programme attributes:

- An in-depth engagement with the relevant disciplinary knowledge in its interdisciplinary context
- Capacity for analytical and critical thinking and creative problem solving
- Ability to engage independent and reflective learning
- Skills for collaborative and multi-disciplinary work
- Respect for ethical practice and social responsibility
- Skills for effective communication

TEACHING STRATEGIES

Private Study	<ul style="list-style-type: none">• Review lecture material and textbook• Do set problems and assignments• Join Moodle discussions of problems• Reflect on class problems and assignments• Download materials from Moodle• Keep up with notices and find out marks via Moodle
Lectures	<ul style="list-style-type: none">• Find out what you must learn• See methods that are not in the textbook• Follow worked examples• Hear announcements on course changes
Workshops	<ul style="list-style-type: none">• Be guided by Demonstrators• Practice solving set problems• Ask questions
Assessments	<ul style="list-style-type: none">• Demonstrate your knowledge and skills• Demonstrate higher understanding and problem solving
Assignment	<ul style="list-style-type: none">• Practising the knowledge for sustainability assessment and decision making in groups

EXPECTED LEARNING OUTCOMES

ASSESSMENT OVERVIEW

Item	Length	Weighting	Learning outcomes assessed	Assessment Criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
1. Quiz	10 multiple choices	10%	LO1, part of LO2	The quiz covers the lecture contents of Week 1, 2 and 3 (inclusive).	Week 4	N/A	Week 4

RELEVANT RESOURCES

- **Book:** Life Cycle Assessment: Theory and Practice (2018) by Hauschild, Michael, Rosenbaum, Ralph K., Olsen, Stig. (ebook is available in UNSW library)
- **Book:** Sustainable Buildings and Infrastructure: Paths to the Future by Annie R. Pearce , Yong Han Ahn, and HanmiGlobal Co Ltd (ebook is available in UNSW library)
- Recommended websites in the lecture contents.

DATES TO NOTE

Refer to MyUNSW for Important Dates available at:

<https://student.unsw.edu.au/dates>

PLAGIARISM

Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

Plagiarism is the use of another person's work or ideas as if they were your own. When it is necessary or desirable to use other people's material you should adequately acknowledge whose words or ideas they are and where you found them (giving the complete reference details, including page number(s)). The Learning Centre provides further information on what constitutes Plagiarism at:

<https://student.unsw.edu.au/plagiarism>

ACADEMIC ADVICE

For information about:

- Notes on assessments and plagiarism;
- Special Considerations: student.unsw.edu.au/special-consideration;

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
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PE1: Knowledge