ENGR 3025 DESIGNING FOR CIRCULAR ECONOMY (ADVANCED)

Credit Points 10

Legacy Code 301293

Coordinator Toktam Bashirzadeh Tabrizi (https://directory.westernsydney.edu.au/search/name/Toktam Bashirzadeh Tabrizi/)

Description Students examine their local circular economy and the United Nations Sustainable Development Goals 2030 (UNSDG) principles as they apply to designing a sustainable future with Circularity for extended product life cycle, reuse, remanufacture, value up-cycling, production, and waste resource management. Students work on an industry-based, real-world, socio-technical, environmental challenge project in collaboration with community and industry partners. The project is based in the local Western Sydney region and students propose design solutions that are scalable and relatable in diverse contexts. Students will be able to apply their awareness of the sustainability requirements within the community and industry to their future career activities, by creating new value, and new green employment opportunities with a sustainability skills approach.

School Eng, Design & Built Env

Discipline Other Engineering And Related Technologies

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 3 subject

Equivalent Subjects ENGR 2021 Sustainable Design Sustainable Futures

Restrictions

Students must have completed 100 credit points

Assumed Knowledge

Sufficient practical knowledge and skills in sustainable design and/or materials related life cycle is desirable.

Learning Outcomes

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

1. Examine the literature in relation Circular Economy approaches
2. Investigate contextual challenge to find promising problems
3. Formulate a solution using Circular Economy (CE) principles that references select United Nations Sustainable Development Goals 2030
4. Apply circular design principles into a professional practice technical workflow
5. Reflect upon own knowledge development in addressing solutions contributing innovation
6. Communicate in a clear, convincing and ethical manner concepts and designs to diverse stakeholders in a range of formats.
7. Report on the synthesis of CE principles in the solution development and final design.

Subject Content

1. Circularity principles
2. Authentic case studies from previous industry projects
3. Working through a Circular design brief
4. Introduce circularity into industry and integration to transdisciplinary professional practice
5. Developing a sustainable Circular design proposal

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
Portfolio	1000 words	20	N	Individual	Y
Applied Project	1000 words, 3 x draft visual concepts, Presentatio (2 minutes)	30	N	Individual	Y
Report	1250 words, 1 x final contextual visual concept, Presentation (3 minutes)	50	N	Individual	N

Teaching Periods

Spring (2025)

Parramatta City - Macquarie St

On-site

Subject Contact Toktam Bashirzadeh Tabrizi (https://directory.westernsydney.edu.au/search/name/Toktam Bashirzadeh Tabrizi/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ENGR3025_25-SPR_PC_1#subjects)