

ENGR 1046 HUMAN CENTRED DESIGN RESEARCH METHODS

Credit Points 10

Legacy Code 301280

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

Description This subject introduces Human-Centred Design (HCD) to students as an interactive practice that puts people's views, behaviour, and their environment at the centre of problem-solving, design and innovation processes. Students will work on an applied research project that allows them to observe, experiment, gain feedback from participants, and think critically through co-designing to propose new interpretations and solutions for our changing built environment, design artefacts and social habits. In alignment with the United Nations Sustainability Development Goals (UNSDG), this subject's research methods cover professional skills on ethics, academic literacy, design and research iteration processes, interdisciplinary team approaches, and sustainability. Students will be presented with opportunities to interact with industry and community experts to enhance their understandings and make potential career connections.

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 1 subject

Equivalent Subjects LGYA 5705 - Introduction to Professional Practice ENGR 1015 - Engineering Industrial Design Practice ENGR 1016 - Engineering Design Construction Practice ENGR 1033 - Engineering Design Construction Practice LGYB 0482 - Engineering Design Construction Practice ENGR 1027 - Introduction to Industrial Design methods

Learning Outcomes

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

1. Communicate findings with a range of multi-modal means (e.g., verbal, writing, video, portfolio, presentations, online collaborative tools) based on academic literacy expectation and ethical and professional standards of human-centred design (HCD)
2. Apply research to analyse existing products, built environment, user need, standards, and systems viability using HCD research methods and design, digital and visual literacy skills
3. Evaluate HCD problems individually and in groups while aligning to United Nations Sustainable Development Goals (UNSDGs)
4. Produce design solutions using design research suitable for use that demonstrate HCD and design process knowledge by practice through design research, prototyping, testing and iterations

Subject Content

- People and context
- Design and visual literacy and the research process
- Critical thinking

- Design methodology
- Problem-solving
- Design Innovation
- Professional responsibility and ethics
- Academic literacy
- Teamwork
- Professional communication skills: written, visual and verbal presentations
- Design actions responding to principles of United Nations Sustainable Development Goals (UNSDGs)

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
Log/ Workbook	500 words supported by portfolio	10	N	Individual	Y
Essay	1200 words supported by portfolio	20	N	Group	Y
Applied Project	800 Words supported by portfolio	20	N	Individual	Y
Portfolio	Presentation (7 minutes) supported by Portfolio	10	N	Group	Y
Portfolio	Presentation (7 minutes) plus Portfolio	40	N	Individual	Y

Teaching Periods

Autumn (2025)

Parramatta City - Macquarie St

On-site

Subject Contact Mauricio Novoa ([https://directory.westernsydney.edu.au/search/name/Mauricio Novoa/](https://directory.westernsydney.edu.au/search/name/Mauricio%20Novoa/))

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ENGR1046_25-AUT_PC_1#subjects)