

ENGR 1040 DESIGNING FOR PEOPLE: APPLIED ERGONOMICS

Credit Points 10

Legacy Code 301286

Coordinator Jean Payette (<https://directory.westernsydney.edu.au/search/name/Jean Payette/>)

Description Ergonomics is the study of the interaction between people, their environments, and their objects. A sound understanding of the principles of ergonomics allows a designer to develop products, systems and environments with optimum product usability and end user safety. In this unit, students are introduced to modelling workshop procedures and undertake their own ergonomic study. Students then build and test a hand-held scale product, and integrate user feedback into their redesign.

School Eng, Design & Built Env

Discipline Other Engineering And Related Technologies

Student Contribution Band HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 1 subject

Learning Outcomes

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

1. Apply ergonomics theory and methods to conduct, document and interpret ergonomics research.
2. Analyse the ergonomics of an existing hand-held consumer product.
3. Redesign a hand-held consumer product with reference to ergonomics theory and practical research.
4. Generate basic plan drawings for 1:1 scale Usability Model.
5. Apply modelling techniques to produce a 1:1 scale model to demonstrate product functions and to test product usability.
6. Locate and comply with relevant Australian product safety standards.

Subject Content

- Ergonomics principles and guidelines
- Usability testing
- Anthropometrics measurements
- Safety issues in the workshop ? induction
- Visual systems
- Ergonomics of lighting
- Visual and Auditory display
- Information / Control display
- Inclusive Design
- Research methods

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
Applied Project	Ergonomics analysis report: 1,250 words (20%); Design brief: 1,000 words (10%)	30	N	Individual
Applied Project	3 x A2 Concept renderings (Photoshop & Illustrator)	20	N	Individual
Applied Project	Report: 1,000 words (Redesign report 15%, testing report 15%); Working model 1:1 (20%)	50	N	Individual

Teaching Periods

Spring (2022)

Parramatta - Victoria Rd

Day

Subject Contact Jean Payette (<https://directory.westernsydney.edu.au/search/name/Jean Payette/>)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=ENGR1040_22-SPR_PS_D#subjects)

Spring (2023)

Parramatta City - Macquarie St

On-site

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View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ENGR1040_23-SPR_PC_1#subjects)