

ENGR 1026 INTRODUCTION TO ENGINEERING PRACTICE (WSTC)

Credit Points 10

Legacy Code 700148

Coordinator Buddhima De Silva ([https://directory.westernsydney.edu.au/search/name/Buddhima De Silva/](https://directory.westernsydney.edu.au/search/name/Buddhima%20De%20Silva/))

Description This subject encourages students to explore the professional responsibilities and challenges faced by Engineers. Students are introduced to emerging issues and approaches in the engineering profession, with particular attention given to using a systems approach to solve engineering problems. Students engage in a term-long research and problem solving task that addresses technical, environmental and social sustainability imperatives and fosters fundamental research, communication skills. Special emphasis is placed on lifelong learning, academic literacy and professional skills including information literacy, project management, engineering drawing and teamwork which equip students for subsequent academic and professional pursuits.

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

Equivalent Subjects ENGR 1016 Engineering Design and Construction Practice ENGR 1024 Introduction to Engineering Practice ENGR 1033 Engineering Design and Construction Practice LGYB 0482 Engineering Design and Construction Practice ENGR 1025 Introduction to Engineering Practice

Restrictions

Students must be enrolled at Western Sydney University, The College. Students enrolled in Extended Diplomas must pass 40 credit points from the preparatory subjects listed in the program structure prior to enrolling in this University level subject. Students enrolled in the combined Diploma/Bachelor programs listed below must pass all College Preparatory subjects listed in the program structure before progressing to the Year 2 subjects.

Learning Outcomes

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

1. Solve an engineering problem using systems approach.
2. Identify and reflect upon the professional responsibilities of the Engineer.
3. Deploy information literacy skills to investigate a complex problem context, alternate approaches and possible solutions.
4. Deploy academic standard literacy skills including academic writing, argument construction and referencing.
5. Communicate research and solutions clearly and professionally in visual and verbal presentations and an illustrated report.

6. Plan, manage, actively contribute to and assess a team based project.
7. Identify and apply environmentally and socially sustainable design criteria to a complex problem.
8. Produce and read an engineering drawing representing simple structures, landscapes and electric circuit.

Subject Content

1. Sustainability
2. Complex systems
3. Innovation
4. Problem-solving
5. Professional responsibility
6. Information literacy and the research process
7. Critical thinking
8. Academic literacy
9. Teamwork
10. Time and project management
11. Professional communication skills: written, visual and verbal presentations
12. Systems approach
13. Engineering drawing
1. Sustainability
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7. Critical thinking
8. Academic literacy
9. Teamwork
10. Time and project management
11. Professional communication skills: written, visual and verbal presentations
12. Systems approach
13. Engineering drawing

Special Requirements

Essential equipment

Access to an engineering drawing software.

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.

| Item | Length | Percent | Threshold | Individual/ Group Task |
|-----------------|---|---------|-----------|---------------------------|
| Report | Approx. 1000 words | 30 | N | Individual |
| Proposal | 15 min per group | 20 | N | Individual |
| Applied Project | Approx. 3000 words report for a group of 4-6 students + 15 min presentation per group | 40 | N | Individual |
| Reflection | 500 words | 10 | N | Individual |

Prescribed Texts

- None

Teaching Periods

Term 1

Penrith (Kingswood)

Day

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View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=ENGR1026_22-T1_KW_D#subjects)

Parramatta City - George St

Day

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Term 2

Penrith (Kingswood)

Day

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Parramatta City - George St

Day

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Term 3

Parramatta City - George St

Evening

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