

ENGG1500

Introduction to Professional Engineering

< <https://www.newcastle.edu.au/course/ENGG1500> >

Course handbook

Description



This course is the first in a series of professional practice courses that introduces students to professional skills that are integral to an engineering workplace. The focus of all the courses is on integrating professional skills with technical skills. The courses also incorporate academic survival skills and support, particularly in first year. The course content is delivered by subject specialists and then students are asked to apply their theoretical learning to engineering-based assessments. This first year professional practice course explores a number of large-scale issues that are increasingly becoming the focus of engineering across the globe. Adding to this macro picture is a more micro examination of the day to day life of an engineer. The aim of exploring both the macro and micro perspectives is for students to not only gain a realistic picture of what to expect in their future career, but also an understanding of the myriad ways engineers can be part of the solution for some of the issues the world is currently facing. The course also focuses on developing underpinning skills such as practical problem solving, report writing, oral presentation skills, teamwork and W&HS that students will need in all years of their program. Students participate in a project of their choosing from provided options. Through the project, they demonstrate teamwork and other core skills. Each student is required to present a reflective learning journal as part of their assessment.

Availability

[2024 Course Timetables >](#)

Singapore BCA

• Semester 1 - 2024

Callaghan

• Semester 1 - 2024

Singapore PSB

• Trimester 3 - 2024 (Singapore)

Learning outcomes



On successful completion of the course students will be able to:

1. Create a tangible engineering solution to a set problem
2. Identify and discuss large and small scale engineering issues in the context of their engineering studies

3. Identify the value and legal requirements of WHS by participating in WHS briefings and inductions and demonstrating safe workshop practice
 4. Construct written and oral communications in an accepted professional format
 5. Identify team roles and work in teams to meet a specified purpose
 6. Utilise reflective tools to evaluate their own learning needs
 7. Manage time as a resource and provide on-time deliverables in-line with industry-authentic client expectations
 8. Experience working in environments with a structure and level of guidance representative of emerging industry
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Content

The course will introduce students to the engineering process by following a practical project through from start to finish. This will involve but not be limited to:

- Problem definition and scoping
- Research
- Design thinking
- Problem solving
- Making valid assumptions in engineering
- Engineering on both a large and small scale
- Design
- Testing and evaluation
- Communication (both written and oral)
- Working in teams
- Resource management
- Reflection as a learning tool

The project will be supported by additional material delivered in lectures and tutorials to reinforce the above concepts. The students will also be exposed to other aspects of professional engineering including:

- Industry speakers
 - Employability
 - Legal requirements
 - Workplace health and safety
 - International and indigenous topics
 - Innovation and entrepreneurship
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Requisite



Course Replacement:

You cannot enrol if you have successfully completed any of the following course(s):

GENG1803

Assessment items



Quiz: Self Assessment

Report: Preliminary Design

Quiz: Peer Review of Reports

Presentation: Progress Reporting

Project: Project Testing

Report: Final Report

Report: Reflective Learning

Contact hours



Semester 1 - 2024 - Singapore BCA

Lecture-1

- Online 2 hour(s) per week(s) for 13 week(s) starting in week 1
- As pre-recorded online lectures.

Online Activity-1

- Online 2 hour(s) per week(s) for 13 week(s) starting in week 1
- As a timetabled live online recap and Q & A session.

Tutorial-1

- Face to Face On Campus 2 hour(s) per week(s) for 13 week(s) starting in week 1

Semester 1 - 2024 - Callaghan

Lecture-1

- Online 2 hour(s) per week(s) for 13 week(s) starting in week 1
- As pre-recorded online lectures.

Online Activity-1

- Online 2 hour(s) per week(s) for 13 week(s) starting in week 1
- As a timetabled live online recap and Q & A session.

Tutorial-1

- Face to Face On Campus 2 hour(s) per week(s) for 13 week(s) starting in week 1
- Students can only enrol in tutorials associated with their program. Please check the timetable for appropriate days and times.***See compulsory requirement section for details.
- Compulsory Requirement: Students must attend 80% of sessions.

Trimester 3 - 2024 (Singapore) - Singapore PSB

Lecture-1

- Online 2 hour(s) per week(s) for 13 week(s) starting in week 1
- As pre-recorded online lectures.

Online Activity-1

- Online 2 hour(s) per week(s) for 13 week(s) starting in week 1
- As a timetabled live online recap and Q & A session.

Tutorial-1

- Face to Face On Campus 2 hour(s) per week(s) for 13 week(s) starting in week 1

Course outline



Course outline not yet available.

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The University of Newcastle acknowledges the traditional custodians of the lands within our footprint areas: Awabakal, Darkinjung, Biripai, Worimi, Wonnarua, and Eora Nations. We also pay respect to the wisdom of our Elders past and present.