ENGG1000

Introduction to Engineering

Session 1, Weekday attendance, North Ryde 2021

School of Engineering

Contents

Disclaimer

Notice

As part of Phase 3 of our return to campus plan, most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to timetable viewer. To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff
Convenor
Nicholas Tse
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50 Waterloo Road
Appointment via Email

Rex Di Bona
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Credit points
10

Prerequisites

Corequisites

Co-badged status

Unit description
The 1st SPINE unit aimed to develop professional, transferable and employability skills. The unit has two objectives; 1) to develop the required self-management skills to be successful in the field of engineering. this includes time management skills, professional behaviour, empathy and metacognitive skills. 2) to develop related and transferable hands-on prototyping skills through a serious of workshops. In the process, students will be able to contextualise their learning and develop basic fundamental prototyping skills required for them to be involved in a team-based project by the subsequent SPINE unit.

The SPINE units are serious of scaffolded units across the engineering curriculum that aims to develop self-agency and self-efficacy that will help you transition into University study.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Demonstrate practical skills in prototyping engineering designs.

ULO2: Follow safe working procedures when working with others.

ULO3: Apply strategies and tools to organise and conduct knowledge discovery independently.

ULO4: Work and interact in accordance to the code of ethics and guidelines of engineering accreditation organisations.

ULO5: Articulate independent thinking and effectively communicate ideas and concepts.

General Assessment Information

Grading and passing requirement for unit

In order to pass this unit, a student must obtain a mark of 50 or more for the unit (i.e. obtain a passing grade P/ CR/ D/ HD).

For further details about grading, please refer below in the policies and procedures section.

Hurdle Requirements

"You must attend and participate in at least 8 of the 10 hands-on skills development workshop classes to pass this unit. This is a hurdle requirement.

Prototyping Skill Development

There are multiple options of the skills development activities, however once assigned, the student must remain with that activity and should not be changed to another mid way through the 5-week block. A list of competencies checklist will be marked off either from ongoing weekly activities or via the submitted 'proof of work'. These submittable are due as per the skills activities and may slightly vary between each skills development activities. All details will listed on iLearn.

Assessment Tasks

Name	Weighting	Hurdle	Due
Weekly Quiz	30%	No	Week 3,5,7,9,11,13
Prototyping skill development 1	20%	No	Week 6
Participation of scheduled activities	10%	Yes	Weekly
Prototyping skill development 2	20%	No	Week 13
Professional portfolio on professional development	20%	No	Week 13

Weekly Quiz

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 10 hours
Due: **Week 3,5,7,9,11,13**
Weighting: **30%**

Weekly Quiz on audio podcasts and other professional development topics

On successful completion you will be able to:

- Follow safe working procedures when working with others.
- Apply strategies and tools to organise and conduct knowledge discovery independently.
- Articulate independent thinking and effectively communicate ideas and concepts.

Prototyping skill development 1

Assessment Type [1]: Design Implementation
Indicative Time on Task [2]: 5 hours
Due: **Week 6**
Weighting: **20%**

Developing the required hands-on competency relating to a chosen engineering field. The hands-on skill development will be translatable across other engineering domains. The skills will be chosen based on a preference selection during week 1. The availability of the skills will be dependent on whether students choose to engage in face-to-face mode or via online medium. Some skills are only available in face-to-face mode.

Example of cross-disciplinary hands-on skills: Technical drawing skill is an underpinning skill in both mechanical and civil engineering design communication.

On successful completion you will be able to:

- Demonstrate practical skills in prototyping engineering designs.
- Follow safe working procedures when working with others.
- Articulate independent thinking and effectively communicate ideas and concepts.

Participation of scheduled activities

Assessment Type [1]: Participatory task
Indicative Time on Task [2]: 15 hours

Due: **Weekly**
Weighting: **10%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Engagment of scheduled activties which includes workshop attendence, mentorship program etc. More information will be provided on iLearn.

On successful completion you will be able to:

- Demonstrate practical skills in prototyping engineering designs.
- Work and interact in accordance to the code of ethics and guidelines of engineering accreditation organisations.

Prototyping skill development 2

Assessment Type [1]: Design Implementation
Indicative Time on Task [2]: 5 hours
Due: **Week 13**
Weighting: **20%**

This is the 2nd skill development activity. Similar to the 1st skill development, it emphases on the hands prototyping skill required in any engineering field. The skill allocation will be assigned in week 1 as well.

The iterative exposure to new skills development is also to develop the required metacognitive skills in being successful with embarking with new knowledge fields. To put it simply is learning to learn.

On successful completion you will be able to:

- Demonstrate practical skills in prototyping engineering designs.
- Follow safe working procedures when working with others.
- Articulate independent thinking and effectively communicate ideas and concepts.

Professional portfolio on professional development

Assessment Type [1]: Portfolio
Indicative Time on Task [2]: 20 hours
Due: **Week 13**
Weighting: **20%**

Curate a professional portfolio that demonstrates the development of professional identity, self-improvement and learning artifacts.

On successful completion you will be able to:

- Work and interact in accordance to the code of ethics and guidelines of engineering accreditation organisations.
- Articulate independent thinking and effectively communicate ideas and concepts.

[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Required resources can either be purchase or loan. Refer to iLearn for more information.

Unit Schedule

Refer to iLearn and lecture notes for the unit schedule.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/su

pport/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- Getting help with your assignment
- Workshops
- StudyWise
- Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.