



## UNSW Course Outline

# CEIC1000 Sustainable Product Engineering and Design - 2024

Published on the 25 Aug 2024

## General Course Information

**Course Code :** CEIC1000

**Year :** 2024

**Term :** Term 3

**Teaching Period :** T3

**Is a multi-term course? :** No

**Faculty :** Faculty of Engineering

**Academic Unit :** School of Chemical Engineering

**Delivery Mode :** In Person

**Delivery Format :** Standard

**Delivery Location :** Kensington

**Campus :** Sydney

**Study Level :** Undergraduate

**Units of Credit :** 6

### Useful Links

[Handbook Class Timetable](#)

## Course Details & Outcomes

### Course Description

This course covers introductory level scientific and engineering design concepts including sustainable development, and product and processing line management with an emphasis on sustainable manufacturing as the core theme throughout the course. Students will be taught to

determine material and energy inputs and outputs for production as well as use of flowsheets and other graphical representations. Issues with respect to the sustainability, safety, engineering profession and careers are introduced, Laboratory, Pilot Plant or Industry visits (where appropriate) will be incorporated into the course to reinforce understanding of the manufacturing process. Students will also gain skills in information literacy via accessing and analysing sources of engineering and chemistry related information.

## Course Aims

In the global village of the current era, development impacts our world in such a way that we can easily deplete resources. If we want to secure a future for our children on this planet, we need to develop principles of sustainable development. Sustainability is no longer an adjunct, added after the product has been designed, but must now affect the design principles.

This course is designed to give you an introductory background to the disciplines and professions the process industries need for sustainable development, with a focus on Chemical and Food products and processes. The course may include guest lectures presented by industrial speakers from different areas, whom you will be able to question about products, processes, sustainability, and the careers of working professionals. It will give you a feel for the breadth and depth of the industry and the many different types of jobs available for graduates. You will learn about the various aspects that need to be considered in designing a product or process on a large scale in a changing global environment. The course will provide an opportunity to strengthen your technical communication skills, arguably the most important skill set you can have for any profession. Also key to any professional is information literacy, and this course will provide you with a number of tools that you will utilize throughout your degree and your career.

## Course Learning Outcomes

Course Learning Outcomes
CLO1 : Describe what is involved in the chemical and food processing industries
CLO2 : Discuss major manufacturing processes and their relation to sustainability.
CLO3 : Evaluate and describe different methods for determining the viability of a process or product.
CLO4 : Contribute effectively in a team environment.
CLO5 : Develop enhanced communication skills for a technical audience using conventions of the profession.
CLO6 : Research and use appropriate resources effectively to find further information on technical subjects.

Course Learning Outcomes	Assessment Item
CLO1 : Describe what is involved in the chemical and food processing industries	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Peer Evaluation</li> </ul>
CLO2 : Discuss major manufacturing processes and their relation to sustainability.	<ul style="list-style-type: none"> <li>• Group Project</li> </ul>
CLO3 : Evaluate and describe different methods for determining the viability of a process or product.	<ul style="list-style-type: none"> <li>• Class participation</li> <li>• Group Project</li> </ul>
CLO4 : Contribute effectively in a team environment.	<ul style="list-style-type: none"> <li>• Peer Evaluation</li> <li>• Class participation</li> <li>• Group Project</li> </ul>
CLO5 : Develop enhanced communication skills for a technical audience using conventions of the profession.	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Group Project</li> </ul>
CLO6 : Research and use appropriate resources effectively to find further information on technical subjects.	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Group Project</li> </ul>

## Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams | Echo 360

### Learning and Teaching in this course

CEIC1000 employs student-centred learning as the basis for its instructional design and emphasises the importance of active learning. The teaching in this course is based on a blended classroom philosophy conducted in an online and face-to-face formal activities (as appropriate). The classes are designed to be supportive and friendly, and include meaningful realistic learning and assessment tasks, as well as promote independent and collaborative study and enquiry. Teaching strategies used during the course will include: two key lecture series running in parallel (technical and professional skills) to equip students with content which is aligned to their class assessments. The course 6 units of credit (UoC) which means you shoudl expect to commit 150 hours to the course across the term. This time includes your engagement with the content, teaching and learning actvities and assessment tasks. There are 4 hours of formal contact per week and in some weeks pre and/or post class work weekly. There is NO final exam. Therefore means that there are many assessments which are linked to weekly activity(ies) and the central project-based activity. We will step you through the course weekly.

# Other Professional Outcomes

## Engineers Australia, Professional Engineer Stage 1 Competencies

This course contributes to your development of the following EA Professional Engineer competencies:

- PE1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline
- PE1.4 Discernment of knowledge development and research directions within the engineering discipline
- PE1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline
- PE1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline
- PE2.2 Fluent application of engineering techniques, tools and resources
- PE2.3 Application of systematic engineering synthesis and design processes
- PE3.2 Effective oral and written communication in professional and lay domains
- PE3.4 Professional use and management of information
- PE3.6 Effective team membership and team leadership

<https://www.unsw.edu.au/engineering/student-life/student-resources/program-design>

# Assessments

## Assessment Structure

Assessment Item	Weight	Relevant Dates
Quizzes Assessment Format: Individual Short Extension: Yes (5 days)	15%	Start Date: Not Applicable Due Date: Week 2, Week 7, Week 10
Group Project Assessment Format: Group Short Extension: Yes (3 days)	55%	Start Date: Not Applicable Due Date: Week 3, Week 8, Week 10, Week 12
Peer Evaluation Assessment Format: Individual Short Extension: Yes (3 days)	15%	Start Date: Not Applicable Due Date: Week 4, Week 9, Week 12
Class participation Assessment Format: Individual Short Extension: Yes (3 days)	15%	Start Date: Not Applicable Due Date: Week 5, Week 10

# **Assessment Details**

## **Quizzes**

### Assessment Overview

Students will complete a series of online quizzes to provide regular feedback on their understanding of the course content.

### Course Learning Outcomes

- CLO1 : Describe what is involved in the chemical and food processing industries
- CLO5 : Develop enhanced communication skills for a technical audience using conventions of the profession.
- CLO6 : Research and use appropriate resources effectively to find further information on technical subjects.

### Detailed Assessment Description

There are 3 summative quizzes and the content will be based on preceding weeks content. All summative (actual) quizzes are found in Moodle and will open and close as per the schedule.

Quiz 1 (3%) - Week 2

Quiz 2 (7%) - Week 7

Quiz 3 (5%) - Week 10

### Assessment Length

See Moodle

### Assignment submission Turnitin type

This is not a Turnitin assignment

### Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see [here](#).

## **Group Project**

### Assessment Overview

This is a major group project involving evaluation of a particular existing process-product

combination, summary of problems, and identification of potential solutions to economic, social or environmental concerns. A scaffolded approach has been taken where the group project will use both lecture concepts and outside reading.

The project is designed to encourage your learning and assess your knowledge and ability of three crucial areas: your familiarity with the basics of the product and process engineering and design, your depth of knowledge of the fundamental concepts covered in the course, and your ability to integrate these concepts into problem-solving and to communicate relevant global issues in a clear and concise manner.

Even though it is a group project, individual components contribute significantly to your final mark for the project. These components include one or more of the following: assessment submissions, presentations, team evaluations and reflections.

#### **Course Learning Outcomes**

- CLO2 : Discuss major manufacturing processes and their relation to sustainability.
- CLO3 : Evaluate and describe different methods for determining the viability of a process or product.
- CLO4 : Contribute effectively in a team environment.
- CLO5 : Develop enhanced communication skills for a technical audience using conventions of the profession.
- CLO6 : Research and use appropriate resources effectively to find further information on technical subjects.

#### **Detailed Assessment Description**

Report marks will be moderated by team assessment of individual contributions to the submission. Also, there will be individual submissions within this group project. Details of the assessment and due dates will be available in Moodle (Project brief).

#### **Submission notes**

Submitted in Moodle

#### **Assignment submission Turnitin type**

Not Applicable

#### **Generative AI Permission Level**

#### **Planning/Design Assistance**

You are permitted to use generative AI tools, software or services to generate initial ideas, structures, or outlines. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e., what is generated by the tool, software or service

should not be a part of your final submission. You should keep copies of your iterations to show your Course Authority if there is any uncertainty about the originality of your work.

If your Convenor has concerns that your answer contains passages of AI-generated text or media that have not been sufficiently modified you may be asked to explain your work, but we recognise that you are permitted to use AI generated text and media as a starting point and some traces may remain. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see [here](#).

You will have the option to use Generative AI (GenAI) to help your team get started for concept generation and/or ideation for some parts of this assessment. However it is required you to change the GenAI output to such an extent that it is your own work. It is expected that you will acknowledge the use and demonstrate evidence of adaptation and provide citation as appropriate.

Please refer to project brief for further details.

## Peer Evaluation

### Assessment Overview

Peer evaluation is undertaken to ensure that students receive feedback about their contributions to group work and/or workshop activities. This assessment provides formative feedback at strategic intervals to encourage and develop students skills to collaborate with their group members. Students will be marked on the quality of the feedback using a rubric.

### Course Learning Outcomes

- CLO1 : Describe what is involved in the chemical and food processing industries
- CLO4 : Contribute effectively in a team environment.

### Detailed Assessment Description

Your Peer Evaluation marks will be based on the quality of the feedback to your peer on the group project.

Team Evaluation (TE) 1 (5%) - Week 4

Team Evaluation (TE) 2 (5%) - Week 9

Team Evaluation (TE) 3 (5%) - Week 12

### Assignment submission Turnitin type

This is not a Turnitin assignment

### Generative AI Permission Level

#### No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see [here](#).

## Class participation

### Assessment Overview

Students will participate in a range of activities with the class. This could include practical workshops, collaborative tasks, field trips and other industry related activities. Students will write reflections on their learning that will be assessed against a rubric. General feedback will be provided to the class, with comments and marks provided individually to students.

### Course Learning Outcomes

- CLO3 : Evaluate and describe different methods for determining the viability of a process or product.
- CLO4 : Contribute effectively in a team environment.

### Detailed Assessment Description

Class participation (CP) will involve students actively engaging in activities (for e.g. workshops, class activities) and submission of reflective writing (R) to gain 15% total course marks depending on the quality of the reflective writing submitted.

CP1 and R1 10% - Week 5

CP2 and R2 5% - Week 10

### Assessment Length

See Moodle

### Submission notes

Submitted in Moodle

### Assignment submission Turnitin type

This is not a Turnitin assignment

## Generative AI Permission Level

### Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.

If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see [here](#).

## General Assessment Information

### Grading Basis

Standard

## Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	Course & project intro, industry perspective on sustainable design
	Tutorial	Getting started on group project
Week 2 : 16 September - 22 September	Lecture	P1: Technical writing (includes problem statement, critical review, reflective writing, technical report structure, references)
	Tutorial	Rotation tutorial week 1: MakerSpace activity
Week 3 : 23 September - 29 September	Lecture	TL1: Engineering basics (Flow diagrams), Resource management - materials
	Tutorial	Rotation tutorial week 2: MakerSpace activity OR MEB 1
Week 4 : 30 September - 6 October	Lecture	P2: Working in Teams
	Tutorial	Rotation tutorial week 3: MakerSpace activity OR MEB 1
Week 5 : 7 October - 13 October	Lecture	TL2: Resource management - energy
	Tutorial	MEB II
Week 6 : 14 October - 20 October	Other	No formal classes this week. Virtual site tours is available for all students. In-person site tours (as permitted by industry).
Week 7 : 21 October - 27 October	Lecture	TL3: Resource management - waste
	Tutorial	Waste management tutorial
Week 8 : 28 October - 3 November	Lecture	P3: Presentation skills and the "Pitch" workshop
	Tutorial	Pitch & presentation tips
Week 9 : 4 November - 10 November	Lecture	P4: Professional identity
	Tutorial	Group project workshop (feedback and check-in)
Week 10 : 11 November - 17 November	Lecture	Course wrap & TL4: industry case studies
	Tutorial	Final Pitch presentation

# **Attendance Requirements**

Students are strongly encouraged to attend all classes and review lecture recordings.

## **General Schedule Information**

P1: Professional skills series, TL1: Technical Lecture series

Inspiring industry, research and alumni guests are key part of this course to expose students to possible career pathways and will be invited as relevant.

Also there will be optional site tours pending availability of manufacturing plants. However, there are virtual (VR) site tours available for this course to help students connect to industries that may be of interest.

## **Course Resources**

### **Prescribed Resources**

Dowling D and co. (2020). Engineering Your Future An Australasian Guide (4th Edition). Wiley.

### **Recommended Resources**

Trevelyan J (2020). Learning Engineering Practice. CRC Press.

## **Course Evaluation and Development**

Recent changes, based on student and teaching team feedback

2023 student feedback resulted in the following inclusions and/or minor modifications in this iteration:

- students enjoyed practice workshop activities. Additional hands-on workshop with sustainability concept in mind has been integrated.

2022 student feedback also resulted in the following inclusions and minor modifications in this next iteration:

- integration of guest speakers and plant tours (virtual and/or actual site tour) to support student learning and connection to "real" world
- continue with interactive class activities (workshops) where practically possible

# Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Sarah Grundy		SEB Level 4, Office 433	9385 4333	via Teams forum or email	No	Yes
Lecturer	Peter Wich		SEB Level 3, Office 321	9385 5664	Via Teams forum or email	No	No

## Other Useful Information

### Academic Information

#### I. Special consideration and supplementary assessment

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to, or within 3 working days of, submitting an assessment or sitting an exam.

Please note that UNSW has a Fit to Sit rule, which means that if you sit an exam, you are declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the information on UNSW's [Special Consideration page](#).

#### II. Administrative matters and links

All students are expected to read and be familiar with UNSW guidelines and polices. In particular, students should be familiar with the following:

- [Attendance](#)
- [UNSW Email Address](#)
- [Special Consideration](#)
- [Exams](#)
- [Approved Calculators](#)
- [Academic Honesty and Plagiarism](#)
- [Equitable Learning Services](#)

#### III. Equity and diversity

Those students who have a disability that requires some adjustment in their teaching or learning

environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equitable Learning Services. Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.

#### **IV. Professional Outcomes and Program Design**

Students are able to review the relevant professional outcomes and program designs for their streams by going to the following link: [https://www.unsw.edu.au/engineering/student-life/  
student-resources/program-design](https://www.unsw.edu.au/engineering/student-life/student-resources/program-design).

*Note: This course outline sets out the description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle or your primary learning management system (LMS) should be consulted for the up-to-date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline/Moodle/LMS, the description in the Course Outline/Moodle/LMS applies.*

#### **Academic Honesty and Plagiarism**

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism, visit: [student.unsw.edu.au/plagiarism](https://student.unsw.edu.au/plagiarism). The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis or contract cheating) even suspension from the university. The Student Misconduct Procedures are available here:

[www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf](http://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf)

## Submission of Assessment Tasks

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of five percent (5%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day. This is for all assessments where a penalty applies.

Work submitted after five days (120 hours) will not be accepted and a mark of zero will be awarded for that assessment item.

For some assessment items, a late penalty may not be appropriate. These will be clearly indicated in the course outline, and such assessments will receive a mark of zero if not completed by the specified date. Examples include:

- Weekly online tests or laboratory work worth a small proportion of the subject mark;
- Exams, peer feedback and team evaluation surveys;
- Online quizzes where answers are released to students on completion;
- Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date; and,
- Pass/Fail assessment tasks.

## Faculty-specific Information

[Engineering Student Support Services](#) – The Nucleus - enrolment, progression checks, clash requests, course issues or program-related queries

[Engineering Industrial Training](#) – Industrial training questions

[UNSW Study Abroad](#) – study abroad student enquiries (for inbound students)

[UNSW Exchange](#) – student exchange enquiries (for inbound students)

[UNSW Future Students](#) – potential student enquiries e.g. admissions, fees, programs, credit transfer

## Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students)

## School-specific Information

### Course Workload

Course workload is calculated using the Units-Of-Credit (UOC). The normal workload expectation for one UOC is approximately 25 hours per term. This includes class contact hours, private study, other learning activities, preparation and time spent on all assessable work.

Most coursework courses at UNSW are 6 UOC and involve an estimated 150 hours to complete, for both regular and intensive terms. Each course includes a prescribed number of hours per week (h/w) of scheduled face-to-face and/or online contact. Any additional time beyond the prescribed contact hours should be spent in making sure that you understand the lecture material, completing the set assignments, further reading, and revising for any examinations. Most 6 UoC courses will involve approximately 10-12 hours per week of work on your part. If you're not sure what to do in these hours of independent study, the resources on the [UNSW Academic Skills](#) pages offer some suggestions including: making summaries of lectures, read/summarise sections from the textbook, attempt workshop problems, reattempting workshop problems with some hints from the solutions, looking for additional problems in the textbook.

Full-time enrolment at university means that it is a *full-time* occupation for you and so you would typically need to devote 35 hours per week to your studies to succeed. Full-time enrolment at university is definitely incompatible with full-time employment. Part-time/casual employment can certainly fit into your study schedule but you will have to carefully balance your study obligations with that work and decide how much time for leisure, family, and sleep you want left after fulfilling your commitments to study and work. Everyone only gets 168 hours per week;

overloading yourself with both study commitments and work commitments leads to poor outcomes and dissatisfaction with both, overtiredness, mental health issues, and general poor quality of life.

## On-campus Class Attendance

Most classes at UNSW are "In Person" and run in a face-to-face mode only. Attendance and participation in the classes is expected. As an evidence-driven engineer or scientist, you'll be interested to know that education research has shown students learn more effectively when they come to class, and less effectively from lecture catch-up recordings. If you have to miss a class due to illness, for example, we expect you to catch up in your time, and within the coming couple of days.

For most courses that are running in an "in person" mode:

- Lectures are normally recorded to provide an opportunity to review material after the lecture; lecture recordings are not a substitute for attending and engaging with the live class.
- Workshops/tutorials are not normally recorded as the activities that are run within those sessions normally cannot be captured by a recording. These activities may also include assessable activities in some or all weeks of the term.
- Laboratories are not recorded and require in-person attendance. Missing laboratory sessions may require you to do a make-up session later in the term; if you miss too many laboratory sessions, it may be necessary to seek a Permitted Withdrawal from the course and reattempt it next year, or end up with an Unsatisfactory Fail for the course.
- Assessments will often require in-person attendance in a timetabled class or a scheduled examination.

## Submission of Assessment Tasks

In the School of Chemical Engineering, all written work will be submitted for assessment via Moodle unless otherwise specified. Attaching cover sheets to uploaded work is *not* required unless specifically requested for an individual assessment task; when you submit work through Moodle for assessment you are agreeing to uphold the Student Code.

Some assessments will require you to complete the work online and it may be difficult for the course coordinator to intervene in the system after the due date. You should ensure that you are familiar with assessment systems well before the due date. If you do this, you will have time to get assistance before the assessment closes.

All submissions are expected to be neat and clearly set out. Your results are the pinnacle of all

your hard work and should be treated with respect. Presenting results clearly gives the marker the best chance of understanding your method; even if the numerical results are incorrect. Please make it easy for the markers who are looking at your work to see your achievement and give you due credit.

Marking guidelines for assignment submissions will be provided at the same time as assignment details to assist with meeting assessable requirements. Submissions will be marked according to the marking guidelines provided.

## Academic Integrity

**Academic integrity** is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage (International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013). At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity and plagiarism can be located at:

- The [Current Students site](#)
- The [ELISE training site](#)

The Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

To help describe what we are looking for, here are some things that we consider to be quite acceptable (even desirable!) actions for many assessments, and some that we consider to be unacceptable in most circumstances. Please check with the instructions for your assessments and your course coordinator if you're unsure. As a rule of thumb, if you don't think you could look the lecturer in the eye and say "this is my own work", then it's not acceptable.

### Acceptable actions

☒ reading/searching through material we have given you, including lecture slides, course notes, sample problems, workshop problem solutions

☒ reading/searching lecture transcripts

- reading/searching resources that we have pointed you to as part of this course, including textbooks, journal articles, websites
- reading/searching through your own notes for this course
- all of the above, for any previous courses
- using spell checkers, grammar checkers etc to improve the quality of your writing
- studying course material with other students

#### *Unacceptable actions*

- asking for help completing an assessment from other students, friends, family
- asking for help on Q&A or homework help websites
- searching for answers to the specific assessment questions online or in shared documents
- copying material from any source into your answers
- using generative AI tools to complete or substantially complete an assessment for you
- paying someone else to do the assessment for you

**Referencing** is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism. Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>.

For assessments in the School of Chemical Engineering, we recommend the use of referencing software such as [Mendeley](#) or [EndNote](#) for managing references and citations. Unless required otherwise specified (i.e. in the assignment instructions) students in the School of Chemical Engineering should use either the APA 7th edition, or the American Chemical Society (ACS) referencing style as canonical author-date and numbered styles respectively.

**Artificial intelligence tools** such as ChatGPT, CodePilot, and built-in tools within Word are modern tools that are useful in some circumstances. In your degree at UNSW, we're teaching you skills that are needed for your professional life, which will include how to use AI tools responsibly plus lots of things that AI tools cannot do for you. AI tools already are (or will soon be) part of

professional practice for all of us. However, if we were only teaching you things that AI could do, your degree would be worthless, and you wouldn't have a job in 5 years.

Whether the use of AI tools in an assessment is appropriate will depend on the goals of that assessment. As ever, you should discuss this with your lecturers – there will certainly be assessments where the use of AI tools is encouraged, as well as others where it would interfere with your learning and place you at a disadvantage later. Our goal is to help you learn how to ethically and professionally use the tools available to you. To learn more about the use of AI, [see this discussion we have written](#) where we analyse the strengths and weaknesses of generative AI tools and discuss when it is professionally and ethically appropriate to use them.

While AI may provide useful tools to help with some assessments, UNSW's policy is quite clear that taking the output of generative AI and submitting it as your own work will never be appropriate, just as paying someone else to complete an assessment for you is serious misconduct.

## Asking Questions

Asking questions is an important part of learning. Learning to ask good questions and building the confidence to do so in front of others is an important professional skill that you need to develop. The best place to ask questions is during the scheduled classes for this course, with the obvious exception being questions that are private in nature such as special consideration or equitable learning plans. Between classes, you might also think of questions – some of those you might save up for the next class (write them down!), and some of them you might ask in a Q&A channel on Teams or a Q&A forum on Moodle. Please understand that staff won't be able to answer questions on Teams/Moodle immediately but will endeavour to do so during their regular working hours (i.e. probably not at midnight!) and when they are next working on this particular course (i.e. it might be a day or two). Please respect that staff are juggling multiple work responsibilities (teaching more than one course, supervising research students, doing experiments, writing grants, ...) and also need to have balance between work and the rest of their life.

## School Contact Information

For assistance with enrolment, class registration, progression checks and other administrative matters, please see [the Nucleus: Student Hub](#). They are located inside the Library – first right as you enter the main library entrance. You can also contact them via <http://unsw.to/webforms> or

reserve a place in the face-to-face queue using the UniVerse app.

For course administration matters, please contact the Course Coordinator.

Questions about this course should normally be asked during the scheduled class so that everyone can benefit from the answer and discussion.