



UNSW Course Outline

CEIC2000 Material and Energy Systems - 2024

Published on the 30 Jan 2024

General Course Information

Course Code : CEIC2000

Year : 2024

Term : Term 1

Teaching Period : T1

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

In this course you will learn the principles of material and energy balances and thermodynamics and how they can be used to analyse chemical processes. These principles are fundamental to the way chemical and chemical product engineers think and are foundational to your future

studies.

You will learn how to apply thermodynamic concepts with material and energy balances to chemical process problems involving several unit operations and involving chemical reactions. This will include study of the first and second law of thermodynamics, vapour liquid equilibria for pure and mixed components, heats of phase change, heats of reaction and example applications such as refrigeration and power plants. Through this course you will cross a threshold in understanding what it means to be a chemical or chemical product engineer.

Course Aims

The course aims to teach you to think like a chemical engineer or chemical product engineer: to use basic principles from chemistry and physics as tools to break apart and understand complex chemical processes.

Relationship to Other Courses

CEIC2000 Material and Energy Systems brings together the basic chemistry and physics you learned in year 1 to analyse relatively complex chemical engineering processes by making use of the fundamental limits to the ways that material and energy can behave. The course is in many ways the centre of the Chemical Engineering curriculum. It is a pre-requisite for all core courses in second year and third year.

Course Learning Outcomes

Course Learning Outcomes
CL01 : Select and apply thermodynamic concepts such as work, heat, enthalpy, entropy, and internal energy to analyse chemical and process engineering systems
CL02 : Calculate changes in thermodynamic variables for ideal gases and single component non-ideal fluids for simple unit operations (such as turbines, compressors, heat exchangers) and in reactive systems.
CL03 : Recognise the need for, find and use appropriate physical, chemical and thermodynamic property models or data (either graphical or tabulated)
CL04 : Use the principles of steady state material and energy balance to analyse single unit, multi-unit, cyclical and reactive systems involved in common chemical process operations
CL05 : Apply thermodynamic principles, and material and energy balances in chemical process design

Course Learning Outcomes	Assessment Item
CL01 : Select and apply thermodynamic concepts such as work, heat, enthalpy, entropy, and internal energy to analyse chemical and process engineering systems	<ul style="list-style-type: none">• In-term tests• Design assignments• Final exam
CL02 : Calculate changes in thermodynamic variables for ideal gases and single component non-ideal fluids for simple unit operations (such as turbines, compressors, heat exchangers) and in reactive systems.	<ul style="list-style-type: none">• In-term tests• Design assignments• Final exam
CL03 : Recognise the need for, find and use appropriate physical, chemical and thermodynamic property models or data (either graphical or tabulated)	<ul style="list-style-type: none">• In-term tests• Design assignments• Final exam
CL04 : Use the principles of steady state material and energy balance to analyse single unit, multi-unit, cyclical and reactive systems involved in common chemical process operations	<ul style="list-style-type: none">• In-term tests• Design assignments• Final exam
CL05 : Apply thermodynamic principles, and material and energy balances in chemical process design	<ul style="list-style-type: none">• Design assignments

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams | Echo 360

Learning and Teaching in this course

This course is delivered in flipped mode. Content is delivered online and asynchronously, live

classes show you how to apply the ideas in practice. We suggest that you:

- View the lectures, pausing, making notes and writing down questions as they occur to you. Check what the text has to say about it.
- Look over the workshop solution before class, highlighting any uncertainties and making notes of any questions
- Come to the workshop and focus on what your lecturer is saying. Ask questions! Annotate your solution, make notes only if needed
- Review the tutorial activities before you come to class, so you have a good idea of what to do in class time. Come prepared with questions for your tutor
- Allocate time to read selected parts of the text if needed, and to work on the homework sets. Connect with your peer network / team as needed

Other Professional Outcomes

Engineers Australia, Professional Engineer Stage 1 Competencies

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

- PE1.1 Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline.
- PE1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline.
- PE1.3 In-depth understanding of specialist bodies of knowledge within 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.
- PE2.1 Application of established engineering methods to complex engineering problem solving.

Additional Course Information

The course assumes you have completed chemistry and physics at high school level, and that you are proficient in solving simultaneous algebraic equations.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
In-term tests Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: Week 4 and Week 8
Design assignments Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Three days after your week 7, 8, 9, 10 tutorial
Final exam Assessment Format: Individual	50%	Start Date: Not Applicable Due Date: Exam Period

Assessment Details

In-term tests

Assessment Overview

Students will complete some in-class tests to assess and provide feedback on their competence in their knowledge and skills development.

Course Learning Outcomes

- CL01 : Select and apply thermodynamic concepts such as work, heat, enthalpy, entropy, and internal energy to analyse chemical and process engineering systems
- CL02 : Calculate changes in thermodynamic variables for ideal gases and single component non-ideal fluids for simple unit operations (such as turbines, compressors, heat exchangers) and in reactive systems.
- CL03 : Recognise the need for, find and use appropriate physical, chemical and thermodynamic property models or data (either graphical or tabulated)
- CL04 : Use the principles of steady state material and energy balance to analyse single unit, multi-unit, cyclical and reactive systems involved in common chemical process operations

Detailed Assessment Description

In-term tests are conducted in a workshop class in week 4 (10% of course marks) and in week 8 (20% of course marks).

Assessment Length

90 minutes

Assessment information

In-term tests are open book. Any printed materials are permitted.

Assignment submission Turnitin type

This is not a Turnitin assignment

Design assignments

Assessment Overview

Students will complete design exercises in small teams. These exercises will involve the selection, application and judgement in the use of models and concepts. Peer evaluation will be used to moderate individual contributions.

Course Learning Outcomes

- CL01 : Select and apply thermodynamic concepts such as work, heat, enthalpy, entropy, and internal energy to analyse chemical and process engineering systems
- CL02 : Calculate changes in thermodynamic variables for ideal gases and single component non-ideal fluids for simple unit operations (such as turbines, compressors, heat exchangers) and in reactive systems.
- CL03 : Recognise the need for, find and use appropriate physical, chemical and thermodynamic property models or data (either graphical or tabulated)
- CL04 : Use the principles of steady state material and energy balance to analyse single unit, multi-unit, cyclical and reactive systems involved in common chemical process operations
- CL05 : Apply thermodynamic principles, and material and energy balances in chemical process design

Submission notes

Submitted by one member of your team using the assignment tools in Moodle.

Assessment information

One member of your team ONLY to submit the team assignment via Turnitin. Make sure the names and student numbers of all contributors are listed on the assignment front page.

This assignment uses peer evaluation of contribution. If you contribute nothing to the project, you can expect to be commensurately rewarded by your peers.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Final exam

Assessment Overview

Students will complete a summative exam that will assess their understanding of all parts of the course.

Course Learning Outcomes

- CL01 : Select and apply thermodynamic concepts such as work, heat, enthalpy, entropy, and internal energy to analyse chemical and process engineering systems
- CL02 : Calculate changes in thermodynamic variables for ideal gases and single component non-ideal fluids for simple unit operations (such as turbines, compressors, heat exchangers) and in reactive systems.
- CL03 : Recognise the need for, find and use appropriate physical, chemical and thermodynamic property models or data (either graphical or tabulated)
- CL04 : Use the principles of steady state material and energy balance to analyse single unit, multi-unit, cyclical and reactive systems involved in common chemical process operations

Detailed Assessment Description

Open book, in person exam.

Assessment Length

2 hours

Assessment information

The final exam is open book. Any printed materials are permitted.

Assignment submission Turnitin type

This is not a Turnitin assignment

General Assessment Information

Exams are open book. Any printed materials are permitted. UNSW approved electronic calculators are permitted. Electronic resources are not permitted.

Grading Basis

Standard

Requirements to pass course

Achieve a composite mark of at least 50 / 100

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Fundamentals: units, states, phenomena, principles and models. Material and energy balancing for closed systems (first law).
	Workshop	Example problem solving and application of concepts
	Tutorial	Equations of state are models.
	Workshop	Example problem solving and application of concepts
	Homework	Problem set 1
Week 2 : 19 February - 25 February	Lecture	Flowsheeting, material and energy balancing for open steady state flow processes, enthalpy. Phase change for pure species.
	Workshop	Example problem solving and application of concepts
	Tutorial	Internal energy and enthalpy
	Workshop	Example problem solving and application of concepts
	Homework	Problem set 2
Week 3 : 26 February - 3 March	Lecture	Material and energy balancing for systems with phase change and multiple components. Introduction to degrees of freedom analysis
	Workshop	Example problem solving and application of concepts
	Tutorial	Vapour pressure and humidity
	Workshop	Example problem solving and application of concepts
	Homework	Problem set 3
Week 4 : 4 March - 10 March	Lecture	Path functions and reversibility - deriving models for compression and expansion processes. Material balances for processes with loops.
	Workshop	Example problem solving and application of concepts
	Tutorial	Tutorial under revision
	Workshop	Class test 1 - 10% assessment weight toward final course mark
	Homework	Problem set 4.
Week 5 : 11 March - 17 March	Lecture	Thermodynamic cycles and their uses. Second law.
	Workshop	Example problem solving and application of concepts
	Tutorial	Tutorial under revision
	Workshop	Example problem solving and application of concepts
	Homework	Problem set 5
Week 6 : 18 March - 24 March	Workshop	Class runs in the usual time and place as a help or revision session.
	Tutorial	Tutorial classes do not run during flex week. Please come to one or both of the workshops for help or revision.
	Workshop	Class runs in the usual time and place as a help or revision session.
Week 7 : 25 March - 31 March	Lecture	Heats of reaction, Hess's law. Material and energy balances on systems with chemical reactions using the rate or extent of reaction.
	Workshop	Example problem solving and application of concepts
	Tut-Lab	Design class 1
	Workshop	Example problem solving and application of concepts
	Homework	Problem set 7
Week 8 : 1 April - 7 April	Lecture	Reactive processes with loops, degrees of freedom analysis.
	Workshop	Example problem solving and application of concepts
	Tutorial	Design class 2
	Workshop	Class test 2 - 20% assessment weight toward final course mark
	Homework	Problem set 8
Week 9 : 8 April - 14 April	Lecture	Enthalpy also depends on composition: heats of mixing and non-ideal liquids.
	Workshop	Example problem solving and application of concepts
	Tutorial	Design class 3
	Workshop	Example problem solving and application of concepts
	Homework	Problem set 9
Week 10 : 15 April - 21 April	Lecture	Power cycles, combustion and flames.

	Workshop	Example problem solving and application of concepts
	Tutorial	Design class 4
	Workshop	Example problem solving and application of concepts
	Homework	Problem set 10

Attendance Requirements

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

General Schedule Information

The course workshops and tutorials assume that you have already studied the online lecture materials for that week. Please make sure you are prepared so that you don't waste your time in class.

In workshop classes the lecturer will go through solutions to one or more example problems, illustrating and explaining how the lecture concepts for the week apply in practice. There is no new material here, and the class is recorded, so use the time to give your full attention to the explanation. This is a great chance to ask questions about how the course ideas apply!

Course Resources

Prescribed Resources

Felder, R.M., Rousseau, R.W., and Bullard, L.G., "Elementary Principles of Chemical Processes", Wiley, Hoboken NJ, 2016.

This text is a primary means of access to course content and so students are encouraged to purchase their own copy. Multiple editions are available in the library, including electronic access (Leganto link provided in moodle).

We recommend that you purchase your own copy either second hand or from the bookshop, because the e-book license only allows a limited number of simultaneous users and because a printed book is allowable in the exam whereas an e-book is not.

Recommended Resources

Additional resources are linked from the moodle module.

Additional Costs

There are no additional costs.

Course Evaluation and Development

Course evaluation and development feedback is welcome any time but is primarily sought through the myExperience survey run at the end of term.

Based on previous feedback, we

- redesigned and re-recorded all of the lecture material (very short videos)
- implemented on-campus demonstration classes (workshops)
- included an extra mid term test with lower weight for earlier feedback
- contracted the number of tutorials (from 3 x 1 hour to 1 x 2 hour per week)
- greatly simplified the moodle structure to make the course material easier to navigate

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Graeme Bushell		Hilmer 219	93855921	via MS Teams or by appointment	Yes	Yes
Lecturer	Edgar Wong				via MS Teams or by appointment	No	No
Tutor	James Morel				via MS Teams	No	No
	Jaco Van Antwerpen				via MS Teams	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 policies. 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>.

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. 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

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