UNSW Course Outline

GSOE9740 Industrial Ecology and Sustainable Engineering - 2024

Published on the 25 Aug 2024

General Course Information

Course Code : GSOE9740
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : Faculty of Engineering
Academic Unit : School of Civil and Environmental Engineering
Delivery Mode : Online
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Postgraduate, Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Sustainability means living well within the limits of a finite planet. More than ever, engineers need to find holistic and effective solutions to currently unsustainable practices of production and consumption, to protect our vital life support systems and meet the social and economic needs

of a growing human population at the same time.

This course teaches concepts and methods to analyse and assess the environmental impacts of industrial systems and economies. It aims to equip students with the ability to understand challenges of sustainability from a local to global scale, to think critically, holistically and with a life cycle perspective and to apply sustainability assessment methods and tools (such as input-output analysis, hybrid life cycle assessment and environmental footprint assessment) in real-world examples.

Course Aims

The aim of the course is to introduce students to the concepts and quantitative methods of sustainable engineering and industrial ecology and their application in work practice and research. Through lectures, workshops, group discussions and presentations, group assignments and the final exam, students will learn to:

Consider the interactions between technical, ecological, social and economic systems and avoid shifting problems from one area to the other;

Define, evaluate and help to resolve issues of sustainability in engineering problems;

Apply quantitative methods, interpret results and understand uncertainty;

Make more informed decisions towards increased sustainable outcomes.

Further outcome attributes of the course include:

An in-depth engagement with the concepts of industrial ecology and sustainable engineering and their inter-disciplinary context;

Capacity for analytical and critical thinking, life cycle thinking and creative problem solving;

Ability to engage independent and reflective learning;

Skills for collaborative and multi-disciplinary work;

A respect for ethical practice and social responsibility;

Skills for effective communication

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Describe and interpret the principles of industrial ecology and sustainable engineering and their application in work practice and research and formulate reasonable suggestions based on sustainability assessment activities.
CLO2 : Critically evaluate sustainability problems
CLO3 : Describe and compare different quantitative evaluation methods and conduct simple life cycle, footprint and input-output analyses.
CLO4 : Interpret the outcomes from different sustainability assessment methods, formulate the limitations inherent in the different approaches and make recommendations towards more sustainable decision-making processes.
CLO5 : Assess the environmental sustainability of households, companies and projects via collaborative teamwork in interdisciplinary groups.

Course Learning Outcomes	Assessment Item
CLO1 : Describe and interpret the principles of industrial ecology and sustainable engineering and their application in work practice and research and formulate reasonable suggestions based on sustainability assessment activities.	• Individual Assignment • Oral presentation • Group assignment • Quizzes
CLO2 : Critically evaluate sustainability problems	• Individual Assignment • Oral presentation • Group assignment • Quizzes
CLO3 : Describe and compare different quantitative evaluation methods and conduct simple life cycle, footprint and input-output analyses.	• Individual Assignment • Oral presentation • Group assignment • Quizzes
CLO4 : Interpret the outcomes from different sustainability assessment methods, formulate the limitations inherent in the different approaches and make recommendations towards more sustainable decision-making processes.	• Individual Assignment • Oral presentation • Group assignment • Quizzes
CLO5 : Assess the environmental sustainability of households, companies and projects via collaborative teamwork in interdisciplinary groups.	• Individual Assignment • Oral presentation • Group assignment • Quizzes

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams | Review - Assessment/Feedback

Tool

Learning and Teaching in this course

The following teaching strategies will be used in this course. Students are encouraged to direct their own learning to get the most out of their participation in this course.

Online Lectures

- Find out what you must learn.
- Watch **all** lecture, exercise and workshop videos and answer the questions therein.
- Participate in online discussions and work out provided example problems.
- Ask questions online on how the content of lectures applies to assignment questions.
- Read announcements on course changes.

Online Workshops

- Work actively through all exercises provided online.
- Be guided by auxiliary material and additional reading.
- Attempt all questions in practice quizzes.
- Practice solving set problems.
- Ask questions and discuss solutions with other students via Moodle.

Private Study

- Review lecture material, reference books, and resources on UNSW Moodle.
- Work in groups on online assignments.
- Reflect on set problems and assignments.
- Download and work through additional readings provided.
- Join Moodle discussions of problems.
- Keep up with notices and find out marks via Moodle.

Assessments (quizzes, assignments, group discussions and presentations etc.)

- Take all quizzes at the set time! These are **summative** assessments and count towards your final course mark.
- Demonstrate your knowledge and skills in online discussions and assignments.
- Demonstrate ability to work effectively in a group by completing the group assignment.
- Demonstrate higher understanding and problem solving on real world problems in hypothetical, but realistic problem settings in online workshops.

Other Professional Outcomes

At the end of this course, students will be able to critically evaluate sustainability problems (practiced in quizzes, presentations and assignments) and decide which method to choose for

quantitative sustainability assessment. They will be able to describe and contrast different quantitative evaluation methods and conduct simple life cycle, footprint and input-output analyses (practiced in online workshops and assignments). They will also be able to interpret the outcomes from each sustainability assessment method, know the limitations inherent in the different approaches and make recommendations towards more sustainable decision-making processes. Students will get to know the basic principles of industrial ecology and sustainable engineering and their application in work practice and research and formulate reasonable suggestions based on sustainability assessment activities.

Additional Course Information

The course assumes familiarity with environmental and sustainability issues and will involve computational activities. Familiarity with matrix algebra is beneficial. Microsoft Office Excel will be used in exercises and assignments. The basics of Matlab programming will be taught.

Prerequisites: Knowledge of life cycle assessment (LCA) is **important**; courses that teach LCA and are recognised as prerequisites are CVEN9892, GSOE9340 and SOLA9015. Students should have successfully completed one of these courses or have completed equivalent training in LCA.

This is a **100% online course** which will be fully delivered asynchronously via Moodle. As such there are no set contact hours. However, note that there will be two live online discussion forums with compulsory attendance and several live Q&A sessions, which are voluntary. It is expected that you invest at least 6 hours per week of private study in this course. You need to **complete all tasks on Moodle every week** to keep up with the course progress!

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Individual Assignment Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: Week 6
Oral presentation Assessment Format: Individual	10%	Start Date: Not Applicable Due Date: Week 8
Group assignment Assessment Format: Group	30%	Due Date: Week 10
Quizzes Assessment Format: Individual	30%	Due Date: Weeks 3, 8 and 10

Assessment Details

Individual Assignment

Assessment Overview

Each student will individually develop a research topic relevant to the course, conduct the research, and present the research in a journal-style paper (30% of total course mark) and an online presentation (10%). The paper will be peer reviewed and marked by other students and the course coordinator through a process similar to a formal academic publication. The course coordinator and
lecturers will serve as the Editors. Each paper will be reviewed by at least two anonymous reviewers (from the class or other scholars invited by the Editors). The assignment will be submitted through Turnitin and marks will be returned within 2 weeks.

Course Learning Outcomes

- CLO1 : Describe and interpret the principles of industrial ecology and sustainable engineering and their application in work practice and research and formulate reasonable suggestions based on sustainability assessment activities.
- CLO2 : Critically evaluate sustainability problems
- CLO3 : Describe and compare different quantitative evaluation methods and conduct simple life cycle, footprint and input-output analyses.
- CLO4 : Interpret the outcomes from different sustainability assessment methods, formulate the limitations inherent in the different approaches and make recommendations towards more sustainable decision-making processes.
- CLO5 : Assess the environmental sustainability of households, companies and projects via collaborative teamwork in interdisciplinary groups.

Detailed Assessment Description

A marking rubric will be made available to students on Moodle.

Assessment Length

8 pages

Assessment information

A1 is submitted via the UNSW Workshop tool. Reports may be checked via Turnitin!

Assignment submission Turnitin type

Not Applicable

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.

Oral presentation

Assessment Overview

5 minute (maximum) oral presentation of findings from the individual assignment. A marking rubric will be provided before the presentation. Marks will be returned within 2 weeks.

Course Learning Outcomes

- CLO1 : Describe and interpret the principles of industrial ecology and sustainable engineering and their application in work practice and research and formulate reasonable suggestions based on sustainability assessment activities.
- CLO2 : Critically evaluate sustainability problems
- CLO3 : Describe and compare different quantitative evaluation methods and conduct simple life cycle, footprint and input-output analyses.
- CLO4 : Interpret the outcomes from different sustainability assessment methods, formulate the limitations inherent in the different approaches and make recommendations towards more sustainable decision-making processes.
- CLO5 : Assess the environmental sustainability of households, companies and projects via collaborative teamwork in interdisciplinary groups.

Detailed Assessment Description

A marking rubric will be made available to students on Moodle.

Assessment Length

5 minutes

Assignment submission Turnitin type

Not Applicable

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.

Group assignment

Assessment Overview

Students will form groups of 3 to submit a sustainability assessment of an engineering project. Submissions should be a maximum of 10 pages in length (including summary/abstract, but excluding any cover sheets, references and appendices). A marking rubric will be provided. Marks will be returned within 2 weeks.

Course Learning Outcomes

- CLO1 : Describe and interpret the principles of industrial ecology and sustainable engineering and their application in work practice and research and formulate reasonable suggestions based on sustainability assessment activities.
- CLO2 : Critically evaluate sustainability problems
- CLO3 : Describe and compare different quantitative evaluation methods and conduct simple life cycle, footprint and input-output analyses.
- CLO4 : Interpret the outcomes from different sustainability assessment methods, formulate the limitations inherent in the different approaches and make recommendations towards more sustainable decision-making processes.
- CLO5 : Assess the environmental sustainability of households, companies and projects via collaborative teamwork in interdisciplinary groups.

Detailed Assessment Description

Sustainability assessment of an engineering project (group assignment). Major assignment for small groups of students. Includes quantitative and qualitative evaluation, following the triple-bottom-line methodology. For the online group assignment (worth 30% of the total course mark) students must actively project-manage their group assignment works in order to gain a good mark. Students should expect to spend a significant amount of time working with their team online to develop their work.

A marking rubric will be made available to students on Moodle.

Assessment Length

10 pages

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity

reports.

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.

Quizzes

Assessment Overview

Three quizzes throughout the course, each worth 10% of the total course mark, and 15 minutes in length. The quizzes will test the students' ability to synthesise the overall course, demonstrate understanding of main principles and implement them in given situations. May include calculations. All material presented during the session will be assessable in the quizzes unless otherwise noted. Marks will be returned at the end of the quiz.

Course Learning Outcomes

- CLO1 : Describe and interpret the principles of industrial ecology and sustainable engineering and their application in work practice and research and formulate reasonable suggestions based on sustainability assessment activities.
- CLO2 : Critically evaluate sustainability problems
- CLO3 : Describe and compare different quantitative evaluation methods and conduct simple life cycle, footprint and input-output analyses.
- CLO4 : Interpret the outcomes from different sustainability assessment methods, formulate the limitations inherent in the different approaches and make recommendations towards more sustainable decision-making processes.
- CLO5 : Assess the environmental sustainability of households, companies and projects via collaborative teamwork in interdisciplinary groups.

Assessment Length

15 mins each

Submission notes

Moodle Quiz

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.

General Assessment Information

There will be no final examination in this course. Instead, there will be three online quizzes, worth 30% of the total course mark, one individual assignment (30%) with an individual presentation (10%) and one group assignment (30%).

If you are unwell or have other extenuating circumstances which prevent you from completing an assessment, you **always have to apply for Special Consideration** through official University channels (before the deadline, if possible): https://student.unsw.edu.au/special-consideration. Otherwise the fit-to-submit rule applies, i.e. by sitting or submitting an assessment on the scheduled assessment date, the student is declaring that they are fit to do so and cannot later apply for Special Consideration.

Marking criteria: All assignments will be marked on the basis of whether the student demonstrates an understanding of the material. Where numerical errors can be identified as simple slips, penalties will not be as large as when errors appear to be a result of a conceptual misunderstanding, or the source of the error is difficult to determine from the working. The group assignment will be additionally assessed with respect to the depth of the analysis, the breadth of its consideration of the question at hand and the clarity of the way in which the answer is presented. The use of tables and diagrams is encouraged. Make sure you do not exceed the imposed page limits.

Penalties for late submissions of all assignments apply. Where applicable (see table below), late work will be penalised at the rate of 5% per day after the due time and date have expired. There is no extension for quizzes.

Grading Basis

Standard

Requirements to pass course

The total of all assessments needs to be at least 50 marks (50%) to pass the course.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Online Activity	Introduction to sustainability concepts, definitions and principles. IPAT activity.
Week 2 : 16 September - 22 September	Online Activity	Input-Output Analysis I (basics, mathematics, environmental extensions). Live Online Discussion Forum on supply chain / life-cycle thinking (attendance expected). Online Practice Quiz.
Week 3 : 23 September - 29 September	Online Activity	Input-Output Analysis II (production layer decomposition). IOA and PLD exercises. Assignment 1 briefing. 1st Online Quiz.
Week 4 : 30 September - 6 October	Online Activity	Fundamental programming concepts (loops, scripts, functions, strings, etc.). Matlab basics. Assignment 1 workshop.
Week 5 : 7 October - 13 October	Online Activity	Input-Output Analysis III. IELab.
Week 6 : 14 October - 20 October	Online Activity	Industrial Ecology and Sustainable Engineering. Assignment 2 briefing. Assignment 1 due.
Week 7 : 21 October - 27 October	Online Activity	Advanced analytical techniques of Industrial Ecology I (structural path analysis and mixed-unit IOA). SPA and MU-IOA exercises. Peer-mark Assignment 1.
Week 8 : 28 October - 3 November	Online Activity	Practical tools and models: Triple Bottom Line tool for the water industry. Assignment 3 briefing. 2nd Online Quiz. Assignment 2 due.
Week 9 : 4 November - 10 November	Online Activity	Advanced analytical techniques of Industrial Ecology II (hybrid LCA). Matrix Augmentation exercise.
Week 10 : 11 November - 17 November	Online Activity	Industrial Ecology Practice (Live Online Webinar, attendance compulsory). Hybrid LCA exercise. 3rd Online Quiz. Assignment 3 due.

Attendance Requirements

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

General Schedule Information

A table of online lectures, workshops and activities is provided below. Please note that this course is being delivered **100% online via Moodle**. It has the usual weekly structure and you need to complete all tasks on Moodle every week to keep up with the course progress!

Course Resources

Prescribed Resources

All material required for this course will be provided on UNSW Moodle. It is compulsory for all students to access this resource: https://moodle.telt.unsw.edu.au/login/index.php. Strongly recommended books are listed below.

Recommended Resources

Textbook and Readings

There is not compulsory textbook for this course. However, we **strongly recommend** the following two:

- Murray, J. and Wood, R. (Eds.). 2010. ***The Sustainability Practitioner's Guide to Input-Output Analysis***. Common Ground Publishing LLC, Champaign, Illinois, USA. http://onsustainability.cgpublisher.com/product/pub.197/prod.3 Note from the UNSW Bookshop: If you would like to order a copy, the book is printed to order locally in Sydney, so it would only take a week to supply.
- Peters, G. and Svanström, M. 2019. ***Environmental Sustainability for Engineers and Applied Scientists***. Cambridge University Press, Cambridge. https://doi.org/10.1017/9781316711408 [Available through UNSW Library at https://www.library.unsw.edu.au].
- Diesendorf, M. and Taylor, R. (2023) ***The Path to a Sustainable Civilisation: Technological, Socioeconomic and Political Change***. 2023. Springer Nature Singapore, Singapore. https://doi.org/10.1007/978-981-99-0663-5 and https://sustainablecivilisation.com

Readings will be posted on Moodle, unless a URL is provided in the syllabus. Students are required to be familiar with the required reading materials prior the class.

Useful literature

- Suh, S., ed. 2009. Handbook of Input-Output Economics in Industrial Ecology. Vol. 23, Series: Eco-Efficiency in Industry and Science: Springer. http://www.springer.com/earth+sciences/geostatistics/book/978-1-4020-4083-2
- Thijs ten Raa (Ed.) 2017 Handbook of Input–Output Analysis. Edward Elgar Publishing. http://dx.doi.org/10.4337/9781783476329
- Hoekstra, A. Y. and T. O. Wiedmann. 2014. Humanity's unsustainable environmental footprint. Science 344(6188): 1114-1117. http://dx.doi.org/10.1126/science.1248365
- Hellweg, S. and L. Milà i Canals. 2014. Emerging approaches, challenges and opportunities in life cycle assessment. Science 344(6188): 1109-1113. http://www.sciencemag.org/content/344/6188/1109.abstract
- Duchin, F. and Levine, S. H. 2014. Industrial Ecology. In: Reference Module in Earth Systems and Environmental Sciences, Elsevier. http://dx.doi.org/10.1016/B978-0-12-409548-9.09407-0
- Weisz, H., Suh, S. and Graedel, T. E. 2015. Industrial Ecology: The role of manufactured capital in sustainability. Proceedings of the National Academy of Sciences, 112(20), 6260-6264. http://www.pnas.org/content/112/20/6260.short

Useful databases for academic journals (accessible via UNSW Library)

- http://www.sciencedirect.com
- http://www.scopus.com
- http://scholar.google.com

APPENDIX

Definition of Industrial Ecology

Industrial ecology is a rapidly growing field that systematically examines local, regional and global materials and energy uses and flows in products, processes, industrial sectors and economies. The name industrial ecology was coined to emphasize how natural systems can serve as a model for designing sustainable industrial systems. Industrial Ecology places human technological activity – industry in the widest sense – in the context of the larger ecosystems that support it, examining the sources of resources used in society and the sinks that may act to absorb or detoxify wastes.

Industrial Ecology provides a solution-oriented engineering approach to environmental and sustainability problems. Robert White, the former president of the US National Academy of Engineering, summarised these elements by defining industrial ecology as "… the study of the flows of materials and energy in industrial and consumer activities, of the effects of these flows on the environment, and of the influences of economic, political, regulatory, and social factors on the flow, use, and transformation of resources" (White 1994).

The field Industrial Ecology has grown fast in the last years and now several initiatives are taken for education programmes in this area (ISIE flyer 2014). The Journal of Industrial Ecology (since 1997, published by MIT Press, http://mitpress.mit.edu/JIE) and the International Society for Industrial Ecology (since 2001, http://www.yale.edu/is4ie) give Industrial Ecology a strong position in the international scientific community. With the publication of a special section in the top journal PNAS in 2015, Industrial Ecology has become a mainstream field of research.

Rationale including Industrial Ecology in the Course Program

Industrial Ecology (and Sustainability Assessment) as an umbrella term and overarching subject is suitable for post-graduate teaching at UNSW for the following reasons:

- IE encompasses and summarises in one term topics and methods that are important to Environmental Engineering. It is based to on a life cycle perspective and on the analysis of materials and energy flows – both longstanding principles of teaching and research at UNSW.
- IE has a focus on industrial activities (viewing firms as agents for environmental improvement) which goes well with UNSW engineering background and relationship to industry.
- IE is not well established at Australian Universities – UNSW occupies an important niche of teaching and research. Internationally there are half a dozen Universities that have significant

Master programs in Industrial Ecology.
- IE requires and is well suited for multidisciplinary and interdisciplinary research and analysis – these are increasingly required to solve complex problems.

Course Evaluation and Development

We welcome student feedback throughout the course - either through the Discussion Forum or the weekly Feedback tool on Moodle. This is very important to us – let us know what you think works well and what we can do better. This information will be used to continually improve the course.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Tommy Wiedmann		Room 106, School of Civil & Environmental Engineering (Building H20)	+61 2 9065 2065	agree via email	No	Yes

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.

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 Plagarism

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 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.