UNSW Course Outline

ELEC4123 Electrical Design Proficiency - 2024

Published on the 01 Feb 2024

General Course Information

Course Code : ELEC4123
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Engineering
Academic Unit : School of Electrical Engineering & Telecommunications
Delivery Mode : Multimodal
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

How would you feel if you were offered a course that would test your limits on how good you have become as a prospective electrical engineer? What would you think of having a course in your resume that is acknowledged by Engineers Australia, the main engineering accreditation

body in Australia, as a flagship course due to its rigorous and comprehensive set of assessments on electrical engineering design? How does it feel to work on an industry-type project in a team while demonstrating your individual analytical knowledge and practical alongside soft skills required in modern high-tech industries? ELEC4123 is the course that will give you the competency and confidence you need to graduate as an electrical/ telecommunications/quantum engineer who is job-ready and prepared to face real-world design challenges.

The course involves three core design competency components in the fields of Electronics, Control Systems, and Signal Processing. The elective component of the course provides an opportunity to apply your group work skills in a much broader scope on multidisciplinary industry-type projects with a focus on a mix of core topics mentioned above in a more advanced level, as well as other electrical engineering disciplines such as Power and Energy Systems, Network and Physical Communications, and Quantum Engineering. The components in core and elective topics may vary depending on the resources available in each term.

Course Aims

Electrical design is arguably the most important component of the electrical, telecommunications, and quantum engineering program specialisations. The principal purpose of this course is to test your design proficiency in the core areas and one of the elective areas, through a sequence of design challenges. The aims of the course are to:

1. Provide the student with a realistic design experience.
2. Ensure the student's design skills are adequate and to the level desirable for a graduate engineer.
3. Give the student the opportunity to address weaknesses in their design skill base and to advance this skill base.
4. Prepare the students for the transition from the learning environment to the professional setting where these design skills are essential.

Relationship to Other Courses

This is a 4th-year design course in the School of Electrical Engineering and Telecommunications, which is a core component of the BE and BE-ME programs (Electrical and Telecommunications) offered by the School. This course directly ties into core courses in Electronics, Signal Processing, Control, Telecommunications, Data Networks and Energy and Power Systems which you should have already taken (typically in the third year of your program). Through this course, you should be able to demonstrate how much you have learned throughout your degree and

prove to yourself how qualified you have become to be ready for the workforce after your graduation. See below for more on what is expected.

Pre-requisites and Assumed Knowledge

In addition to DESN1000 and ELEC3117, the knowledge from the courses below is essential:

- Electronics (to the level of ELEC3106, ELEC2141 and ELEC2133).
- Signal Processing (to the level of ELEC3104)
- Control Systems (to the level of ELEC3114).

Through these and other courses, it is assumed that students have also developed good programming/coding literacy and familiarity with LTspice, MATLAB/Simulink as well as microcontroller which might be used in some topics.

Important note: If you have NOT taken either of these courses, you should reconsider your options as it is NOT recommended to take this course without having completed these courses. Even though there is no official pre-requisite for this course in the Handbook, that does not mean you can take it before finishing all your 3rd-year core courses plus some 4th-year electives. It is your responsibility to make sure you have proper assume knowledge and pre-requisites for this course as there is no official design teaching or revision of pre-requisites in this course. It is also assumed that you have completed at least the same UoCs or even more as required for Thesis A so that you are able to choose the right elective topic. They are heavily based on 4th-year elective courses in your program.

If you have any concern or complaint about the pre-requisites and assumed knowledge, please raise them directly with the Head of School.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Demonstrate an ability to work both individually and within a group.
CLO2 : Produce designs which draw upon a number of disciplines previously studied in other courses.
CLO3 : Demonstrate the ability to contribute to and learn from peers.
CLO4 : Develop a sufficient level of understanding and engineering design skills within a range of disciplines.
CLO5 : Explain, evaluate, and reflect on design decisions as well as implement them to achieve the design requirements.

Course Learning Outcomes	Assessment Item
CLO1 : Demonstrate an ability to work both individually and within a group.	• Core Design Tasks and Individual Reflection • Elective Design Tasks • Elective Design Team Performance and Report
CLO2 : Produce designs which draw upon a number of disciplines previously studied in other courses.	• Core Design Tasks and Individual Reflection • Elective Design Tasks • Elective Design Team Performance and Report
CLO3 : Demonstrate the ability to contribute to and learn from peers.	• Core Design Tasks and Individual Reflection • Elective Design Tasks • Elective Design Team Performance and Report
CLO4 : Develop a sufficient level of understanding and engineering design skills within a range of disciplines.	• Core Design Tasks and Individual Reflection • Elective Design Tasks
CLO5 : Explain, evaluate, and reflect on design decisions as well as implement them to achieve the design requirements.	• Core Design Tasks and Individual Reflection • Elective Design Tasks

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Other Professional Outcomes

Engineers Australia, Professional Engineer Stage 1 Competencies

The learning outcomes of this course contribute to your development of the following EA competencies:

	EA Stage 1 Competencies	Course Learning Outcomes (CLOs)
PE1: Knowledge and Skill Base	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals	
PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing		
PE1.3 In-depth understanding of specialist bodies of knowledge		2, 3, 4, 5
PE1.4 Discernment of knowledge development and research directions		
PE1.5 Knowledge of engineering design practice		2, 3, 4, 5
PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice		
PE2: Engineering Application Ability	PE2.1 Application of established engineering methods to complex problem solving	2, 3, 4, 5
PE2.2 Fluent application of engineering techniques, tools and resources		2, 3, 4, 5
PE2.3 Application of systematic engineering synthesis and design processes		2, 3, 4, 5
PE2.4 Application of systematic approaches to the conduct and management of engineering projects		2, 3, 4, 5
PE3: Professional and Personal Attributes	PE3.1 Ethical conduct and professional accountability	1, 2, 3, 4, 5
PE3.2 Effective oral and written communication (professional and lay domains)		1, 2, 3, 4, 5
PE3.3 Creative, innovative and pro-active demeanour		1, 2, 3, 4, 5
PE3.4 Professional use and management of information		1, 2, 3, 4, 5
PE3.5 Orderly management of self, and professional conduct		1, 2, 3, 4, 5
PE3.6 Effective team membership and team leadership		1, 2, 3, 4, 5

Additional Course Information

Credits

This is a 6 UoC course. Since this course has no final examination, the workload of the course is

compacted into just 10 weeks, so your effort must be adjusted accordingly. In addition to the official allocated formal lab hours in this course (8 hours per week), you must be aware of the fact that the nature of this course requires much higher workload than any normal courses you have had in your degree. Therefore, you must be prepared to manage your study load accordingly for independent study, design and preparation. This is not only an expectation, it is a reality that most students undertaking this course do put in a large amount of time, so you should expect even more workload for this course!! If you have any concern or complaint about the workload for this course, please raise them directly with the Head of School, because as the coordinator of this course my hands are tight.

Delivery Mode

The teaching in this subject is heavily focused on laboratories. Each of 4 design topics has 4 assigned laboratories, (there could be optional open labs in face-to-face mode). The laboratories are designed to develop and assess proficiency in each discipline of electrical engineering.

Consultation times are scheduled for 1 hour each week with a dedicated tutor/mentor. They are intended to provide an opportunity to both address knowledge gaps and also to reinforce an approach to design which focuses on the need to identify early what is most problematic about a design problem. Through this process, students are expected to be better prepared to approach the larger design problem that they will face as a team during the elective design topic.

Please note that MS Teams will be used as the main platform for the course (the first page of this document is auto-generated and may not reflect the new changes). Through these mechanisms, the course aims to build and ensure proficiency in the core areas of your program of study.

Design Topics

The course is divided into three core design topics and one elective design topic, each of which is assigned four/4 formal laboratory sessions. The core design topics are Signal Processing, Electronic Circuits and Control System (order may be subjected to change). For the Electronics topic, there will be a extra week dedicated to PCB design tasks. The elective topics are: Topic 4a: Energy Systems; Topic 4b: Data Networks; and Topic 4c: Telecommunications. Topic 4d: Analog Design.

Disclaimer: Due to situational factors, not all the elective topics may be offered this course.

Each of the core topics consists of a sequence of design tasks, with progressively higher complexity, which must be done individually. Regardless of the core topics being allowed to be completed in pairs or individually, the major portion of the assessment is based on your individual contribution to the design, implementation and understanding regardless of working in pairs.

The elective design is performed in groups of 2 to 4 students depending on the topic. You must nominate which of the elective topics you intend to pursue before the end of Week 7 when the final available elective topics are released earlier in that week, at which point you will also have an opportunity to propose a design team. If you are not part of a proposed team, or if unavoidable circumstances require it, you will be assigned to a team at the course convener's discretion. You will be provided with further instructions on how to submit elective topic and team nominations. Unlike the first three design topics, the elective design is assessed only in the final week, however, the progressive observation of the team performance and individual contribution to the project is carried out by the lab demonstrators acting as mentors to help better assess the teams in the final week.

Individual Learning

Preparation for labs is essential to success in this course. You should find yourself revising material from previous courses, discussing problems with your peers and lab partner, raising questions in consultation times, and perhaps struggling to find and solve problems you encounter with your design.

Group Learning

You are encouraged to discuss the design tasks with your classmates outside the laboratory sessions. But you MUST NOT under any circumstances collude with other student/groups and use identical design, pay someone to do the work for you, and ask a friend who have done this course to do your work for you. If we catch you cheating, you will be punished heavily according to UNSW Plagiarism Policies, something that is not worth going through knowing the pain and the trauma that it would cause you and the permanent black mark next to your name in your official record. The elective topic is a team effort, having larger scope and less incremental objectives than the first three design topics. To succeed in this topic, you will need to work effectively as a team member or leader. Moreover, each team is required to submit a report describing the design principles, implementation, outcomes and final reflections. The report will also need to be a team effort.

Laboratory Exemption

There is no laboratory exemption for this course. Regardless of whether equivalent labs have been completed in previous courses, all students enrolled in this course must take the labs. If, for medical reasons, (note that a valid medical certificate must be provided) you are unable to attend a lab, you will need to seek permission from the Course Convener to be assessed in a subsequent week upon providing legitimate documents.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Core Design Tasks and Individual Reflection Assessment Format: Individual	66%	Start Date: See Course Schedule Due Date: See Course Schedule
Elective Design Tasks Assessment Format: Group	22%	Start Date: See Course Schedule Due Date: See Course Schedule
Elective Design Team Performance and Report Assessment Format: Group	12%	Start Date: See Course Schedule Due Date: See Course Schedule

Assessment Details

Core Design Tasks and Individual Reflection

Assessment Overview

There will be 3 separate core design tasks, each worth 22%. You will be assessed on the two main components in a set of mini-projects designed for each core topic. These are "achievement of design requirements" and "understanding of relevant subject material and design decisions". You will be presenting the actual outcomes of your design and will be interviewed by an assessor to demonstrate that you thoroughly understand your design and be able to justify your design decisions. Each 4hr-lab session is an assessment opportunity. It is expected that you complete half of the design tasks in each core topic within the given time frame for that topic during the scheduled lab times.

Your work will be assessed based on a marking guideline and you will have a chance to receive verbal feedback from your assessor on your work during the assessment of each design task. You can then use that feedback to improve your work for the next assessment. The consultation sessions are also an opportunity to receive feedback before the assessment from your mentor and your peers.

At the end of each core topic, you will submit a short reflective task by answering some questions to reflect on your work and the learnings you gained from that topic.

Course Learning Outcomes

- CLO1 : Demonstrate an ability to work both individually and within a group.
- CLO2 : Produce designs which draw upon a number of disciplines previously studied in other courses.
- CLO3 : Demonstrate the ability to contribute to and learn from peers.
- CLO4 : Develop a sufficient level of understanding and engineering design skills within a range of disciplines.
- CLO5 : Explain, evaluate, and reflect on design decisions as well as implement them to achieve the design requirements.

Detailed Assessment Description

See General Assessment Information.

Assignment submission Turnitin type

Not Applicable

Elective Design Tasks

Assessment Overview

The elective project is a group activity, for which the final assessment will take place at the end of the last week of the term. Your team performance, individual contribution, and your progress will be observed and assessed continuously throughout the elective project period by at least one mentor assigned to your group during the same lab sessions. Progress review sessions will be arranged by your mentor within the lab time. You will have a chance to receive feedback during these progress review sessions.

Your work will be assessed based on a marking guideline and verbal feedback given during the assessment. 10% of the mark is the group mark, awarded during the final project assessment based on “achievement of the requirements” as your team presents the project outcomes. The rest of the mark is the individual mark (12%) where an oral interview of each team member will be conducted by their assigned mentor/s and an assessor to determine their level of understanding of both the overall design and their individual contribution to the project.

Course Learning Outcomes

- CLO1 : Demonstrate an ability to work both individually and within a group.
- CLO2 : Produce designs which draw upon a number of disciplines previously studied in other courses.
- CLO3 : Demonstrate the ability to contribute to and learn from peers.

- CLO4 : Develop a sufficient level of understanding and engineering design skills within a range of disciplines.
- CLO5 : Explain, evaluate, and reflect on design decisions as well as implement them to achieve the design requirements.

Detailed Assessment Description

See General Assessment Information

Assignment submission Turnitin type

Not Applicable

Elective Design Team Performance and Report

Assessment Overview

The team performance mark will be awarded by the assigned mentor to each group for the elective project and verbal feedback given during the assessment. Your work will be assessed based on a guideline, e.g., your mentor will especially be interested in the way in which you approach the design problem, how you ensure that you focus on the most challenging parts of the problem first, how you reach an overall design that is likely to work, and how your team manages the resources at its disposal.

There will also be a group report for which you must have some draft ready during your final presentation. But the final report will have to be submitted usually before the examination period. The report should include your workings, design strategies, figures, equations, and anything that shows your effort in completing the analytical and practical part of the design task. Your team should also provide a reflection on the design process that you followed considering your final design performance in the final version of the report. A rubric will be used for marking and feedback will be provided upon request.

Course Learning Outcomes

- CLO1 : Demonstrate an ability to work both individually and within a group.
- CLO2 : Produce designs which draw upon a number of disciplines previously studied in other courses.
- CLO3 : Demonstrate the ability to contribute to and learn from peers.

Detailed Assessment Description

See General Assessment Information.

Assignment submission Turnitin type

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

General Assessment Information

Assessment of core design tasks

These activities are assessed individually. All completed tasks for the three core design topics are to be assessed during the scheduled laboratory sessions by one of the laboratory demonstrators. Once you have completed a task, you should add your name to a marking form so that you can be assessed as quickly as possible. NOTE: You cannot expect to be assessed for all of the tasks you have completed during the final laboratory session of the topic, since this can place an unacceptable burden on the demonstrators time. As a result, we devised a plan for task assessment as follows:

- For each lab session, it is recommended that you complete at least one task and get it assessed, but no more than two tasks will be marked.
  - You are NOT allowed to put down your name for two tasks back-to-back. You have to first get assessed for the first task you complete, then you can put down your name again for the second task.
- Final assessment lab session: No more than two tasks will be assessed.
  - So please make sure to not leave your tasks pile up for the final lab session.
- You will have maximum 2 attempts to get assessed for each task (there is no penalty attached to the second attempt).

Commonly Asked Questions: WHAT MARK DO I NEED TO GET FROM EACH TOPIC TO PASS THE COURSE? WHAT DO I HAVE TO DO TO GET HD FROM THIS COURSE? DO I HAVE TO CONTINUE WITH OTHER TASKS IF I KNOW I HAVE ALREADY ACHIEVED A PASSING MARK FROM THAT TOPIC? And more of these questions ....

Come to the first lecture to find out!!!!

Below is the breakdown of the marking strategy for core topics which covers 66% of your total course mark (22% for each topic):

- 8% of the topic mark is awarded based on actual outcomes and satisfying the design requirements. This will be known as Requirement and Soft Objectives mark (Req+Soft). You cannot expect to obtain any of these marks for a solution which does not actually work or achieve the task objectives to some extent.
- 12% of the topic mark is awarded for your understanding of the design problem and your design approach. This is known as Understanding mark (Und). To obtain these marks, you will need to convince the assessor that you thoroughly understand your design and be able to justify your design decisions.
- Please note that your Req+Soft mark will be usually capped by the Und mark and vice versa.

But there are exceptions as explained below.

  - For example, you might have a fully functioning design that satisfies all the given requirements in a task, but you may not be able to explain the main reasons behind your design decisions, or demonstrate your understanding of the background knowledge required to come up with selected design, or not being able to answer to some specialized understanding questions around the relevant topic to the task. Under these circumstances, you Req mark is either capped by your Und mark (equal mark for both Req and Und) or Req could be only one mark higher than Und (this situation would mainly raise the suspicion of plagiarism and collusion, so be careful!!!)
  - In an opposite case where you do not have a functioning design, you should not expect to receive a mark for Und higher than your Req mark. That mean you will receive equal mark for req and Und, unless you can explain why your design is not working as it should be and demonstrate a good deal of understating. Then your Und mark can be higher by one mark.
- At the end of each topic, you must submit a short reflective task worth 2% by answering some questions to reflect on your work and learning gained from that topic.
  - The submission of this task is through Assignment section MS Teams (the deadline is mostly last Saturday before the next topic begins at 11pm).
  - The mark is awarded for your genuine effort in providing your reflections on your work on each topic (there is no right or wrong answer, but there is a word limit).

You MUST maintain a lab book (electronic or paper-based) to show all your design workings and observations during the assessment. At the end of each topic, you will receive your marks through Power Automate Chat-bot, in addition to on-the-spot marks written on your lab book.

Assessment of the elective design tasks

The elective design topic is a group activity, for which the final assessment will take place on Fri of Week 10 or Mon of Week 11 (depending on situational factors and circumstances), but your team performance and individual contribution will be observed and assessed continuously by an allocated lab demonstrator to your group during lab sessions. Below is the breakdown of the marking strategy for the elective topic which covers 34% of your total course mark:

- 22% of the topic mark is awarded by the lab demonstrators in the final assessment day (and during progress review sessions).
  - 12% is awarded based on an individual interview of each team member, to determine their level of understanding (Und) of both the overall design and their individual contribution to it.
  - 10% is awarded based on the achievement of the requirements in the final design (Req), a component of which will be competitive, meaning that teams will be ranked within each topic, based on the objective performance of their designs.
- 7% of the topic mark is awarded to your team's final report. This is an essential part of the

reflective process.

- You will be expected to have a draft version of the report available during the final assessment of the elective topic (this could include your workings, design strategies, figures, equations, anything that shows your effort in completing the analytical and practical part of the design task). However, the final version of the report should be finalized afterwards, including a reflection on the design process that you followed considering your final design performance. The report submission is due on Sun of Week 11 at 11pm (with a possibility of extension due to situational factors).

- 5% of the topic mark is awarded to your team performance.

Each team will have a dedicated tutor/mentor. You must provide a briefing on your progress to your mentor during the lab times. This is called progress review. Your mentor will schedule progress review times with their teams. Mentors will observe your team's interaction and thought processes, asking some questions, and offer suggestions where appropriate after you presented your progress. Your mentor will especially be interested in the way in which you approach the design problem, how you ensure that you focus on the most challenging parts of the problem first, how you reach an overall design that is likely to work, and how your team manages the resources at its disposal. Your mentor will also observe how individual members contribute to the team's deliberations, design, and interaction during elective topic scheduled lab sessions. Based on these observations, the mentor will award team performance mark as well as your individual contribution which is part of your overall understanding mark.

Please note that attending these progress review sessions is compulsory.

Grading Basis

Standard

Requirements to pass course

You must at least achieve total of 33 marks from the 66 available marks of the Core Design tasks, as well as achieving 17 marks from the total 34 marks of the Elective topic (the design task, report and team performance) to pass this course.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Mon 1pm - 2pm: Introductory Lecture
	Laboratory	Tue and Fri 1pm-5pm: Topic 1 - Electronics
Week 2 : 19 February - 25 February	Other	Mon 1pm-2pm: Consultation Thu (TBD): Consultation
	Laboratory	Tue and Fri 1pm-5pm: Topic 1 - Electronics
Week 3 : 26 February - 3 March	Other	Mon 1pm-2pm: Consultation Thu (TBD): Consultation
	Laboratory	Tue and Fri 1pm-5pm: Topic 1 - Electronics (PCB)
Week 4 : 4 March - 10 March	Other	Mon 1pm-2pm: Intoduction to Topic 2 - Signal Processing Thu (TBD): Consultation
	Laboratory	Tue and Fri 1pm-5pm: Topic 2 - Signal Processing
Week 5 : 11 March - 17 March	Other	Mon 1pm-2pm: Consultation Thu (TBD): Consultation
	Laboratory	Tue and Fri 1pm-5pm: Topic 2 - Signal Processing
Week 6 : 18 March - 24 March	Other	Mon 1pm-2pm: Intoduction to Topic 3 - Control Systems Thu (TBD): Consultation
	Laboratory	Tue and Fri 1pm-5pm: Topic 3 - Control Systems
Week 7 : 25 March - 31 March	Other	Mon 1pm-2pm: Consultation and release of Elective Topics description Thu (TBD): Consultation Wed 11pm: Deadline for Elective Topic group selection
	Laboratory	Tue and Fri 1pm-5pm: Topic 3 - Control Systems (Due to public holiday on Friday, Topic 3 is extended to Tue week 8)
Week 8 : 1 April - 7 April	Lecture	Mon 1pm-2pm: Intoduction to Elective Topics
	Laboratory	Tue and Fri 1pm-5pm: Topic 4 - Electives
Week 9 : 8 April - 14 April	Laboratory	Tue and Fri 1pm-5pm: Topic 4 - Electives
Week 10 : 15 April - 21 April	Laboratory	Tue and Fri 1pm-5pm: Topic 4 - Electives (Final Assessmnet is on Fri)

Attendance Requirements

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

General Schedule Information

Indicative Laboratory Schedule (Tue and Fri are assessment labs)

Place: Lab rooms 201, 224, 225, G14. You will receive your allocated bench number and lab room before your first lab.

Lectures/Consultations: Mon and Thu consultations for each topic will be online via MS Teams and they will be recorded, including the introductory lecture. They might be run in person, which then the classroom will be announced in advance.

Open-labs: To accommodate more lab access time for students to work on their tasks, there will be open-lab times available throughout the week. The tentative schedule will be announced

during the class in Week 1.

Elective Topic Progress Review: The progress review sessions will be during normal lab times.

Course Resources

Prescribed Resources

There are no specific texts for this course, but you should consider your lecture notes and text books from earlier classes in Electronics, Signal Processing, Control, Telecommunications, Data Networks and/or Energy Systems to be useful resources. Recommended resources will be prescriped for every design topic.

Course Evaluation and Development

This course is under constant revision in order to improve the learning outcomes for all students. Please forward any feedback (positive or negative) on the course to the course convener or via the online student survey myExperience. You can also provide feedback to ELSOC who will raise your concerns at student focus group meetings. As a result of previous feedback obtained for this course and in our efforts to provide a rich and meaningful learning experience, we have continued to evaluate and modify our delivery and assessment methods.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Ahmed Musleh		Room 402, EE&T Building (G17)		By appointment	Yes	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-specific Information

General Conduct and Behaviour

Consideration and respect for the needs of your fellow students and teaching staff is an expectation. Conduct which unduly disrupts or interferes with a class is not acceptable and

students may be asked to leave the class.

Use of AI for assessments

Your work must be your own. If you use AI in the writing of your assessment, you must acknowledge this and your submission must be substantially your own work. More information can be found on this website.

Workplace Health & Safety (WHS)

WHS for students and staff is of utmost priority. Most courses involve laboratory work. You must follow the rules about conduct in the laboratory. About COVID-19, advice can be found on this website.

School Contact Information

Consultations: Lecturer consultation times will be advised during the first lecture. You are welcome to email the tutor or laboratory demonstrator, who can answer your questions on this course and can also provide you with consultation times. ALL email enquiries should be made from your student email address with ELEC/TELExxxx in the subject line; otherwise they will not be answered.

Keeping Informed: Announcements may be made during classes, via email (to your student email address) and/or via online learning and teaching platforms – in this course, we will use Moodle https://moodle.telt.unsw.edu.au/login/index.php. Please note that you will be deemed to have received this information, so you should take careful note of all announcements.

Student Support Enquiries

For enrolment and progression enquiries please contact Student Services

Web

Electrical Engineering Homepage