



UNSW Course Outline

ELEC4612 Power System Analysis - 2024

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General Course Information

Course Code : ELEC4612

Year : 2024

Term : Term 3

Teaching Period : T3

Is a multi-term course? : No

Faculty : Faculty of Engineering

Academic Unit : School of Electrical Engineering & Telecommunications

Delivery Mode : In Person

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

Power system analysis serves as the fundamental pillar of power engineering, playing a vital role in career development within this field. ELEC4612 aims to provide a robust understanding of power system analysis, delivering necessary knowledge and skills to overcome the dynamic

challenges present in the power industry.

The course commences with an in-depth overview of modern power systems, emphasising the fundamental concepts employed in power system analysis. These include phasors, complex power, three-phase systems, and per-unit methodology. The subsequent phase of the course delves into the process of modelling transformers, generators, transmission lines, and loads. This hands-on exploration culminates in the construction of network matrices, providing a comprehensive understanding of the interconnections within power systems. It then explores the ways and means to perform power flow analysis under steady-state conditions, fault analysis under symmetrical and unsymmetrical faults, and stability analysis using swing equation and equal area criterion. It further provides mastery over the intricacies involved in achieving a balanced electric grid, through an exploration of power system control and economic dispatch.

Course Aims

The course aims to impart a robust understanding of power system analysis, which is crucial for career development in the field of power engineering. The course will provide students with essential knowledge in the mathematical techniques to analyse power systems, both under steady state and dynamic conditions. It serves as a progression from foundational concepts learned in previous courses, such as AC electrical circuits. The course contributes to future learning by introducing students to the process of modelling and analysis of power systems.

Through lectures, practical exercises, and assignments, the course seeks to engage students in active learning, promoting a solid understanding of the subject matter. The hands-on exploration helps students develop practical skills and a deeper understanding of the interconnections within power systems. By challenging students with real-world scenarios and case studies, the course fosters critical thinking and the ability to analyse and solve complex power system problems.

Course Learning Outcomes

Course Learning Outcomes
CL01 : Mathematically model major types of components used in electrical power systems
CL02 : Calculate the steady-state power flow in a power system
CL03 : Compute fault parameters for different types of short-circuit faults
CL04 : Investigate the stability of a power system
CL05 : Determine the economic dispatch in a power system
CL06 : Evaluate the system frequency using power system control techniques

Course Learning Outcomes	Assessment Item
CLO1 : Mathematically model major types of components used in electrical power systems	<ul style="list-style-type: none"> • Online activities • Laboratory • Mid-term Exam
CLO2 : Calculate the steady-state power flow in a power system	<ul style="list-style-type: none"> • Online activities • Laboratory • Mid-term Exam
CLO3 : Compute fault parameters for different types of short-circuit faults	<ul style="list-style-type: none"> • Final Exam • Online activities • Laboratory
CLO4 : Investigate the stability of a power system	<ul style="list-style-type: none"> • Final Exam • Online activities • Laboratory
CLO5 : Determine the economic dispatch in a power system	<ul style="list-style-type: none"> • Final Exam • Online activities • Laboratory
CLO6 : Evaluate the system frequency using power system control techniques	<ul style="list-style-type: none"> • Final Exam • Online activities

Learning and Teaching Technologies

Moodle - Learning Management System

Other Professional Outcomes

Relationship to Engineers Australia Stage 1 competencies:

The Course Learning Outcomes (LOs) contribute to the Engineers Australia (National Accreditation Body) Stage I competencies as outlined below

Engineers Australia (EA), Professional Engineer Stage 1 Competencies

PE1: Knowledge and Skill Base:

PE1.1 Comprehensive, theory-based **understanding of underpinning fundamentals**: LO 1,2,3,4,5,6

PE1.2 Conceptual understanding of underpinning maths, **analysis**, statistics, **computing**: LO 1,2,3,4,5,6

PE1.3 In-depth understanding of specialist bodies of **knowledge**: LO 1,2,3,4,5,6

PE1.4 Discernment of knowledge development and research directions: NA

PE1.5 Knowledge of **engineering design** practice: LO 1

PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice: LO 1,2,3

PE2: Engineering Application Ability:

PE2.1 Application of established engineering methods to **complex problem solving**: LO 1,2,3,4,5,6

PE2.2 Fluent **application of engineering techniques**, tools and resources: LO 1,2,3,4,5

PE2.3 Application of systematic engineering synthesis and design processes: 1,2,3

PE2.4 Application of systematic approaches to the conduct and management of engineering projects: 1,2,3,4,5,6

PE3: Professional and Personal Attributes:

PE3.1 Ethical conduct and professional accountability: LO 2,3,4,5,6

PE3.2 Effective **oral and written communication** (professional and lay domains): LO 1,2,3,4,5,6

PE3.3 **Creative, innovative** and pro-active demeanour: LO 1,3,5,6

PE3.4 Professional use and management of information: 1,2,3,4,5,6

PE3.5 Orderly management of **self, and professional conduct**: LO 1,2,3,4,5,6

PE3.6 Effective team membership and team leadership: 1,2,3,4,5,6

This course is also designed to provide the course learning outcomes which arise from targeted graduate capabilities. The targeted graduate capabilities broadly support the UNSW and Faculty of Engineering graduate capabilities (also listed below).

Targeted Graduate Capabilities

Electrical Engineering and Telecommunications programs are designed to address the following targeted capabilities which were developed by the school in conjunction with the requirements of professional and industry bodies:

- The ability to apply knowledge of basic science and fundamental technologies;
- The skills to communicate effectively, not only with engineers but also with the wider community;
- The capability to undertake challenging analysis and design problems and find optimal solutions;
- Expertise in decomposing a problem into its constituent parts, and in defining the scope of each part;
- A working knowledge of how to locate required information and use information resources to their maximum advantage;
- Proficiency in developing and implementing project plans, investigating alternative solutions, and critically evaluating differing strategies;
- An understanding of the social, cultural and global responsibilities of the professional engineer;
- The ability to work effectively as an individual or in a team;
- An understanding of professional and ethical responsibilities;

- The ability to engage in lifelong independent and reflective learning

UNSW Graduate Capabilities

The course delivery methods and course content directly or indirectly addresses a number of core UNSW graduate capabilities, as follows:

- Developing scholars who have a deep understanding of their discipline, through lectures and solution of analytical problems in tutorials and assessed by assignments and written examinations.
- Developing rigorous analysis, critique, and reflection, and ability to apply knowledge and skills to solving problems. These will be achieved by the laboratory experiments and interactive checkpoint assessments and lab exams during the labs.
- Developing capable independent and collaborative enquiry, through a series of tutorials spanning the duration of the course.
- Developing independent, self-directed professionals who are enterprising, innovative, creative and responsive to change, through challenging design and project tasks.
- Developing citizens who can apply their discipline in other contexts, are culturally aware and environmentally responsible, through interdisciplinary tasks, seminars and group activities

Additional Course Information

The background knowledge required is a minimum of ELEC3105 for UG students. Although, there are no pre-requisite courses for PG students, the students should have prior knowledge on complex phasor calculations in AC circuits and electrical machine principles.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Final Exam Assessment Format: Individual	35%	
Online activities Assessment Format: Individual	30%	Start Date: 16/09/2024 09:00 AM
Laboratory Assessment Format: Individual	20%	Start Date: 16/09/2024 09:00 AM Due Date: 15/11/2024 06:00 PM
Mid-term Exam Assessment Format: Individual	15%	Start Date: 23/10/2024 11:30 AM Due Date: 23/10/2024 12:30 PM

Assessment Details

Final Exam

Assessment Overview

The final examination tests analytical and critical thinking and general understanding of the course material. Questions may be drawn from any aspect of the course that has been presented in lectures, tutorials and/or laboratories, unless specifically indicated otherwise by the lecturer. Marks will be assigned according to the correctness of the responses.

Course Learning Outcomes

- CL03 : Compute fault parameters for different types of short-circuit faults
- CL04 : Investigate the stability of a power system
- CL05 : Determine the economic dispatch in a power system
- CL06 : Evaluate the system frequency using power system control techniques

Detailed Assessment Description

Detailed Assessment Description

The final exam in this course will cover topics on fault analysis, stability, economic dispatch and load-frequency control. The examination tests analytical and critical thinking and general understanding of the course material in a controlled fashion. This will be an invigilated paper based exam scheduled during the exam period.

Assessment Length

2 hours

Assignment submission Turnitin type

Not Applicable

Hurdle rules

Attempt the assessment to pass the course.

Generative AI Permission Level

Not Applicable

Generative AI is not considered to be of assistance to you in completing this assessment. If you do use generative AI in completing this assessment, you should attribute its use.

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

Online activities

Assessment Overview

This includes five fortnightly online quizzes in Moodle (25%) and completion of course material online in OpenLearning (5%).

Online quizzes test your understanding of the material covered in the corresponding topic. They are useful to consolidate your learning, build your knowledge, and make decisions concerning your studies early in the term. Marks will be assigned according to the correctness of the responses. Three attempts are allowed, and immediate right/wrong feedback will be provided after each attempt. Detailed step-by-step solutions will be automatically released after the closing time.

The course resources in the form of videos and challenges are completely available in the OpenLearning platform, which checks the progress of student learning via a progress bar as you complete your journey through the course materials. Marks will be awarded according to the progress made in the course.

Course Learning Outcomes

- CL01 : Mathematically model major types of components used in electrical power systems
- CL02 : Calculate the steady-state power flow in a power system
- CL03 : Compute fault parameters for different types of short-circuit faults
- CL04 : Investigate the stability of a power system
- CL05 : Determine the economic dispatch in a power system
- CL06 : Evaluate the system frequency using power system control techniques

Detailed Assessment Description

The Moodle quizzes should be submitted online on Sundays (8 pm) of the allocated weeks. No extension will be allowed, as all quizzes are open at least 2 weeks prior and you have three attempts.

To ensure that you use the OpenLearning (OL) materials effectively, a mark of 5% is allocated to the progress bar monitor (shown in percentage in OL) as below:

- <75>
- 75 - 80% progress: 1 mark
- 80-85% progress: 2 marks
- 85-90% progress: 3 marks
- 90-95% progress: 4 marks
- 95-100% progress: 5 marks

Deadline for OL assessment is Week 11

Assignment submission Turnitin type

Not Applicable

Hurdle rules

Attempt this assessment to pass the course.

Generative AI Permission Level

Planning/Design Assistance

You are permitted to use generative AI tools, software or services to generate initial ideas, structures, or outlines. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e., what is generated by the tool, software or service should not be a part of your final submission. You should keep copies of your iterations to show your Course Authority if there is any uncertainty about the originality of your work.

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

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

Laboratory

Assessment Overview

The laboratory assessment, which consists of laboratory tasks, is designed to check your knowledge as you progress through each stage of such laboratory tasks. Marking will be done with a rubric. Feedback will be provided in class during marking.

Course Learning Outcomes

- CL01 : Mathematically model major types of components used in electrical power systems
- CL02 : Calculate the steady-state power flow in a power system
- CL03 : Compute fault parameters for different types of short-circuit faults
- CL04 : Investigate the stability of a power system
- CL05 : Determine the economic dispatch in a power system

Detailed Assessment Description

The laboratory work provides the student with experience of power system model computation

and analysis through application of different software (PowerWorld, PSCAD) and exposure to modelling and analysis of simulated power systems. Students will work individually.

Labs commence in week 2 and a three-hour lab work is scheduled every week. It is essential that you complete the laboratory preparation before coming to the lab. Labs 1 - 4 will be marked based on attendance. Each of these labs will constitute 1.5 marks. For Labs 5 - 8 you will complete the experiments and show the results on the PC screen before leaving the lab. After completing each experiment, your work will be assessed by the laboratory demonstrator. Both the screen and your understanding of the lab work (via viva) will be assessed. Labs 5-8 will constitute 3.5 marks each. You are required to maintain a record of your lab observations, which will help you answer the viva.

There are in total 8 labs. These are in-person sessions, and the software can be accessed in the lab PCs only. You are required to attend all the labs, to achieve the full marks of 20%. If for medical reasons (note that a valid medical certificate must be provided), you are unable to attend a lab, you will need to apply for a catch-up lab during another lab time, as agreed by the laboratory demonstrator. **Attendance is mandatory for all labs 1-8.**

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 for Term 3, 2024 must take the labs.

Assessment Length

3 hours every week

Assignment submission Turnitin type

Not Applicable

Hurdle rules

Attempt this assessment to pass the course.

Generative AI Permission Level

Planning/Design Assistance

You are permitted to use generative AI tools, software or services to generate initial ideas, structures, or outlines. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e., what is generated by the tool, software or service should not be a part of your final submission. You should keep copies of your iterations to show your Course Authority if there is any uncertainty about the originality of your work.

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

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

Mid-term Exam

Assessment Overview

The mid-term examination tests your general understanding of the course material up to week 5. It is designed to give you feedback on your progress through the analytical components of the course. Questions may be drawn from any material already covered in the course schedule. Marks will be assigned according to the correctness of the responses. Feedback will be provided via an exam review session and the exam will be solved and discussed in detail in a tutorial session.

Course Learning Outcomes

- CLO1 : Mathematically model major types of components used in electrical power systems
- CLO2 : Calculate the steady-state power flow in a power system

Detailed Assessment Description

The mid-term test will be during the lecture hours of Wednesday in Week 7, 11-13 hours. It will cover the initial topics on three-phase systems , YBUS modelling and power flow analysis. The test will commence at 11:15 AM and will be for one hour, excluding a reading time of 5 min. This will be a paper based in-person invigilated exam. If you miss the exam for any genuine reasons (you need to email the lecturer Dr. Anam Malik with documents showing evidence for your special consideration), your final exam contribution will increase by 15%, i.e., your final exam contribution will go from 35% to 50%. Note that a re-test is not available

Assessment Length

1 hour

Assignment submission Turnitin type

Not Applicable

Hurdle rules

Attempt this assessment to pass the course.

Generative AI Permission Level

Not Applicable

Generative AI is not considered to be of assistance to you in completing this assessment. If you do use generative AI in completing this assessment, you should attribute its use.

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

General Assessment Information

Attempt each assessment to pass the course.

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	3 phase systems
	Tutorial	3 phase systems
Week 2 : 16 September - 22 September	Lecture	PU systems Ybus matrix building
	Tutorial	PU systems Ybus matrix building
	Laboratory	Lab 1 - Introduction and Modelling in PW
	Assessment	Quiz 1 submission in Moodle
Week 3 : 23 September - 29 September	Lecture	Power flow analysis: GS method
	Tutorial	Power flow analysis: GS method
	Laboratory	Lab 2 - PSCAD modelling
Week 4 : 30 September - 6 October	Lecture	Power flow analysis: NR method
	Tutorial	Power flow analysis: NR method
	Laboratory	Lab 3 - GS Power flow using PW
	Assessment	Quiz 2 submission in Moodle
Week 5 : 7 October - 13 October	Lecture	Fault analysis
	Tutorial	Fault analysis
	Laboratory	Lab 4 - NR Power flow using PW
Week 6 : 14 October - 20 October	Assessment	Quiz 3 submission in Moodle
Week 7 : 21 October - 27 October	Assessment	Mid-term test
	Tutorial	Fault analysis contd.
	Laboratory	Lab 5 - Fault analysis in PW
Week 8 : 28 October - 3 November	Lecture	Power system stability
	Tutorial	Power system stability
	Laboratory	Lab 6 - Fault analysis in PSCAD
Week 9 : 4 November - 10 November	Lecture	Economic dispatch
	Tutorial	Economic dispatch
	Laboratory	Lab 7 - Stability analysis in PW
	Assessment	Quiz 4 submission in Moodle
Week 10 : 11 November - 17 November	Lecture	Load frequency control
	Tutorial	Load frequency control
	Laboratory	Lab 8 - Economic dispatch in PW
	Assessment	Note the below is for Week 11: deadline Friday 22 November, 9 pm: - Quiz 5 submission in Moodle - OL Progress

Attendance Requirements

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

Course Resources

Prescribed Resources

J. Duncan Glover, Thomas Overbye, Mulukutla S. Sarma and Adam B. Birchfield, Power System Analysis and Design, 7th Edition (SI), Cengage Learning, 2022

On-line resources

OpenLearning www.openlearning.com

As a part of the teaching component, openLearning platform will be used to disseminate teaching materials and host forums

Moodle will be used to host quizzes. Assessment marks will also be made available via this platform.

Recommended Resources

- Stevenson, W D: Elements of Power System Analysis, 4th edition, McGraw-Hill, 1982
- P.Kundur, "Power System Stability and Control", McGraw, 1994.
- Olle. I. Elgerd, 'Electric Energy Systems Theory – An Introduction', McGraw Hill, 2003.
- B.M. Weedy, and B. Cory, Electric Power Systems, 4th edition, Wiley, 1998.
- N. Mohan, First Course on Power Systems, Minneapolis, 2006.
- T.R. Bosela, Electrical Power System Technology, Prentice-Hall, 1997.
- J. Eaton, and E. Cohen, Electric Power Transmission Systems, 2nd ed., Prentice-Hall.
- M.E. El-Hawary, Electrical Power System Design and Analysis, Prentice-Hall, 1983.
- T. Gonen, Electric Power Distribution System Engineering, McGraw-Hill, 1986.
- P. Hasse, Overvoltage Protection in Low Voltage Systems, Peter Peregrinus, 1992.
- F. Kussy, and J. Warren, Design Fundamentals for Low Voltage Distribution and Control, Marcel Dekker, 1987.
- J.C. Whitaker, AC Power Systems Handbook, CRC Press, 1991.
- Greenwood, A: Electrical Transients in Power Systems. John Wiley.
- Wood, A & Wollenberg, B: , Wiley, 1984
- On-line resources

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 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.

The lab and Quiz submissions have been adjusted to follow theory. Lab sessions have been introduced every week. Training in the software PSCAD has been introduced, based on industry standards.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
	Anam Malik					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 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

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](#)