UNSW Course Outline

TELE4652 Mobile and Satellite Communications Systems - 2024

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General Course Information

Course Code : TELE4652
Year : 2024
Term : Term 2
Teaching Period : T2
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

In today's fast-paced world, wireless networks have revolutionized the way we communicate, work, and live. From the smartphone in your pocket to the satellite orbiting earth, the demand for continuous and high-speed connectivity has never been greater. As we transition from 4G to 5G

and beyond, understanding the intricacies of wireless communication networks is crucial not only for telecommunications professionals but also for anyone looking to stay ahead in the digital era.

This course offers in-depth insight into the evolution and functioning of wireless networks, encompassing 2G, 3G, 4G, and satellite communication technologies. It aims to furnish participants with a comprehensive understanding of how these systems operate, viewed through the lens of network architecture and design.

Course content includes: Propagation-loss models, mobile fading channels, multiple access techniques, the GSM and 3G standards, digital satellite communication systems, and equalisation and channel diversity techniques. Central to the course is a detailed explanation of the fundamental principles of the existing digital mobile communication systems in Australia, as well as world-wide: GSM, CDMA IS-95, CDMA2000, 3G/UMTS, HSPA, and LTE.

Course Aims

This course covers an important area in telecommunications engineering, as it provides fundamental knowledge for designing modern wireless networks.

At the end of the course, you should be able to:

- Examine the challenges of mobile communications and the engineering solutions that have been developed to create commercial cellular networks.
- Present the structure, design, and functionality of each of the major existing cellular networks: GSM, IS-95, and 3G networks.
- Explain the algorithms and circuits used in the implementation of the current cellular mobile and satellite communication systems.
- Provide an insight into the latest developments and directions of research in modern cellular networks.
- Give an introduction to the field of satellite communications.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Explain the network level structure and functionality of existing mobile and satellite communication systems
CLO2 : Identify the factors that determine the capacity of mobile cellular and satellite communication systems
CLO3 : Demonstrate, with appropriate mathematical models, the practical implementation of the signal processing of the physical layer of mobile and satellite communication systems
CLO4 : Perform simple calculations to estimate the performance of various aspects of cellular networks.
CLO5 : Perform satellite link budget analysis
CLO6 : Recognise current trends in research and development of communications systems

Course Learning Outcomes	Assessment Item
CLO1 : Explain the network level structure and functionality of existing mobile and satellite communication systems	• Final Examination • Laboratory Practical Experiments
CLO2 : Identify the factors that determine the capacity of mobile cellular and satellite communication systems	• Assignments • Final Examination • Laboratory Practical Experiments
CLO3 : Demonstrate, with appropriate mathematical models, the practical implementation of the signal processing of the physical layer of mobile and satellite communication systems	• Assignments • Final Examination
CLO4 : Perform simple calculations to estimate the performance of various aspects of cellular networks.	• Assignments • Laboratory Practical Experiments • Final Examination
CLO5 : Perform satellite link budget analysis	• Assignments • Laboratory Practical Experiments • Final Examination
CLO6 : Recognise current trends in research and development of communications systems	• Assignments • Final Examination

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams | Echo 360

Learning and Teaching in this course

TEACHING STRATEGIES

Delivery Mode

The teaching in this course aims at establishing a good fundamental understanding of the areas covered using:

- Formal lectures, which provide you with a focus on the core analytical material in the course, together with qualitative, alternative explanations to aid your understanding;
- Tutorials, which allow for exercises in problem solving and allow time for you to resolve problems in understanding of lecture material;
- Laboratory sessions, which support the formal lecture material and also provide you with practical construction, measurement and debugging skills;

Learning in this course

You are expected to attend/or watch the video of all lectures, tutorials, labs, and mid-term exams in order to maximise learning. You must prepare well for your laboratory classes and your lab work will be assessed. In addition to the lecture notes/video, you should read relevant sections of the recommended text. Reading additional texts will further enhance your learning experience. Group learning is also encouraged. UNSW *assumes* that self-directed study of this kind is undertaken in addition to attending formal classes throughout the course.

Tutorial classes

You should attempt all of your problem sheet questions in advance of attending the tutorial classes. The importance of adequate preparation prior to each tutorial cannot be overemphasized, as the effectiveness and usefulness of the tutorial depends to a large extent on this preparation. Group learning is encouraged. Answers for these questions will be discussed during the tutorial class and the tutor will cover the more complex questions in the tutorial class. In addition, during the tutorial class, 1-2 new questions that are not in your notes may be provided by the tutor, for you to try in class. These questions and solutions may not be made available on the web, so it is worthwhile for you to attend your tutorial classes to gain maximum benefit from this course.

Laboratory program

The laboratory schedule is deliberately designed to provide practical exposure to the concepts conveyed in lectures soon after they are covered in class. You are required to attend laboratory. Laboratory attendance WILL be kept, and you MUST attend at least 80% of labs.

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 apply for a catch-up lab during another lab time, as agreed by the laboratory coordinator.

Other Professional Outcomes

Engineers Australia (EA), Professional Engineer Stage 1 Competencies

The Course Learning Outcomes (CLOs) contribute to your development of the following EA competencies:

PE1: Knowledge and Skill Base:
PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals: CLO 1, 2, 3, 4, 5
PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing: CLO 1, 2, 3, 4, 5
PE1.3 In-depth understanding of specialist bodies of knowledge: CLO 1, 2, 3, 4, 5
PE1.4 Discernment of knowledge development and research directions: CLO 6
PE1.5 Knowledge of engineering design practice: CLO 3, 4, 5
PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice: n/a

PE2: Engineering Application Ability:
PE2.1 Application of established engineering methods to complex problem solving: CLO 3, 4, 5
PE2.2 Fluent application of engineering techniques, tools and resources: CLO 3, 4, 5
PE2.3 Application of systematic engineering synthesis and design processes:n/a
PE2.4 Application of systematic approaches to the conduct and management of engineering projects: n/a

PE3: Professional and Personal Attributes:
PE3.1 Ethical conduct and professional accountability: n/a
PE3.2 Effective oral and written communication (professional and lay domains): CLO 1, 3
PE3.3 Creative, innovative and pro-active demeanour: CLO 3, 4, 5
PE3.4 Professional use and management of information: CLO 1, 2, 3
PE3.5 Orderly management of self, and professional conduct: n/a
PE3.6 Effective team membership and team leadership: n/a

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 digital and information literacy and lifelong learning skills through assignment work. • Developing ethical practitioners who are collaborative and effective team workers, through group activities, seminars and tutorials. • 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

COURSE DETAILS

Credits

This is a 6 UoC course and the expected workload is 15 hours per week throughout the 10-week term.

Relationship to Other Courses

This is a 4th year technical elective course in the School of Electrical Engineering and Telecommunications. It is aimed at students wishing to specialise in telecommunications in their degree, and possibly, their future careers.

Pre-requisites and Assumed Knowledge

A basic knowledge and understanding of communication systems and the communication problem, as would be gained from TELE3113, is assumed. Basic knowledge of Fourier theory, digital filters and signal processing is also assumed. Above average competency in the fields of algebra, analysis, and statistics, gained from the second year core mathematics courses, commensurate with a student wishing to specialise in telecommunications, will also be required.

The assignments and tutorials will require students to be familiar with MATLAB, or some other equivalent numerical computing platform. The laboratories are to be performed in EE322, the mobile communications laboratory. These laboratory tasks are quite challenging, performed on sophisticated hardware, and as such require students to have good experimental skills and preparation, as is expected from fourth year electrical engineering students.

Following Courses

As a final year technical elective, it is planned that the standard reached by students at the end of this course would be commensurate with that expected of a graduating telecommunications engineer. As a course focusing on real-world, practical systems and engineering solutions, it is hoped that this course will bring together many of the ideas taught in earlier courses, and allow students to understand how the concepts they have learnt at a more theoretical level are applied in actual existing communication systems, used in their everyday lives.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Assignments Assessment Format: Individual	30%	
Final Examination Assessment Format: Individual	50%	
Laboratory Practical Experiments Assessment Format: Individual	20%	

Assessment Details

Assignments

Assessment Overview

There are 2 home assignments, each worth 15%. The first assignment contains calculation-type questions covering the materials from the first half of the course. Similarly, the second assignment covers the materials from the second half of the course. It is anticipated that students will need to commit 15-20 hours of their time to each assignment. Marks will be awarded according to the correctness of the responses with comments provided where appropriate.

Course Learning Outcomes

- CLO2 : Identify the factors that determine the capacity of mobile cellular and satellite communication systems
- CLO3 : Demonstrate, with appropriate mathematical models, the practical implementation of the signal processing of the physical layer of mobile and satellite communication systems
- CLO4 : Perform simple calculations to estimate the performance of various aspects of cellular networks.
- CLO5 : Perform satellite link budget analysis
- CLO6 : Recognise current trends in research and development of communications systems

Final Examination

Assessment Overview

Students need to take the final exam in order to pass the course. The 2-hour exam at the end of the term is a standard closed-book written examination, comprising both calculation-type questions and multiple choices. The final examination will test students' understanding of the course material and analytical skills. Marks will be assigned according to the correctness of the responses.

Course Learning Outcomes

- CLO1 : Explain the network level structure and functionality of existing mobile and satellite communication systems
- CLO2 : Identify the factors that determine the capacity of mobile cellular and satellite communication systems
- CLO3 : Demonstrate, with appropriate mathematical models, the practical implementation of the signal processing of the physical layer of mobile and satellite communication systems
- CLO4 : Perform simple calculations to estimate the performance of various aspects of cellular networks.
- CLO5 : Perform satellite link budget analysis
- CLO6 : Recognise current trends in research and development of communications systems

Laboratory Practical Experiments

Assessment Overview

Laboratories are primarily about learning, and the laboratory assessment is designed mainly to check your knowledge as you progress through each stage of the laboratory tasks. It is essential that you complete the laboratory preparation before attending the lab. You will be recording your observations/readings in your lab book and then completing and submitting the results sheet before leaving the lab. Both the results sheet and your lab book will be assessed by the laboratory demonstrator. Assessment marks will be awarded according to your preparation (completing set preparation exercises and correctness of these or readiness for the lab in terms of pre-reading), how much of the lab you were able to complete, your understanding of the experiments conducted during the lab, the quality of the code you write during your lab work (according to the guidelines given in lectures), and your understanding of the topic covered by the lab. Written feedback will be given in the marked reports.

Course Learning Outcomes

- CLO1 : Explain the network level structure and functionality of existing mobile and satellite communication systems
- CLO2 : Identify the factors that determine the capacity of mobile cellular and satellite communication systems
- CLO4 : Perform simple calculations to estimate the performance of various aspects of cellular networks.
- CLO5 : Perform satellite link budget analysis

General Assessment Information

Assessment

Laboratory Assessments 20% (With a detailed final lab report for all lab experiments)

Assignment x 2 (total 30%)

Final Exam (2 hours) 50%

Grading Basis

Standard

Requirements to pass course

Attending the final exam is required for passing the course, as required by the School.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 0 : 20 May - 26 May	Other	Get ready for the new adventure! :)
Week 1 : 27 May - 2 June	Lecture	Introduction to Wireless Communication Networks
Week 2 : 3 June - 9 June	Lecture	Cellular Concepts and Cellular Network Capacity
Week 3 : 10 June - 16 June	Lecture	Mobile Radio Propagation Models
Week 4 : 17 June - 23 June	Lecture	Effect of Fading and Remedies
Week 5 : 24 June - 30 June	Lecture	Overview of GSM, Spread Spectrum Communications and IS-95
Week 6 : 1 July - 7 July	Other	Flexibility week (Revision)
Week 7 : 8 July - 14 July	Lecture	Overview of 3G, 4G, and Beyond
	Homework	Assignment 1 due
Week 8 : 15 July - 21 July	Lecture	Satellite Communications: Introduction
Week 9 : 22 July - 28 July	Lecture	Satellite Communications: Link Budget Analysis
Week 10 : 29 July - 4 August	Other	Review & Preparation for Exam
Week 11 : 5 August - 11 August	Homework	Assignment 2 due

Attendance Requirements

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

General Schedule Information

The course consists of 3 hours of lectures, a 1-hour tutorial, and a 3-hour laboratory session each week.

Indicative Laboratory Schedule

There are 6 laboratory experiments spread out over the term. Note that each week, different students will do different experiments.

All the labs will start from **Week 2.**

Indicative Laboratory Schedule

Lab 1

Measurement of Antenna Radiation Patterns

Lab 2

Microwave Measurement Techniques

Lab 3

A Study of a Receive-only Satellite link

Lab 4

Digital Modulation and Coding

Lab 5

Study of GSM features using HP 8922M/S GSM test set

Lab 6

Investigation of the CDMA (IS-95) system

Course Resources

Prescribed Resources

Lecture Notes

A comprehensive set of typed lecture notes will available on the website. These typed lecture notes will take the role of the textbook, since no available textbook quite covers all the course material at the depth required of this course. These lecture notes are the reference of examinable material – they effectively play the role of the detailed course syllabus.

Textbooks

No available textbook covers all course topics; however several textbooks would still be extremely useful to students for reference.

Recommended textbooks:

- W. Stallings, “Wireless Communications and Networks, 2nd Ed.”; Pearson Prentice Hall, 2005.
- T.S. Rappaport, “Wireless Communications, Principles and Practice”; Prentice Hall, 1996/2002.
- B.A. Black, P.S. DiPiazza, B.A. Ferguson, D.R. Voltmer, and F.C. Berry, “Introduction to Wireless Systems”; Pearson Prentice Hall, 2008.

Recommended Resources

The following list of books will provide reference for various parts of the course, and can be found at the library as required.

Reference books:

- J. Proakis & M. Salehi, “Communication Systems Engineering”, Prentice-Hall, 2nd Edition, 2002.
- S. Haykin, “Communication Systems”, Wiley, 4th Edition, 2001.
- B. Lathi, “Modern Digital and Analog Communication systems”, Holt Saunders, (most recent edition).
- L.W. Couch II, “Digital and Analog Communication Systems”, Prentice-Hall, 5th Edition, 1997.
- M. Mouly and M-B. Pautet, “The GSM System for Mobile Communications.” Telecomm Publishing, 1992.
- J. Eberspaecher, H-J. Voegel, and C. Bettstetter, “GSM Switching, Services, and Protocols”, John Wiley and Sons, 2001.
- A.J. Viterbi, “CDMA – Principles of Spread Spectrum Communication”, Addison Wesley, 1995.
- R.G. Gallager, “Principles of Digital Communication”, Cambridge University Press, 2008.
- Goldsmith, “Wireless Communications”; Cambridge University Press, 2008.
- M. Schwartz, “Mobile Wireless Communications”; Cambridge University Press, 2008.
- T. Pratt, C.W. Bostian, and J.E. Allnuty, John Wiley & Sons, 2002.
- N. Benvenuto, R. Corvaja, T. Erseghe, & N. Laurenti, “Communication Systems”, Wiley, 2007.
- V.K. Garg, “IS-95 CDMA and cdma2000: Cellular/PCS System Implementation” Prentice Hall, 2000.
- S.R. Saunders and A. Aragon-Zavala, “Antennas and Propagation for Wireless Communication Systems”, Wiley, 2007
- T.T. Ha, Theory and Design of Digital Communication Systems”, Cambridge University Press, 2011.

In addition, the lecturer will make available the set of slides/overheads used in each lecture on the course website, for additional reference. The material in these slides will differ from the printed notes, in presentation, depth, and order of coverage, adjusted for effective presentation and communication. This material is examinable as well.

On-line resources

Moodle As a part of the teaching component, Moodle will be used to disseminate teaching materials, host forums and occasionally quizzes. Assessment marks will also be made available via Moodle: https://moodle.telt.unsw.edu.au/login/index.php.

Mailing list Announcements concerning course information will be given in the lectures and/or on Moodle and/or via email (which will be sent to your student email address).

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.

Administrative Matters On issues and procedures regarding such matters as special needs, equity and diversity, occupational health and safety, enrolment, rights, and general expectations of students, please refer to the School and UNSW policies: https://student.unsw.edu.au/guide https://www.engineering.unsw.edu.au/electrical-engineering/resources

OTHER MATTERS Dates to note

Important Dates are available at: https://student.unsw.edu.au/dates

Student Responsibilities and Conduct Students are expected to be familiar with and adhere to all UNSW policies (see https://student.unsw.edu.au/policy), and particular attention is drawn to the following:

Workload It is expected that you will spend at least 15 hours per week studying a 6 UoC course, from Week 1 until the final assessment, including both formal classes and independent, self-directed study. In periods where you need to complete assignments or prepare for examinations, the workload may be greater. Over-commitment has been a common source of failure for many students. You should take the required workload into account when planning how to balance study with employment and other activities.

Attendance Regular and punctual attendance at all classes is expected. UNSW regulations state that if students attend less than 80% of scheduled classes they may be refused final assessment.

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.

Work Health and Safety UNSW policy requires each person to work safely and responsibly, in order to avoid personal injury and to protect the safety of others.

Special Consideration and Supplementary Examinations You must submit all assignments and attend all examinations scheduled for your course. You can apply for special consideration when illness or other circumstances beyond your control interfere with an assessment performance. If you need to submit an application for special consideration for an exam or assessment, you must submit the application prior to the start of the exam or before the assessment is submitted, except where illness or misadventure prevent you from doing so. Be aware of the “fit to sit/ submit” rule which means that if you sit an exam or submit an assignment, you are declaring yourself well enough to do so and cannot later apply for Special Consideration. For more information and how to apply, see https://student.unsw.edu.au/special-consideration

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Derrick Wing Kwan Ng		415, EET Building		Individual meetings via appointments	No	Yes
Demonstrator	Xiaoyu Ai					No	No

Other Useful Information

Academic Information

I. Special consideration and supplementary assessment

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

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

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

II. Administrative matters and links

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

- Attendance
- UNSW Email Address
- Special Consideration
- Exams
- Approved Calculators
- Academic Honesty and Plagiarism
- Equitable Learning Services

III. Equity and diversity

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

IV. Professional Outcomes and Program Design

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

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