



## UNSW Course Outline

# ZEIT4297 Engineering Project Extension - 2024

Published on the 11 Feb 2024

## General Course Information

Course Code : ZEIT4297

Year : 2024

Term : Semester 1

Teaching Period : Z1

Is a multi-term course? : No

Faculty : UNSW Canberra

Academic Unit : School of Engineering and Technology

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : UNSW Canberra at ADFA

Campus : UNSW Canberra

Study Level : Undergraduate

Units of Credit : 6

### Useful Links

[Handbook Class Timetable](#)

## Course Details & Outcomes

### Course Description

This course is only available to those students who have finished their ZEIT4500 Engineering Project A with high standard (normally at least a DN grade) as a 6 UoC expansion of the original project as a technical elective course. In general, an expansion of the scope of the original

project is required.

## **Course Aims**

The main aim of this course is to provide an opportunity for undergraduate students to integrate all technical and management knowledges gained during their studies and use them to undertake an in-depth research investigation in an engineering topic selected by the students.

## **Relationship to Other Courses**

The course is an extension of the second half of the final year project, ZEIT4501. Enrollment in this course is based on invitation bases to students who have achieved a high standard of progress (HD overall mark) in ZEIT4500.

# Course Learning Outcomes

Course Learning Outcomes	Engineers Australia - Professional Engineer (Stage 1)
CLO1 : Demonstrate in-depth knowledge of a niche research area, as reported for assessment.	<ul style="list-style-type: none"> <li>• PEE2.1 : Application of established engineering methods to complex engineering problem solving</li> <li>• PEE3.1 : Ethical conduct and professional accountability</li> <li>• PEE3.3 : Creative, innovative and pro-active demeanour</li> <li>• PEE3.6 : Effective team membership and team leadership</li> </ul>
CLO2 : Exhibit communication skills for oral seminar, oral panel, and written medium, to a quality that has	<ul style="list-style-type: none"> <li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li> </ul>
CLO3 : Demonstrate information and digital literacy in defining the scope of the research in the broader context science and engineering.	<ul style="list-style-type: none"> <li>• PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain</li> <li>• PEE3.4 : Professional use and management of information</li> </ul>
CLO4 : Demonstrate rigour in analysis, critique and reflection within a design or research task.	<ul style="list-style-type: none"> <li>• PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline</li> <li>• PEE1.2 : Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline</li> <li>• PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline</li> <li>• PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline</li> <li>• PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline</li> <li>• PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline</li> <li>• PEE2.1 : Application of established engineering methods to complex engineering problem solving</li> <li>• PEE2.3 : Application of systematic engineering synthesis and design processes</li> <li>• PEE3.3 : Creative, innovative and pro-active demeanour</li> </ul>
CLO5 : Shown application of knowledge	<ul style="list-style-type: none"> <li>• PEE1.1 : Comprehensive, theory based</li> </ul>

<p>obtained herein, and building on that learnt throughout the degree, to solve a minor research problem.</p>	<p>understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline</p> <ul style="list-style-type: none"> <li>• PEE1.2 : Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline</li> <li>• PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline</li> <li>• PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline</li> <li>• PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline</li> <li>• PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline</li> <li>• PEE2.1 : Application of established engineering methods to complex engineering problem solving</li> <li>• PEE2.2 : Fluent application of engineering techniques, tools and resources</li> </ul>
<p>CLO6 : Experienced and refined methodology for management of a small project, as also observed through panel and peer interaction.</p>	<ul style="list-style-type: none"> <li>• PEE2.3 : Application of systematic engineering synthesis and design processes</li> <li>• PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain</li> <li>• PEE3.1 : Ethical conduct and professional accountability</li> <li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li> <li>• PEE3.3 : Creative, innovative and pro-active demeanour</li> <li>• PEE3.4 : Professional use and management of information</li> <li>• PEE3.5 : Orderly management of self, and professional conduct</li> <li>• PEE3.6 : Effective team membership and team leadership</li> </ul>
<p>CLO7 : Documented and adopted findings from work experience in Engineering, in Industry.</p>	<ul style="list-style-type: none"> <li>• PEE2.1 : Application of established engineering methods to complex engineering problem solving</li> <li>• PEE2.3 : Application of systematic engineering synthesis and design processes</li> <li>• PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain</li> </ul>

	<ul style="list-style-type: none"> <li>• PEE3.1 : Ethical conduct and professional accountability</li> <li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li> <li>• PEE3.4 : Professional use and management of information</li> </ul>
CLO8 : Indicated an insight into the diversity of Engineering through a course in specialist lectures.	<ul style="list-style-type: none"> <li>• PEE2.2 : Fluent application of engineering techniques, tools and resources</li> <li>• PEE2.3 : Application of systematic engineering synthesis and design processes</li> <li>• PEE3.1 : Ethical conduct and professional accountability</li> <li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li> </ul>

Course Learning Outcomes	Assessment Item
CLO1 : Demonstrate in-depth knowledge of a niche research area, as reported for assessment.	<ul style="list-style-type: none"> <li>• Project Seminar</li> <li>• Project Preliminary Report and Viva</li> <li>• Project Specific Deliverable</li> <li>• Project Research Summary</li> </ul>
CLO2 : Exhibit communication skills for oral seminar, oral panel, and written medium, to a quality that has	<ul style="list-style-type: none"> <li>• Project Seminar</li> <li>• Project Preliminary Report and Viva</li> <li>• Project Specific Deliverable</li> <li>• Project Research Summary</li> </ul>
CLO3 : Demonstrate information and digital literacy in defining the scope of the research in the broader context science and engineering.	<ul style="list-style-type: none"> <li>• Project Seminar</li> <li>• Project Preliminary Report and Viva</li> <li>• Project Specific Deliverable</li> <li>• Project Research Summary</li> </ul>
CLO4 : Demonstrate rigour in analysis, critique and reflection within a design or research task.	<ul style="list-style-type: none"> <li>• Project Preliminary Report and Viva</li> <li>• Project Specific Deliverable</li> <li>• Project Research Summary</li> </ul>
CLO5 : Shown application of knowledge obtained herein, and building on that learnt throughout the degree, to solve a minor research problem.	<ul style="list-style-type: none"> <li>• Project Seminar</li> <li>• Project Preliminary Report and Viva</li> <li>• Project Specific Deliverable</li> <li>• Project Research Summary</li> </ul>
CLO6 : Experienced and refined methodology for management of a small project, as also observed through panel and peer interaction.	<ul style="list-style-type: none"> <li>• Project Seminar</li> <li>• Project Preliminary Report and Viva</li> </ul>
CLO7 : Documented and adopted findings from work experience in Engineering, in Industry.	<ul style="list-style-type: none"> <li>• Project Specific Deliverable</li> <li>• Project Research Summary</li> </ul>
CLO8 : Indicated an insight into the diversity of Engineering through a course in specialist lectures.	<ul style="list-style-type: none"> <li>• Project Specific Deliverable</li> <li>• Project Research Summary</li> </ul>

# Learning and Teaching Technologies

Moodle - Learning Management System

## Learning and Teaching in this course

You may be allocated after-hours building access to specialist research laboratories should you require space to build hardware or conduct experiments. This is a decision taken by the Coordinator and/or the Panel on a needs basis and is subject to available resources. The Coordinator and/or the Panel can arrange this on your behalf with the Building Officer. Where possible we have installed fastening points so you can lock your computer/laptop in a secure fashion. The provision of suitable Kensington locks or similar is your responsibility.

During your work, you will undoubtedly obtain the likes of textbooks, software, equipment, etc. that should be returned to its source provider prior to completion of the project. You will be required to complete the return of such items, signed-off by the Panel and returned to the School office before any mark is released for this course.

Equipment should not be moved between laboratories without permission being obtained from the workshop staff. Removal of equipment outside the building requires your supervisor's approval.

If it is appropriate and you wish to take the completed work with you at the end of the project, then you **must purchase all components** yourself. If **any components** are purchased by the University you **will not be allowed** to take the completed work.

The School reserves the right to ask you to present or demonstrate your work in order to clarify issues arising in its examination. Should this be necessary then you will be notified before the end of the examination period. For this reason you should not dismantle or delete work prior to the end of the examination period, and you should not make arrangements to go on leave during this time.

Many of you will be working in specialist research laboratories, and workshops. The School provides student workshop facilities for your use, and provides training for use of the equipment. You will need instruction from the staff responsible for those areas on potential hazards and risks in those areas, and H&S methods to be adopted. The Panel can arrange this training as a group. General information on relevant Health and Safety policies and expectations is found [here](#).

In case that your project involves human research which is with or about people or their data or tissue/biological sample, then you will need to obtain Human Ethics Approval. More details can be found in the introduction briefing in Week 1 as well as the [Research Ethics site](#).

Access to Workshops and TSG, or if you need consumables to support your project, can only be arranged with your Panel. Please involve your supervisors in this. Only those with current competencies can use the Student Workshop. Access to the other workshops for project work can only be arranged with your Panel.

**If a student wishes to receive any TSG support from the workshops or any other laboratories, the student MUST submit a TSG plan summary by end of Week 5 of the first semester study to the student's supervisors and panel for approval and discussion with the School's TSG. No costs will be reimbursed to a student without prior panel approval being given.**

The academic staff involved in each of the Panels are provided on the Moodle site.

## **The Learning Management System**

Moodle is the Learning Management System used at UNSW Canberra. All courses have a Moodle site which will become available to students at least one week before the start of semester. Please find all help and documentation (including Blackboard Collaborate) at the [Moodle Support](#) page.

UNSW Moodle supports the following web browsers:

» Google Chrome 50+

» Safari 10+

\*\* Internet Explorer is not recommended

\*\* Addons and Toolbars can affect any browser's performance.

Operating systems recommended are:

Windows 7, 10, Mac OSX Sierra, iPad IOS10

For further details about system requirements click [here](#).

Log in to Moodle [here](#).

If you need further assistance with Moodle:

For enrolment and login issues please contact:

IT Service Centre

Email: [itservicecentre@unsw.edu.au](mailto:itservicecentre@unsw.edu.au)

Phone: (02) 9385-1333

International: +61 2 9385 1333

For all other Moodle issues please contact:

External TELT Support

Email: [externalteltsupport@unsw.edu.au](mailto:externalteltsupport@unsw.edu.au)

Phone: (02) 9385-3331

International: +61 2 938 53331

Opening hours:

Monday – Friday 7:30am – 9:30 pm

Saturday & Sunday 8:30 am – 4:30pm

## Other Professional Outcomes

A complete mapping of courses to Program Learning Outcomes can be found online [here](#).

UNSW aspires to develop globally focused graduates who are rigorous scholars, capable of leadership and professional practice in an international community. While Final Year Project applies to four programs with different sets of Program Learning Outcomes (PLOs), here, for additional clarity we define a superset of PLOs that contains individual PLOs of the program. Students will be encouraged to develop these by undertaking the course activities and mastering the knowledge content and will be assessed within the assessment tasks.

PL01: Students will be able to relate a quantitative, theory-based understanding of the sciences and fundamentals of their discipline area.

PL02: Students will be able to appropriately select and apply the mathematical, statistical, programming and computational tools and techniques which underpin their discipline area.

PL03: Students will demonstrate a comprehensive understanding of technical knowledge in their discipline areas and articulate directions of future research and knowledge development.

PL04: Students will synthesise engineering design practice, contextual factors, norms and



accountabilities in and the limitations.

PL05: Students will define, conduct experiments on and analyse complex, open-ended problems and apply appropriate methods for their solution.

PL06: Students will demonstrate proficiency in applying systematic engineering synthesis and design processes, and critically evaluating and effectively communicating the results and implications to all audiences.

PL07: Students will be able to operate in collaborative environments, as leader or member of interdisciplinary teams.

PL08: Students will demonstrate independence, creativity and ethical conduct, and explain the importance of user-focused and sustainable solutions.

## **Additional Course Information**

For course administration matters, the project coordinator is usually available for additional consultation during normal working hours; please email to make an appointment.

The obvious and most important members of staff missing from here are your Project Supervisor/s or Technical Advisors. You should arrange your first project meeting with your supervisor no later than the second week of the first project semester. Please make regular contact and use of them. Their role is to aid your learning in the chosen research area. In fact, they are your mentor. The guidance and significant knowledge in the area of research, as well as techniques for research that they can convey, are the most valuable resources. A Panel of academics familiar with your area, is also formed to guide you through your project, providing you with initial direction, to help you overcome barriers in the research process, as well as to assess how well you perform and adapt to the research. They give you feedback from the various parts of assessment. You should gain their advice on how to communicate in the assessments. You will have a formal meeting with the Panel, and other students whom they are guiding, on a monthly basis.

Where possible, you will be able to seek consultancy with the supervisor/s at any time during normal working hours. The best way to arrange this is by email. It is highly advised you make a regular appointment with your supervisor/s to discuss project and directions.

## **Academic Integrity and Plagiarism**

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to this principle of academic integrity. All students are expected to adhere to UNSW's Student Code of Conduct <https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf>

Plagiarism undermines academic integrity and is not tolerated at UNSW. *It is defined as using the words or ideas of others and passing them off as your own, and can take many forms, from deliberate cheating to accidental copying from a source without acknowledgement.*

For more information, please refer to the following:

<https://student.unsw.edu.au/plagiarism>

## Referencing

*Adapt the following 'Referencing' statements according to the practice within your School. In line with UNSW Canberra policy, undergraduate students must be instructed to use either the APA 7 or Chicago NB (notes and bibliography) referencing conventions.*

*In this course, students are required to reference following the APA 7 / Chicago NB referencing style. Information about referencing styles is available at: <https://guides.lib.unsw.adfa.edu.au/c.php?g=472948&p=3246720>*

## Study at UNSW Canberra

<https://www.unsw.adfa.edu.au/study>

Study at UNSW Canberra has lots of useful information regarding:

- Where to get help
- Administrative matters
- Getting your passwords set up
- How to log on to Moodle
- Accessing the Library and other areas.

## Additional Information as required

CRICOS Provider no. 00098G

The University of New South Wales Canberra.

# Assessments

## Assessment Structure

Assessment Item	Weight	Relevant Dates	Engineers Australia - Professional Engineer (Stage 1)
Project Seminar	10%	Start Date: Not Applicable Due Date: Not Applicable	<ul style="list-style-type: none"><li>• PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline</li><li>• PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline</li><li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li><li>• PEE3.3 : Creative, innovative and pro-active demeanour</li></ul>
Project Preliminary Report and Viva	25%	Start Date: Not Applicable Due Date: Not Applicable	<ul style="list-style-type: none"><li>• PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline</li><li>• PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline</li><li>• PEE2.1 : Application of established engineering methods to complex engineering problem solving</li><li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li><li>• PEE3.1 : Ethical conduct and professional accountability</li><li>• PEE3.3 : Creative, innovative and pro-active demeanour</li><li>• PEE3.4 : Professional use and management of information</li><li>• PEE3.5 : Orderly management of self, and professional conduct</li></ul>
Project Specific Deliverable	30%	Start Date: Not Applicable Due Date: 07/06/2024 11:59 PM	<ul style="list-style-type: none"><li>• PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline</li><li>• PEE1.2 : Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering</li></ul>

			<p>discipline</p> <ul style="list-style-type: none"> <li>• PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline</li> <li>• PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline</li> <li>• PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline</li> <li>• PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline</li> <li>• PEE2.1 : Application of established engineering methods to complex engineering problem solving</li> <li>• PEE2.2 : Fluent application of engineering techniques, tools and resources</li> <li>• PEE2.3 : Application of systematic engineering synthesis and design processes</li> <li>• PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain</li> <li>• PEE3.1 : Ethical conduct and professional accountability</li> <li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li> <li>• PEE3.3 : Creative, innovative and pro-active demeanour</li> <li>• PEE3.4 : Professional use and management of information</li> <li>• PEE3.5 : Orderly management of self, and professional conduct</li> <li>• PEE3.6 : Effective team membership and team leadership</li> </ul>
Project Research Summary	35%	Start Date: Not Applicable Due Date: 03/06/2024 11:59 PM	<ul style="list-style-type: none"> <li>• PEE1.1 : Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline</li> <li>• PEE1.2 : Conceptual understanding of the</li> </ul>

			<p>mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline</p> <ul style="list-style-type: none"> <li>• PEE1.3 : In-depth understanding of specialist bodies of knowledge within the engineering discipline</li> <li>• PEE1.4 : Discernment of knowledge development and research directions within the engineering discipline</li> <li>• PEE1.5 : Knowledge of engineering design practice and contextual factors impacting the engineering discipline</li> <li>• PEE1.6 : Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline</li> <li>• PEE2.1 : Application of established engineering methods to complex engineering problem solving</li> <li>• PEE2.2 : Fluent application of engineering techniques, tools and resources</li> <li>• PEE2.3 : Application of systematic engineering synthesis and design processes</li> <li>• PEE2.4 : Application of systematic approaches to the conduct and management of projects within the technology domain</li> <li>• PEE3.1 : Ethical conduct and professional accountability</li> <li>• PEE3.2 : Effective oral and written communication in professional and lay domains</li> <li>• PEE3.3 : Creative, innovative and pro-active demeanour</li> <li>• PEE3.4 : Professional use and management of information</li> <li>• PEE3.5 : Orderly management of self, and professional conduct</li> <li>• PEE3.6 : Effective team membership and team leadership</li> </ul>
--	--	--	---

# Assessment Details

## Project Seminar

### Assessment Overview

A Seminar of 12 minutes duration with 3 minutes of question time will be conducted in Week 11 and 12 of your second project semester the week. The audience of this seminar will be your supervisors, peers, academic and technical staff, and members of the general public. The academic members of the audience will assess this work.

### Course Learning Outcomes

- CL01 : Demonstrate in-depth knowledge of a niche research area, as reported for assessment.
- CL02 : Exhibit communication skills for oral seminar, oral panel, and written medium, to a quality that has
- CL03 : Demonstrate information and digital literacy in defining the scope of the research in the broader context science and engineering.
- CL05 : Shown application of knowledge obtained herein, and building on that learnt throughout the degree, to solve a minor research problem.
- CL06 : Experienced and refined methodology for management of a small project, as also observed through panel and peer interaction.

### Assessment information

In case of a granted 4297 extension, the student is allocated extra 2 minutes for their seminar duration.

### Assignment submission Turnitin type

This is not a Turnitin assignment

## Project Preliminary Report and Viva

### Assessment Overview

The student will in consultation with the supervisor/s develop an **Interim Report** that outlines the scope and significance of the intended research. It will define where this project sits in the wider context of its application, and will include a project management timeline. It will detail reading and progress made on the project up till the date of submission. This will serve as a document to address in the oral defence. **It should be submitted by email to the supervisor and the Panel Chair.**

**An oral defence or Viva** to a small panel of academics of your project direction, and partial work towards the objectives will be scheduled in Weeks 11 and 12 of your first project semester for

ZEIT4500. The submitted Preliminary Report above, will serve as supporting documentation in this defence. The members of the Panel will assign a mark. The format of the Viva will be communicated to you and the Panel.

### **Course Learning Outcomes**

- CL01 : Demonstrate in-depth knowledge of a niche research area, as reported for assessment.
- CL02 : Exhibit communication skills for oral seminar, oral panel, and written medium, to a quality that has
- CL03 : Demonstrate information and digital literacy in defining the scope of the research in the broader context science and engineering.
- CL04 : Demonstrate rigour in analysis, critique and reflection within a design or research task.
- CL05 : Shown application of knowledge obtained herein, and building on that learnt throughout the degree, to solve a minor research problem.
- CL06 : Experienced and refined methodology for management of a small project, as also observed through panel and peer interaction.

### **Assessment information**

The due date of the Interim Report is the 17th of May. The Viva will be held in Weeks 11 and 12, organized by individual Panel Chairs.

The Interim Report and Research Summary have a 10 page limit for the main body. In case of a granted 4297 extension, the Research Summary page limit is extended to 12 pages.

### **Assignment submission Turnitin type**

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

## **Project Specific Deliverable**

### **Assessment Overview**

A Project Specific Deliverable will be identified by your supervisor as reasonable documentation required to support and document the project work so it may be continued by others. This may include electronic working files and designs, documentation of the operations of tools and software used in the project, a traditional research thesis, etc. The form of this deliverable will be detailed in writing at the outset of your study and the Memorandum of Understanding (MoU) signed, and will have been recognised by the Panel as representing a similar workload as required of other students enrolled in this course. The Project Specific Deliverable should be provided directly to the supervisor by Monday, revision week of the second project semester, and the quality and content will form part of their assessment of your work.

### Course Learning Outcomes

- CL01 : Demonstrate in-depth knowledge of a niche research area, as reported for assessment.
- CL02 : Exhibit communication skills for oral seminar, oral panel, and written medium, to a quality that has
- CL03 : Demonstrate information and digital literacy in defining the scope of the research in the broader context science and engineering.
- CL04 : Demonstrate rigour in analysis, critique and reflection within a design or research task.
- CL05 : Shown application of knowledge obtained herein, and building on that learnt throughout the degree, to solve a minor research problem.
- CL07 : Documented and adopted findings from work experience in Engineering, in Industry.
- CL08 : Indicated an insight into the diversity of Engineering through a course in specialist lectures.

### Assignment submission Turnitin type

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

## **Project Research Summary**

### Assessment Overview

A 10 page **Research Summary** is a written reflection on the project definition, impact, significance, and conclusions will be submitted for review to the School Undergraduate Journal. It is a communication of your contribution to the focus area and engineering discipline. It will be submitted electronically in PDF format to the School student journal (JUER, <https://ojs.unsw.adfa.edu.au/index.php/juer/index>) .Guidelines on document structure are provided. Your supervisor and Panel will also provide guidance on how to write and structure this document to best communicate the significance of your project work to the area of research.

All research summary reports **must** go through the **Turnitin check** via the course Moodle site. All students must submit their draft versions two weeks before the project seminar week for a prelim screening so that they can use the **Originality Report** generated to improve their final version. The due date for the **final version summary and the corresponding Originality Report** is the Monday of Week 13 (or Week 14 for students who start their projects in Semester 1) of the second project semester. The Panel will assess and review this work, and may request revisions, whereupon the final submission completes this assessment.

### Course Learning Outcomes

- CL01 : Demonstrate in-depth knowledge of a niche research area, as reported for assessment.
- CL02 : Exhibit communication skills for oral seminar, oral panel, and written medium, to a quality that has



- CL03 : Demonstrate information and digital literacy in defining the scope of the research in the broader context science and engineering.
- CL04 : Demonstrate rigour in analysis, critique and reflection within a design or research task.
- CL05 : Shown application of knowledge obtained herein, and building on that learnt throughout the degree, to solve a minor research problem.
- CL07 : Documented and adopted findings from work experience in Engineering, in Industry.
- CL08 : Indicated an insight into the diversity of Engineering through a course in specialist lectures.

### Assessment information

All research summary reports must go through the Turnitin check via the course Moodle site. All students must submit their draft versions before the project seminar week for a prelim screening so that they can use the Originality Report generated to improve their final version. The due date for the final version summary and the corresponding Originality Report is the first day of week 13 of 4501. The Panel will assess and review this work, and may request revisions, whereupon the final submission completes this assessment.

### Assignment submission Turnitin type

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

## General Assessment Information

All marks obtained for assessment items during the session are provisional. The final mark as published by the university following the assessment review group meeting is **the only official mark**.

**This study stretches across two semesters with an EC grade provided in the first session, updated to final grade at the conclusion of the courses.** In these courses you shall undertake a body of work under the technical supervision of one or more academic staff, and guidance of a group of interested academics (The Panel). The topic of this research will be decided in consultation with you and the supervisors, and allocated on the basis of availability of staff and resources. By default, all student have approached their potential supervisor and have already chosen and have been allocated a project before their first semester of project work start. **The coordinator's default position is to disallow any student who has failed their project previously from undertaking a new project on the same research topic.**

The Head of School reserves the right to remove a student's enrolment if performance is deemed unsatisfactory. At mid-project the Panel will decide if sufficient progress has been demonstrated to allow continuation onto ZEIT4501. A high standard of progress may result in an invitation to enrol also in an additional 6 UoC expansion of the project (ZEIT4297) as a **technical elective**

**course.** For unsatisfactory performance a FL grade will be recorded, and a new project and re-enrolment in ZEIT4500 will be required.

Any student who receives a mark in the range 46- 49 in a course will have their performance reviewed by the school/discipline assessment meeting. If the meeting is satisfied that the student has demonstrated achievement of all of the learning outcomes at least once, a grade of 50 PS will be recommended. The meeting should record its reasons for deciding to recommend 50 PS, or to leave the student's mark under 50.

Final Year Project (FYP) enrolment is flexible. ZEIT4500 constitutes the first half of FYP (H1); ZEIT4501 constitutes the second half of FYP (H2). A typical enrolment is 4500 (H1) in S1 and 4501 (H2) in S2. To elucidate varying semester lengths enrolments, this document details assessment against an N-week long semester (In 2023, both S1 and S2 have N=13). (N-0) means 13th week; (N1) means 12th week, etc.

### **Late Submission**

Unless prior arrangement is made with the lecturer or a formal application for special consideration is submitted, a penalty of 5% of the total available mark for the assessment will apply for each day that an assessment item is late up to a maximum of 5 days (120 hours) after which an assessment can no longer be submitted and a grade of 0 will be applied.

All requests for special consideration must be formally submitted via MyUNSW prior to the assessment due date. Abiding by the framework, should you for reasons of illness or misadventure fail to meet the submission dates, or be unavailable for the oral presentations above, appropriate documentation should be presented as soon as practicable after recovery, and arrangements will be made in consultation with the Engineering Project Coordinator for a late submission.

Supplementary assessment in the event of failure of the course is generally not available, and should not be expected.

### **Whole course moderation process**

It is important in such a large and diverse course as this to have confidence in the standards being expected of students, and that the marking reflects those standards. It is reasonable that student and staff will expect the school to take every possible step to ensure the quality, scope and assessment are equitable across all streams and Panels in this Engineering Project course,

so such steps are outlined here for their information.

Students should note the offering of projects and the MoU detailing student contributions, are closely monitored by the Panels, and the Coordinator, to ensure equity in what is defined as the Project Specific Deliverable; Expected scope and standards of evidence required in the submissions of all projects are discussed by the Panel academics prior to the project starting; Staff and students alike are regularly reminded of the marking schedule as a precursor to assessing all parts of this work; The Coordinator and other select supervisors sit on multiple Panels to moderate expectations. In this context they are able to align the marking standards and interpretations in an equitable way; Written assessments are also sometimes read by members of other Panels, as well as the Coordinator, to detect any essence of difference, and if these arise, discussions are undertaken to resolve them; The Panel meetings held regularly, provide a forum to discuss and illuminate expectations; Panel chairs have access to the same resources and instructions provided to the students, on the Moodle site, and reflect these to their Panel; Importantly, refinement of this process is integral to the continuing improvement of the course. Academic staff and students provide crucial feedback that strengthens this course.

## **Use of Generative AI in Assessments**

### **1. SIMPLE EDITING ASSISTANCE**

*For this assessment task, you may use standard editing and referencing software, but not Generative AI. You are permitted to use the full capabilities of the standard software to answer the question (e.g. you may wish to specify particular software such as Microsoft Office suite, Grammarly, etc.).*

*If the use of generative AI such as ChatGPT is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.*

### **2. PLANNING ASSISTANCE**

*(This is most relevant to longer research assessments)*

*As this assessment task involves some planning or creative processes, you are permitted to use software to generate initial ideas. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e. only occasional AI generated words or phrases may form part of your final submission. It is a good idea to keep copies of the initial*

*prompts to show your lecturer if there is any uncertainty about the originality of your work.*

*[Alternative wording: You are required to submit the original AI generated responses as set out below] (Consider what would be the minimum requirement for you to be satisfied of the originality of the submitted work, and the workload implications of any detailed examination as part of the marking).*

*If the outputs of generative AI such as ChatGPT form a part of your submission, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.*

*\* To cite: OpenAI (Year Accessed). ChatGPT. OpenAI. <https://openai.com/models/chatgpt/>*

*\* Please note that the outputs from these tools are not always accurate, appropriate, nor properly referenced. You should ensure that you have moderated and critically evaluated the outputs from generative AI tools such as ChatGPT before submission.*

APA referencing format is recommended in your project report.

<https://www.student.unsw.edu.au/how-cite-references-apa-style>

### **Grading Basis**

Standard

### **Requirements to pass course**

The overall passing mark is set at 50%.

In addition, it is a mandatory requirement of these courses that you attend at least 8 specialist lectures (due to COVID-19 unpredictability, all 8 can be consumed online as webinars), and will have completed the practical work experience.

While attendance of the specialist lectures will not contribute to the final mark of the course, you must keep a brief record of the specialist lectures attended by using the summary form available on Moodle and upload it to the course Moodle site by the Friday of Week 13.

Instructions on work experience are dispatched to you through the Work Experience Moodle Site. You must lodge all the required documentation to that Moodle site for Work Experience as soon as the requirements are completed. Failure to provide either set of documentation will result in a Withheld (WD) grade.

# Course Schedule

## Attendance Requirements

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

## General Schedule Information

Due to the nature of this course, there will be NO regular lecture during the semester time.

The two reserved time slots (1hr and 2hrs) simply ensure that all students shall have two free time slots per week to meet with their supervisors and/or panel meetings. However, **in the first week of each semester, two compulsory briefings will be arranged, and all students must attend.** The first briefing will cover matters related to the course learning outcomes, the overall project schedule, panel meetings, and support from the Technical Support Group (TSG). The second briefing will focus on library support and report writing skills. **In addition, in each semester up to three compulsory seminars jointly organized by the School and Engineer Australia may be arranged.**

Each panel will organise a set of meeting times that work for everyone. **You should expect to have fortnightly panel meetings (around 4-6 meetings per semester + VIVA/Seminar).** Important deadlines are indicated in the Assessment section.

The structure of the research topic is one for you to develop under the guidance of your supervisor(s). There is a significant opportunity within the semester timetabling during normal hours for you to undertake the work. Use the time between scheduled courses to make progress on this project.

It is highly recommended that you participate in regularly scheduled meetings with your supervisor/s to discuss project objectives, progress, and skills. Similar consultations with the TSG are provided for those undertaking hardware development projects to aid you in structuring timelines for production and assembly and to learn from experienced Mentors. **It is your responsibility, with guidance from these mentors and your supervisor/s, to manage your outputs to meet workshop schedules, such that you are able to complete the objectives of your research.**

## Course Resources

### Prescribed Resources

*There are no required resources for students. Recommended resources will be specified by*

*students' individual project supervisors.*

## Recommended Resources

Students might find the following references useful for improving research and technical writing skills:

[User Guides, Manuals, and Technical Writing: A Guide to Professional English](#)

Wallwork, Adrian, New York : Springer; 2014

[Research methods for engineers](#)

Thiel, David V., Cambridge : Cambridge University Press; 2014

The references can be accessed via the links below through the library:

<https://link-springer-com.wwwproxy1.library.unsw.edu.au/book/10.1007/978-1-4939-0641-3>

<https://www-cambridge-org.wwwproxy1.library.unsw.edu.au/core/books/research-methods-for-engineers/DD1A91B7C81C464EE764EFA89BF94AAB>

## Additional Costs

Please discuss with individual supervisors for any cost incurred for research activities.

## Course Evaluation and Development

Students are encouraged to provide feedback to the course coordinator anytime in any form during the course. The coordinator will act accordingly depending on the urgency and availability of resources. Any request regarding research activities can be discussed with academic supervisors. Students need to talk to the course coordinator when having difficulties communicating with academic supervisors.

One of the key priorities in the 2025 Strategy for UNSW is a drive for academic excellence in education. One of the ways of determining how well UNSW is progressing towards this goal is by listening to our own students. Students can also provide feedback during the semester via: direct contact with the lecture, Student-Staff Liaison Committee meetings in schools, informal feedback conducted by staff, and focus groups. Student opinions really do make a difference. Refer to the Moodle site for this course to see how the feedback from previous students has contributed to the course development.

**Important note:** Students are reminded that any feedback provided should be constructive and professional and that they are bound by the Student Code of Conduct Policy

<https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf>

## Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Jianfeng Xue		R128 B20	51145225	Available by appointment	No	Yes

## Other Useful Information

### Academic Information

#### Course Evaluation and Development

One of the key priorities in the 2025 Strategy for UNSW is a drive for academic excellence in education. One of the ways of determining how well UNSW is progressing towards this goal is by listening to our own students. Students will be asked to complete the myExperience survey towards the end of each course.

Students can also provide feedback during the semester via: direct contact with the lecturer, the “On-going Student Feedback” link in Moodle, Student-Staff Liaison Committee meetings in schools, informal feedback conducted by staff, and focus groups (where applicable). Student opinions really do make a difference. Refer to the Moodle site for your course to see how the feedback from previous students has contributed to the course development.

**Important note:** Students are reminded that any feedback provided should be constructive and professional and that they are bound by the Student Code of Conduct.

<https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf>

#### Equitable Learning Services (ELS)

Students living with neurodivergent, physical and/or mental health conditions or caring for someone with these conditions may be eligible for support through the Equitable Learning Services team. Equitable Learning Services is a free and confidential service that provides

practical support to ensure your mental or physical health conditions do not adversely affect your studies.

Our team of dedicated **Equitable Learning Facilitators (ELFs)** are here to assist you through this process. We offer a number of services to make your education at UNSW easier and more equitable.

Further information about ELS for currently enrolled students can be found at: <https://www.student.unsw.edu.au/equitable-learning>

## Academic Honesty and Plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to this principle of academic integrity. All students are expected to adhere to UNSW's Student Code of Conduct. Find relevant information at: [Student Code of Conduct \(unsw.edu.au\)](https://www.student.unsw.edu.au/student-code-of-conduct)

Plagiarism undermines academic integrity and is not tolerated at UNSW. It is defined as using the words or ideas of others and passing them off as your own, and can take many forms, from deliberate cheating to accidental copying from a source without acknowledgement.

For more information, please refer to the following:

<https://student.unsw.edu.au/plagiarism>

## Submission of Assessment Tasks

### Special Consideration

Special Consideration is the process for assessing and addressing the impact on students of short-term events, that are beyond the control of the student, and that affect performance in a specific assessment task or tasks.

Applications for Special Consideration will be accepted in the following circumstances only:

- Where academic work has been hampered to a substantial degree by illness or other cause;
- The circumstances are unexpected and beyond the student's control;
- The circumstances could not have reasonably been anticipated, avoided or guarded against by the student; and either:



(i) they occurred during a critical study period and was 3 consecutive days or more duration, or a total of 5 days within the critical study period; or

(ii) they prevented the ability to complete, attend or submit an assessment task for a specific date (e.g. final exam, in class test/quiz, in class presentation)

Applications for Special Consideration must be made as soon as practicable after the problem occurs and at the latest within three working days of the assessment or the period covered by the supporting documentation.

By sitting or submitting the assessment task the student is declaring that they are fit to do so and cannot later apply for Special Consideration (UNSW 'fit to sit or submit' requirement).

Sitting, accessing or submitting an assessment task on the scheduled assessment date, after applying for special consideration, renders the special consideration application void.

Find more information about special consideration at: <https://www.student.unsw.edu.au/special/consideration/guide>

Or apply for special consideration through your [MyUNSW portal](#).

### **Late Submission of assessment tasks (other than examinations)**

UNSW has a standard late submission penalty of:

- 5% per day,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

### **Electronic submission of assessment**

Except where the nature of an assessment task precludes its electronic submission, all assessments must be submitted to an electronic repository, approved by UNSW or the Faculty, for archiving and subsequent marking and analysis.

### **Release of final mark**

All marks obtained for assessment items during the session are provisional. The final mark as published by the university following the assessment review group meeting is the only official mark.