

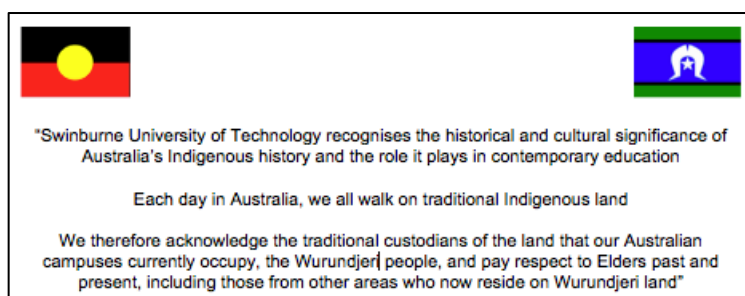
Unit Outline

COS70008 Technology Innovation Research and Project

Semester 1 2025

Please read this Unit Outline carefully. It includes:

- PART A** Unit summary
- PART B** Your Unit in more detail
- PART C** Further information



PART A: Unit Summary

Unit Code(s)	COS70008
Unit Title	Technology Innovation Research and Project
Duration	One semester
Total Contact Hours	72 Hours
Requisites:	
Pre-requisites	62.5 credit points
Co-requisites	Nil
Concurrent pre-requisites	Nil
Anti-requisites	Nil
Assumed knowledge	Nil
Credit Points	25 credit points
Campus/Location	Hawthorn
Mode of Delivery	Blended
Assessment Summary	<p>Individual</p> <p>Research paper review and Ethics practices: 10%</p> <p>Project brief: 10%</p> <p>Final project report: 15%</p> <p>Reflection report: 15%</p> <p>Team</p> <p>Innovation Concept: 25%</p> <p>Project Demonstration/Presentation: 25%</p>

Aims

This is a project-based unit in which students work in teams to innovate a solution to an industry driven challenge. The project will have a substantial emphasis on innovation. Teams of students will have a staff member as a 'facilitator' whilst working on this project. Student teams will be allowed to select a project from a range of industry-oriented innovation projects aligned to their chosen specialisation. This unit forms part of the student specialisation selection if their course undertaken has a choice of specialisation.

Unit Learning Outcomes

Students who successfully complete this Unit should be able to:

1. Describe the practices used in real-world research including legal, commercial, and ethical frameworks, and apply an evidence-based approach to technology innovation
2. Research the literature and compare viewpoints and arguments, and identify gaps in knowledge-generating innovation concepts on topics in the students' chosen specialisation

3. Apply critical knowledge of design fundamentals and Innovative practices to explore technology challenges for real-world problems related to students' chosen specialisation
4. Apply a systematic approach to critically evaluate design solutions related to innovative technologies in the students' chosen specialisation
5. Appraise innovative technologies related to students' chosen specialisation to design, develop and present design solutions to end-users within a team environment
6. Develop reflective practices to interpret and critically evaluate design solutions by using self and peer-evaluation

Graduate Attributes

This unit may contribute to the development of the following Swinburne Graduate Attributes:

- GA1 Communication - Verbal communication
- GA2 Communication - Communicating using different media
- GA3 Teamwork - Collaboration and negotiation
- GA4 Teamwork – Teamwork roles and processes
- GA5 Digital literacies– Information literacy
- GA6 Digital Literacies– Technical literacy

Content

- Technical content in the selected specialisation or course discipline
- Technology innovation and design techniques relevant to the selected specialisation or course discipline
- Social and cultural technology innovation perspectives
- Interdisciplinary team dynamics
- Technology project management
- Ethical, legal and commercial constraints to research
- Current research practices in industry, government, and not-for-profit organisations.
- Research methods including quantitative, qualitative, action, statistical research
- Techniques and tools for sourcing information and referencing
- Professional technical writing

PART B: Your Unit in more detail

Unit Improvements

Feedback provided by previous students through the Student Survey has resulted in improvements that have been made to this unit. Recent improvements include:

- Updated materials and assignments
- Students must attend the workshop 1 and workshop 2 on-campus

Unit Teaching Staff

Name	Role	Email	Consultation Times
Dr Siva Chandrasekaran	Unit Convenor Seminar (professional learning)	schandrasekaran@swin.edu.au	By email Working Hours
Dr Naveed Ali	Seminar and workshop facilitator for Software Development/Cloud Computing	nali1@swin.edu.au	By email Working Hours
Dr Eureka Priyadarshini	Seminar and workshop facilitator for Data Science	wpriyadarshani@swin.edu.au	By email Working Hours
Yasas Akurudda Liyanage Don	Seminar and workshop facilitator for Cybersecurity/Network systems	yakuruddaliyanagedon@swin.edu.au	By email Working Hours
Dr James Hamlyn-Harris	Workshop facilitator for professional learning	jhamlynharris@swin.edu.au	By email Working Hours

Learning and Teaching Structure

Activity	Total Hours	Hours per Week	Teaching Period Weeks
Seminars	24 hours	2 hours	Weeks 1 to 12
Blended Workshops	48 hours	4 hours	Weeks 1 to 12

Each student should attend the below to meet the standard of 25 CP unit

- Two one-hour seminars will be delivered online each week:
 - Seminar 1 is discipline-based, undertaken by the facilitator, who will cover the specialised knowledge and skills for different specialisation/disciplines.
 - Seminar 2, hosted by the professional learning facilitator, who will cover the general knowledge and professional skills that helps to undertake Team project.
- Two two-hour workshops will be delivered each week:
 - Workshop 1, hosted by the discipline-based facilitator, who will facilitate the technical project based on specialisation/discipline.
 - Workshop 2 hosted by the professional learning facilitator who will cover the fundamental practices for project delivery and management.
- Non-scheduled learning events and activities, mainly the concrete development work for projects: approx. 240 hours for the whole semester.

Week by Week Schedule

Week	Week Beginning	Teaching and Learning Activity Student Task or Assessment			
		Seminar 1	Workshop 1	Seminar 2	Workshop 2
1	03 March	Introduction to the Unit / Discipline-based seminar	Introduction to the Unit/Project and formation of student teams	Innovation & Research	Student Tasks on Innovation & Research
2	10 March	Discipline-based seminar	Problem identification	Conducting a literature review	Student tasks on Conducting a literature review

3	17 March	Discipline-based seminar	Research of project learning issues	Applying literature to an innovation project	Student tasks on Applying literature to research paper review Assessment – Research paper review and ethics practice due 21 st Mar 23:59
4	24 March	Discipline-based seminar	Innovation Concept/research report	Professional writing	Student tasks on Professional writing Project brief due 28 th Mar 23:59
5	31 March	Discipline-based seminar	Design and Development	Professional communication	Student tasks on Professional communication
6	07 April	Discipline-based seminar	Design and Development	Communicating a design process	Student tasks on Communicating a design process Assessment – Innovation concept due 11 Apr 23:59
Easter Break Starts from 17 th April to 21 st April					
7	21 April	Discipline-based seminar	Modelling and simulation or building	Communicating a design solution	Student tasks on Communicating a design solution
8	28 April	Discipline-based seminar	Modelling and simulation or building	Reflection & reflective practice	Student tasks on Reflection & reflective practice
9	05 May	Discipline-based seminar	Prototyping/Testing	Academic integrity & plagiarism	Student tasks on Academic integrity & plagiarism
10	12 May	Discipline-based seminar	Testing and Evaluation, Client feedback	Professional ethics	Student tasks on Professional ethics
11	19 May	Discipline-based seminar	Client/panel presentation	IP, Legal & other Professional issues	Student tasks on IP, Legal & other Professional issues Assessment -Team Project Presentation/demonstration due week 11 21 st May 23:59
12	26 May	Discipline-based seminar	Product Delivery/project final reporting	Professional seminar wrap-up	Student tasks on Professional seminar wrap-up Assessment Individual Final Project Report week 12 due 30 th May 23:59 & Reflection report due 2 nd June 23:59

Assessment

a) Assessment Overview

Tasks and Details	Individual or Group	Weighting	Unit Learning Outcomes that this assessment task relates to	Assessment Due Date
Project brief	Individual	10%	1,2	21 st Mar 23:59
Research paper review and Ethics practice	Individual	10%	1,2	28 th Mar 23:59
Final project report	Individual	15%	3,4,5,6	30 th May 23:59
Reflection report	Individual	15%	3,4,5,6	2 nd June 23:59
Team Innovation Concept	Team	25%	3,4,5,6	11 th Apr 23:59
Team Project Demonstration/Presentation	Team	25%	3,4,5,6	21 st May 23:59

Assessment Requirements	Details
b) Use of generative AI (genAI) in this unit	<p>The valid use of genAI in this unit is as follows:</p> <ul style="list-style-type: none"> • AI is used to complete certain elements of the task, with students providing discussion or commentary on the AI-generated content, images and tables. • Students should justify the use of AI content by providing enough explanation with proper references, citations. • Any assessments submitted with genAI content will not be assessed <ul style="list-style-type: none"> ○ If there is no proper discussions or commentary provided on the AI-generated content ○ If there is not enough explanation with proper references, citations within the generated content, images or tables. ○ There will be percentage of penalty applied to the whole submission based on the percentage of genAI content.
c) Hurdle requirements	<p>To pass this unit, you must:</p> <ul style="list-style-type: none"> • achieve an overall mark for the unit of 50% or more, and • complete the project to an acceptable standard. A rubric will be used to determine if students have met the acceptable standard. The rubric is available on Canvas. <p>Students who do not successfully achieve hurdle requirement (ii) in full, will receive a maximum of 45% as the total mark for the unit and will not be eligible for a conceded pass.</p>
d) Final assessment period	<p>If the unit you are enrolled in has a final assessment (including invigilated exams), you will be expected to be available for the entire final assessment period including any Special Exam period.</p>
e) Submission requirements	<p>Assignments and other assessments are generally submitted online through the Canvas assessment submission system which integrates with the Turnitin.</p> <p>Please ensure you keep a copy of all assessments that are submitted.</p> <p>In cases where a hard copy submission is required an Assessment Cover Sheet must be submitted with your assignment. The standard Assessment Cover Sheet is available from the Submitting work webpage or www.swinburne.edu.au/studentforms/</p>
f) Extensions and late submissions	<p>Late Submissions - Unless an extension has been approved, late submissions will result in a penalty. You will be penalised 10% of your achieved mark for each calendar day the task is late, up to a maximum of 5 calendar days. After 5 calendar days, a zero result will be recorded.</p>

<p>g) Referencing</p>	<p>To avoid breaching academic integrity, you are required to provide references whenever you include information from other sources in your work and acknowledge when you have used Artificial Intelligence (AI) tools (such as ChatGPT). Further details regarding academic integrity are available in Section C of this document. Referencing conventions required for this unit are: Don't use materials, images, information from internet, other resources in your team/individual submissions. If you want to refer to an idea, methodology, process etc., you need to refer it by citing the original author. You have to redraw/rephrase the idea, process or the work to be submitted as your work for assessment.</p> <p>Helpful information on referencing can be found at http://www.swinburne.edu.au/library/referencing/</p>
<p>h) Groupwork guidelines</p>	<p>A group assignment is the collective responsibility of the entire group, and if one member is temporarily unable to contribute, the group should be able to reallocate responsibilities to keep to schedule. In the event of longer-term illness or other serious problems involving a member of group, it is the responsibility of the other members to notify immediately the Unit Convenor or relevant tutor.</p> <p>Group submissions must be submitted with an Assignment Cover Sheet, signed by all members of the group.</p> <p>All group members must be satisfied that the work has been correctly submitted. Any penalties for late submission will generally apply to all group members, not just the person who submitted.</p> <p>Individual - An individual assessment must be submitted in accordance with the expectation of different assessment to be submitted by due date. If the work is part of a teamwork (project) where an individual need to work on his project brief/research report/final report, an individual team member should have continued communication with the team members and attend all classes, workshops, and team meetings. In the event of longer-term illness or other serious problems involving a member of group, it is responsibility of an individual to immediately notify the Unit convenor or relevant tutor/facilitator.</p>

Required Textbook(s)

The required textbook(s) are available through the Swinburne Library or can be purchased from bookshops.

Recommended Reading Materials

The Library has a large collection of resource materials, both texts and current journals. Listed below are some references that will provide valuable supplementary information to this unit. It is also recommended that you explore other sources to broaden your understanding.

PART C: FURTHER INFORMATION



For further information on any of these topics, refer to Swinburne's Student webpage <http://www.swinburne.edu.au/student/>

Student behaviour and wellbeing

All students are expected to: act with integrity, honesty and fairness; be inclusive, ethical and respectful of others; and appropriately use University resources, information, equipment and facilities. All students are expected to contribute to creating a work and study environment that is safe and free from bullying, violence, discrimination, sexual harassment, vilification and other forms of unacceptable behaviour.

The [Student Charter](#) describes what students can reasonably expect from Swinburne in order to enjoy a quality learning experience. The Charter also sets out what is expected of students with regards to your studies and the way you conduct yourself towards other people and property.

You are expected to familiarise yourself with University regulations and policies and are obliged to abide by these, including the [Student Academic Misconduct Regulations](#), [Student General Misconduct Regulations](#) and the [People, Culture and Integrity Policy](#). Any student found to be in breach of these may be subject to disciplinary processes.

Examples of expected behaviours are:

- conducting yourself in teaching areas in a manner that is professional and not disruptive to others
- following specific safety procedures in Swinburne laboratories, such as wearing appropriate footwear and safety equipment, not acting in a manner which is dangerous or disruptive (e.g. playing computer games), and not bringing in food or drink
- following emergency and evacuation procedures and following instructions given by staff/wardens in an emergency response

Canvas

You should regularly log on to the Swinburne learning management system, Canvas. You can access Canvas via the [Student login](#) webpage or <https://swinburne.instructure.com/> Canvas is updated regularly with important unit information and communications.

Communication

All communication will be via your Swinburne email address. If you access your email through a provider other than Swinburne, then it is your responsibility to ensure that your Swinburne email is redirected to your private email address.

Academic Integrity

Academic integrity is about taking responsibility for your learning and submitting work that is honestly your own. It means acknowledging the ideas, contributions and work of others; referencing your sources and acknowledging the use of artificial intelligence tools (such as ChatGPT, DALL·E, Midjourney); contributing fairly to group work; and completing tasks, tests and exams without cheating. Artificial intelligence tools should only be used where approved by the Unit Convenor.

Swinburne University uses the Turnitin system, which helps to identify inadequate citations, poor paraphrasing and unoriginal work in assignments that are submitted via Canvas. Your Unit Convenor will provide further details.

Plagiarising, cheating and seeking an unfair advantage in a test, exam or assessment task are all breaches of academic integrity and treated as academic misconduct. Examples of breaches of academic integrity include:

- using the whole or part of computer program written by another person as your own without appropriate acknowledgement
- copying the whole or part of somebody else's work in an assessment, including material from a published work, a website or database, a set of lecture notes, current or past student's work, or any other person's work
- using output from artificial intelligence tools (e.g. ChatGPT) in whole or part without acknowledgement and/or without the approval of the Unit Convenor
- poorly paraphrasing somebody else's work
- using a musical composition or audio, visual, graphic and photographic work created by another without acknowledgment
- using objects, artefacts, costumes or models created by another person and presenting them as your own
- submitting assessments that have been developed by another person or service (paid or unpaid), referred to as contract cheating
- presenting or submitting assignments or other work in conjunction with another person or group of people when that work should be your own independent work.
- enabling others to cheat, including letting another student copy your work or by giving access to a draft or completed assignment.

The penalties for academic misconduct can be severe, ranging from a zero grade for an assessment task through to exclusion from Swinburne.

For further details, see <https://www.swinburne.edu.au/student-login/academic-integrity/>

Student support

Swinburne offers a range of services and resources to help you complete your studies successfully. Your Unit Convenor or studentHQ can provide information about the study support and other services available for Swinburne students. See <https://www.swinburne.edu.au/life-at-swinburne/student-support-services/> for further information.

Special consideration

If your studies have been adversely affected due to serious and unavoidable circumstances outside of your control (e.g. severe illness or unavoidable obligation), you may be able to apply for special consideration (SPC).

Applications for Special Consideration are submitted via the SPC online tool normally no later than 5.00pm on the third working day after the submission/sitting date for the relevant assessment component. See <https://www.swinburne.edu.au/life-at-swinburne/student-support-services/special-consideration-assistance/>

Accessibility needs

Sometimes students with a disability, a mental health or medical condition or significant carer responsibilities require reasonable adjustments to fully access and participate in education. Swinburne's AccessAbility Services can develop an 'Education Access Plan' that includes the services and reasonable adjustments that you need. The plan makes recommendations to University teaching and examination staff.

It is recommended that you register with AccessAbility Services within one week after the commencement of your unit to allow the University to make reasonable adjustments.

Review of marks

An independent marker reviews all fail grades for major assessment tasks. In addition, a review of assessment is undertaken if your final result is between 45 and 49 or within 2 marks of any grade threshold.

You can ask the Unit Convenor to check the result for an assessment item or your final result. Your request must be made in writing within 10 working days of receiving the result. The Unit Convenor can discuss the marking criteria with you and check the aggregate marks of assessment components to identify if an error has been made. This is known as local resolution.

If you are dissatisfied with the outcome of the local resolution, you can lodge a formal complaint.

Feedback, complaints and suggestions

In the first instance, discuss any issues with your Unit Convenor. If your concerns are not resolved or you would prefer not to deal with your Unit Convenor, then you can complete a feedback form.

See <https://www.swinburne.edu.au/corporate/feedback/>

Advocacy

If you require assistance with any academic issues, University statutes, regulations, policies and procedures, you are advised to seek advice from an Independent Advocacy Officer at Swinburne Student Life. Talking to an Advocacy Officer is free, independent and confidential.

For more information and booking an appointment, please see <https://www.swinburne.edu.au/current-students/student-services-support/advocacy/>