School of Science, Computing and Emerging Technologies

Unit Outline

COS80029

Technology Application Project

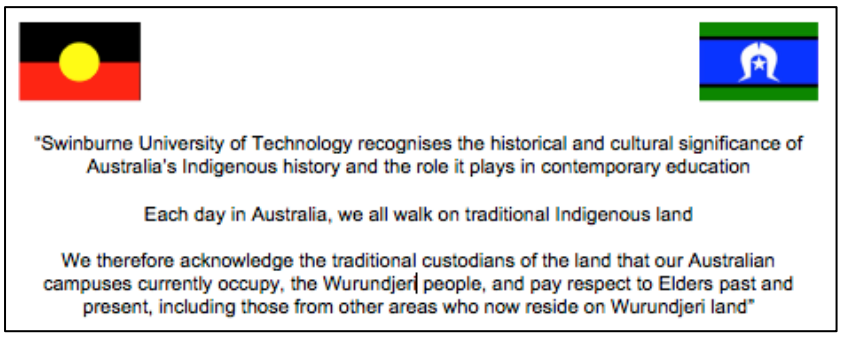
Semester 2 2025

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)		COS80029
Unit Title		Technology Application Project
Duration		One semester or equivalent
Total Contact Hours		72 hours
Requisites:		
	Pre-requisites	COS70008 Technology Innovation Project
	Co-requisites	Nil
	Concurrent pre-requisites	Nil
	Anti-requisites	Nil
	Assumed knowledge	Project management knowledge is an advantage.
Credit Points		25 credit points
Campus/Location		Hawthorn
Mode of Delivery		Blended: online lectures plus on-campus classes & workshops
Assessment Summary		Project Concept Design (Group): 15% Progress Evaluation (Individual): 15% Project Demonstration/Presentation (Group): 15% Project Report (Group): 20% Final Production (Individual): 35%

Aims

This is a project-based unit in which students work in teams to apply a solution to an industry driven challenge. The project will have a substantial emphasis on technology application. 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 application projects aligned to their chosen specialisation or course discipline.

Unit Learning Outcomes

Students who successfully complete this unit can:

1. Select and apply appropriate technologies and sources of information to provide cost-effective solutions to real-life problems in the context of a technology application project
2. Appraise the technology challenges by independently performing ethical, scholarly and applied research
3. Select and apply proper research methods and practices to interpret and critically appraise data ethically acquired during technology application
4. Plan, design, develop, and present solutions for a real-life project in a team environment that demonstrates scholarship in a field relevant to technology application, with a strong emphasis on ethical considerations and cyber security
5. Demonstrate an understanding of the relationships between the knowledge studied in technical units and its practical application in a real-life organisational setting, through reflective practice, and self and peer evaluation

6. Demonstrate an awareness and understanding of professional behaviours as well as social and cultural perspectives in an organisational context

Graduate Attributes

The Swinburne Graduate Attributes describe the capability of our graduates to use knowledge, skills and behaviours to contribute to society meaningfully and positively. They include professional, self-directed learning and future-ready skills.

This unit contributes to the development of the following Swinburne Graduate Attributes:

- GA1 Communication 1 - Verbal Communication
- GA2 Communication - Communicating using different media
- GA3 Teamwork 1 - Collaboration and negotiation
- GA4 Teamwork 2 - Teamwork roles and processes
- GA5 Digital literacies– Information literacy
- GA6 Digital Literacies– Technical literacy

Other graduate attributes may be practised in the unit but are not formally taught as part of the unit content, nor incorporated within formal assessment.

Content

- Technical content in the selected specialisation or course discipline
- Technology application techniques relevant to the selected specialisation or course discipline
- Identification and application of discipline-specific research methods
- Identification and implementation of appropriate experimental designs and research strategies
- Digital technology integration techniques
- ICT ethics and cyber security
- Interdisciplinary team dynamics
- Technology project management
- Professional technical writing and presentation

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:

- The projects in the unit will strongly align with current industry practices learning mode
- A mechanism based on express of interest will be used for project allocation

Unit Teaching Staff

Name	Role	Room	Email / Teams	Consultation Times
Huai Liu	Unit Convenor Lecturer	EN508f	hliu@swin.edu.au	Thursday 10.30am-11.30am
Bita Zaferanloo	Class Tutor		bzaferanloo@swin.edu.au	
Armita Zarnegar			azarnegar@swin.edu.au	
Rui Zhou	Facilitator for Software Development		rzhou@swin.edu.au	
Waqar Khan			wkhan@swin.edu.au	
Pei-Wei Tsai	Facilitator for Data Science, Data Analytics & Information Systems		ptsai@swin.edu.au	
Xinyi Cai			xcai@swin.edu.au	
Mohsin Ali			mohsinali@swin.edu.au	
Mengjiao Guo	Class Tutor Facilitator for Mobile and Cloud Computing		mengjiaoguo@swin.edu.au	
Mohammad Sayad Haghighi	Class Tutor Facilitator for Cybersecurity & Network Systems		msayadhaghighi@swin.edu.au	

Learning and Teaching Structure

Category	Activity	Total Hours	Hours per Week	Teaching Period Weeks
Online	Lecture 1	12 hours	1 hour	Weeks 1 to 12
Online	Lecture 2	12 hours	1 hour	Weeks 1 to 12

In person	Class	24 hours	2 hours	Weeks 1 to 12
In person	Workshop	24 hours	2 hours	Weeks 1 to 12

- Two one-hour lectures will be delivered online each week:
  - Lecture 1, hosted by the unit convenor, will cover the general knowledge and skills for undertaking an ICT capstone project.
  - Lecture 2 is discipline-based, run by the facilitator, to cover the specialised knowledge and skills for different specialisations/disciplines.
- One two-hour class and one two-hour workshop will be delivered on campus each week:
  - Class, hosted by a tutor, will cover the fundamental practices in project management.
  - Workshop, hosted by the facilitator, will cover the specialised technical content for each specialisation/discipline.
- Non-scheduled learning events and activities, mainly the concrete development work for projects: approx. 228 hours for the whole semester.

Week by Week Schedule

Week	Week Beginning	Teaching and Learning Activity			Student Task or Assessment
		Lecture 1	Class	Lecture 2 & Workshop	
1	Aug 4	Introduction to unit; unit outline, design and deliverables	Icebreaker, team formation and project registration	Subject to specialisation/ discipline	
2	Aug 11	Client meeting	Active listening		
3	Aug 18	Requirements; project planning	Identify strengths / weaknesses		
4	Aug 25	Scrum	Discussion of common flaws; Client related problems		
5	Sep 1	Leadership	Activities on interviewing skills;		Project Concept Design
6	Sep 8	Ethics in IT, ACS code of ethics	Leadership Exercise - Disinterested team members		Progress Evaluation
Mid-semester break: Sep 15 – Sep 21					
7	Sep 22	IT Security	Elevator Pitch	Subject to specialisation/ discipline	
8	Sep 29	Report writing	Activities for ethics in IT: ACS ethics case studies		
9	Oct 6	Presentation skills	Project Management principles		
10	Oct 13	Video presentations & posters	Technical documentation and report preparation		
11	Oct 20	Final delivery	Presentation rehearsals		Files for Project Demonstration/ Presentation
12	Oct 27	Final Presentations			Project Report; Final Production

Assessment

a) Assessment overview

Tasks and Details	Individual or Group	Weighting	Mapped Unit Learning Outcomes	Mapped Graduate Attributes	Assessment Due Date
Project Concept Design	Group	15%	1, 2, 3, 4	GA2, GA3, GA4, GA5	End of week 5
Progress Evaluation	Individual	15%	1, 2, 3, 4, 5	GA1, GA2, GA3, GA5, GA6	End of week 6
Project Demonstration /Presentation (including * attendance of video presen-tation sessions in Week 12; * attendance of capstone project expo in mid-November; and * demonstra-tion to client)	Group	15%	4, 5 ,6	GA1, GA2, GA3, GA4, GA5, GA6	End of week 12 (Video file of presentation submitted at end of week 11)
Project Report	Group	20%	3, 4, 5, 6	GA2, GA3, GA4, GA5, GA6	End of week 12
Final Production	Individual	35%	2, 3, 4, 5, 6	GA1, GA2, GA4, GA5, GA6	End of week 12

Standards expected for different grades

Final subject assessments will reflect the amount of original work included in each IT solution. Consideration will also be given to the level of difficulty of the project, the number of students in the team, how well the solution satisfies the client requirements, and the overall quality of the finished product.

- For a team to achieve a **High Distinction**, the software, or solution, or sophisticated high quality proof of concept, or prototype must be produced on time. All supporting documentation (help files, manuals) should be in clear, precise and correct English. The team will have not only provided all the required features but also anticipated software requirements not specified by the client (based on their creative and critical thinking) and will have incorporated these into the software after relevant consultation with the client.

- For a team to achieve a **Distinction** the software or product should satisfy the requirements of the client and software should be installable with only minor modification. The software / manuals should be of a standard acceptable to the client but not necessarily professional. Software should operate without bugs. Software should be installed on the client's computer by the team.
- For a team to achieve a **Credit**, the software (or prototype) or solution should satisfy almost all of the requirements of the client. Software may be installed in the client's computer (if the client wants to use it). Software should operate correctly but may have known bugs that can be avoided, or worked around. Further development may be required by a future team to fix and improve the software.
- For a team to achieve a **Pass**, the prototype software should satisfy the majority of the functional requirements specified by the client or obtained during requirements elicitation. The software should be demonstrated to work on its development environment (Swinburne's or a student's computer) and be usable as a "proof of concept" or as a prototype for further development by a future team or external software engineering company. Documentation should be understandable but need not be in precise English.
- A team or members of a team will receive a **Fail** grade if they have failed to produce working software or have failed to address the client's problems or requirements.
- If a team member contributes significantly less original work than other members of the same team, that student may receive a different and lesser grade than other students in the team. This contribution will be assessed by the facilitator through consultation with the team supervisor, through logbook entries and through peer review reports prepared by relevant students. A team member's mark may be up to 50% lower than the marks of other members of the team.
- Conversely, if a student makes an outstanding original contribution to a team (as assessed by peer review reports) that student may receive a different and greater grade compared to the rest of the team. A team member's mark may be up to 10% higher than the marks of other members of the team.
- If a team member fails to make a significant original contribution to a software or design project, that student will receive a Fail, regardless of the quality of the software produced or the grades of the other students in the assigned team. This contribution will be assessed by consultation with the unit convenor, facilitator, and client.
- If a student fails to join a team or work with a team to which the student has been allocated, that student will receive a Fail.

Assessment Requirements	Details
b) Use of generative AI (genAI) in this unit	GenAI may be used for brainstorming and generating ideas for improving work. However, assessments submitted in this unit should **not** contain generated content, directly copied from GenAI tools.

c) Hurdle requirements	As the minimum requirements of assessment to pass the unit and meet all Unit Learning Outcomes to a minimum standard, a student must achieve: • An aggregate mark of 50% or more
d) Final assessment period	N/A
e) Submission requirements	Assignments and other assessments are generally submitted online through the Canvas assessment submission system which integrates with the Turnitin . Please ensure you keep a copy of all assessments that are submitted. 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/ Consult with the project facilitator and client to arrange the submission of final delivery of the project.
f) Extensions and late submissions	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 working day the task is late, up to a maximum of 5 working days. After 5 working days, a zero result will be recorded.
g) Referencing	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: Harvard Helpful information on referencing can be found at http://www.swinburne.edu.au/library/referencing/
h) Groupwork guidelines	N/A

Required Textbook(s)

None

Recommended Reading Materials

Swinburne Library has a large collection of resources. 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.

Subject to the project nature. Consult with project client and facilitator for appropriate reading materials.

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 generative artificial intelligence;

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.

Plagiarism, collusion, contract cheating, unauthorised file sharing, falsification, fabrication, manipulation or misrepresentation of information, reuse of previous work and non-compliance with instructions in an invigilated or non-invigilated assessment item are all breaches of academic integrity and treated as academic misconduct. Examples of breaches of academic integrity include, but are not limited to:

- submitting work as your own for assessment that has been fully or partially completed by a third party, either paid or unpaid
- using output from artificial intelligence tools (e.g. ChatGPT) in whole or part without acknowledgement and/or without the approval of the Unit Convenor
- using another person's work or ideas as though it is your own work, without appropriate attribution
- working closely with another student or group of students (either past or current), to submit for assessment, some or all of the other student or students' work as your own work
- sharing without permission of the Unit Convenor, Swinburne resources or other material related to assessment to an entity or document repository site
- creating, intentionally modifying or inventing information that is intended to be submitted as part of an assessment item
- using the whole or part of a computer program written by another person as your own without appropriate acknowledgement
- poorly paraphrasing somebody else's work
- using a musical composition or audio, visual, graphic and photographic work created by another person without acknowledgment
- enabling others to cheat, including letting another student copy your work or by giving access to a draft or completed assignment
- letting someone or something else impersonate you, or you impersonate someone else in an invigilated or non-invigilated assessment item
- accessing, obtaining and/or providing to others unauthorised materials relating to an invigilated or non-invigilated assessment item.

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. For further information, see the Current students web page.

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/

Note: Submitting fraudulent (fake or altered) medical certificates is considered misconduct and can lead to serious penalties from Swinburne. In addition, your doctor may report fraudulent medical certificates as a prosecutable offence under the Victorian Crimes Act.

AccessAbility Services

If you are a student with a disability, medical or mental health condition or you have significant carer responsibilities, you may require reasonable adjustments to fully access and participate in education. Swinburne's AccessAbility Services can develop an Education Access Plan (EAP) that includes the services and reasonable adjustments that you need.

It is recommended that you register with AccessAbility Services when you first commence your course but you can contact the service at any time during your studies to find out about reasonable adjustments. Contact Accessibility Services to discuss further.

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 the Swinburne Student Association. 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/