



COMP4050

Software Engineering Practices

Session 2, In person-scheduled-weekday, North Ryde 2026

School of Computing

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General Information

Unit convenor and teaching staff

Unit convenor and lecturer

Ansgar Fehnker

ansgar.fehnker@mq.edu.au

Unit convenor and lecturer

Kate Stefanov

kate.stefanov@gmail.com

Ansgar Fehnker

ansgar.fehnker@mq.edu.au

Credit points

10

Prerequisites

200cp at 1000 level or above including COMP2050 and COMP3010

Corequisites

Co-badged status

Unit description

This unit provides an opportunity for students to practice and demonstrate their software engineering skills within the context of a team. Students will work together to understand, design, modify, test and deliver non-trivial software using practices that are in use in the information technology industry.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Quality Education; Decent Work and Economic Growth; Industry, Innovation and Infrastructure

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: perform the stages of a modern software development process to achieve non-trivial outcomes

ULO2: apply principles of software project management, particularly relating to teamwork, roles and responsibilities

ULO3: use modern software development tools such as version control systems and issue trackers

ULO4: communicate progress and results of the software development process

General Assessment Information

General Assessment Information

COMP4050 applies an agile method to the engineering of features in a non-trivial software project. Students work as a team on a project, in cooperation with other teams. The assessment is focused on the software processes and tools that a team uses, as well as individual contributions to the team effort.

Development Process

The artifacts contributing to the assessment of the *development process* include individual and project logs files, project boards, student logs, peer evaluation, retrospectives, and presentations. Based on the supplied evidence and the convenor's observations, these assessment items will be assessed according to the following standards:

- **Distinction/High Distinction:** An extremely valuable team member who makes many key contributions to many different aspects of the software that is developed by the team.
- **Credit:** A team member who makes useful contributions to multiple aspects of the team's software.
- **Pass:** A team member who makes a small number of contributions to the team's software or focuses on a single area of contribution.

Software Product

The artifacts contributing to the assessment of the software product include user feedback of the final product, plus artifacts collected over the course of the project, such as logs, test records, requirements documents, architecture descriptions, and the actual code base. Based on the supplied evidence and the convenor's observations, these assessment items will be assessed according to the following standards:

- **Distinction/High Distinction:** The software product is of high quality, demonstrating excellent functionality, usability, and robustness. It meets or exceeds user expectations and project requirements, with clear evidence of thoughtful design, and thorough testing. The product reflects strong collaboration across teams and integration of individual contributions.
- **Credit:** The software product is functional and meets most project requirements. It

shows evidence of solid design and implementation, with attention to usability and testing. While not exceptional, the product is reliable and demonstrates competent teamwork and integration of contributions.

- **Pass:** The software product meets basic functionality and some project requirements. It may have limited usability, design, or testing coverage. The product may reflect uneven contributions or limited collaboration.

Individual Reflective Report

Students will be asked to reflect and provide evidence on their progression with respect to general skills such as Autonomy, Influence, Complexity, and Knowledge. At the end of the session, they are asked to reflect in addition on their development in a specific technical skill. The report should include and refer to curated artifacts such as personal logs, team logs, and project management resources. Based on the supplied evidence and the convenor's observations, these assessment items will be assessed according to the following standards:

- **Distinction/High Distinction:** The reflection demonstrates insight in the development across all general skill areas, as well as the selected technical skill. The reflection clearly identifies challenges, learning moments, and strategies for improvement, and explicitly refers to attached evidence and artefacts.
- **Credit:** The reflection shows a solid understanding of personal development across most general skill areas, and the selected technical skill. the reflection provides relevant examples.
- **Pass:** The reflection provides a basic overview of personal development, but lacks a systematic approach to discussing the general skill areas, or the selected technical skill.

Requirements to pass the unit

- Achieve a total mark equal to or greater than 50%.

The use of **Generative AI and AI tools in general is permitted**; however, you must use these tools in a way that enhances your learning rather than submitting the work of an AI tool as your own. If you do not engage with the project and activities yourself—even with the assistance of AI tools—you will fail to develop the skills required to pass the unit and, equally importantly, to succeed in the workplace.

Automatic short extension: Some assessments are eligible for automatic short extension. You can only apply for an automatic short extension before the due date.

Late Assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, or a short extension has been approved, a 5% penalty (of the total possible mark) will be applied each day the final

reflection is not submitted, up until the 7th day (including weekends). After the 7th day, a mark of '0' will be awarded even if the assessment is submitted. For example, if the assignment is worth 8 marks (of the entire unit) and your submission is late by 19 hours (or 23 hours 59 minutes 59 seconds), 0.4 marks (5% of 8 marks) will be deducted. If your submission is late by 24 hours (or 47 hours 59 minutes 59 seconds), 0.8 marks (10% of 8 marks) will be deducted, and so on.

Submission time is set at Sundays, **11:55 pm**. A 1-hour grace period is provided to students who experience technical problems.

Special Consideration

The [Special Consideration Policy](#) aims to support students impacted by short-term circumstances or events that are serious, unavoidable, and significantly disruptive, which may affect their performance in assessments. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Software Product	30%	No	01/11/2026	Individual and Group	No	Open
Development Process	30%	No	08/11/2026	Individual and Group	No	Open
Individual Reflective Report	40%	No	08/11/2026	Individual	Yes	Open

Software Product

Assessment Type ¹: Experiential task

Indicative Time on Task ²: 35 hours

Due: **01/11/2026**

Weighting: **30%**

Groupwork/Individual: Individual and Group

Short extension ³: No

AI Approach: Open

This team-based assessment measures the quality of requirements, the architecture, software quality assurance, usability, and documentation. This assessment will be based on user feedback of the final product, plus artifacts collected over the course of the project, such as logs, test records, requirements documents, architecture descriptions, and the actual code base demonstrating individual and group components.

On successful completion you will be able to:

- perform the stages of a modern software development process to achieve non-trivial

outcomes

- apply principles of software project management, particularly relating to teamwork, roles and responsibilities
- use modern software development tools such as version control systems and issue trackers
- communicate progress and results of the software development process

Development Process

Assessment Type ¹: Portfolio

Indicative Time on Task ²: 30 hours

Due: **08/11/2026**

Weighting: **30%**

Groupwork/Individual: Individual and Group

Short extension ³: No

AI Approach: Open

This team-based assessment measures student contributions to software development and project management activities. Included are activities such as soliciting and developing client input, proposing new features or fixes, estimating how much functionality can be achieved in a development period, allocating tasks, and managing the backlog. The team will collect individual and project logs files, project boards, student logs, peer evaluation, retrospectives, and presentations.

On successful completion you will be able to:

- perform the stages of a modern software development process to achieve non-trivial outcomes
- apply principles of software project management, particularly relating to teamwork, roles and responsibilities
- use modern software development tools such as version control systems and issue trackers
- communicate progress and results of the software development process

Individual Reflective Report

Assessment Type ¹: Reflection task

Indicative Time on Task ²: 20 hours

Due: **08/11/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

Students will be asked to reflect and provide evidence on their progression with respect the general skill such as Autonomy, Influence, Complexity, and Knowledge. In addition, they are asked to reflect on their development in one selected technical skill. The report should include curated artifacts such as personal logs, team logs, and project management resources.

On successful completion you will be able to:

- perform the stages of a modern software development process to achieve non-trivial outcomes
- apply principles of software project management, particularly relating to teamwork, roles and responsibilities
- use modern software development tools such as version control systems and issue trackers
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¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- [Academic Success](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation.

³ An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

Delivery and Resources

Week 1

The workshops will start in week 1.

Weekly Activities

- Workshop including lecture (3 hours)

Workshops

The focus of the unit is on development periods of a few weeks duration - so-called sprints - where milestones such as new features, bug fixes and the like are proposed, planned, delivered and reviewed. Students should not develop code by themselves or in pairs or focus narrowly on one or two aspects. Instead, we expect students to participate in each aspect of the project rather than focus on one or two aspects in isolation. In particular, students will be asked to review each other's code and participate in reviews of each software milestone.

Tools such as distributed version control and milestone planning software will be used throughout to coordinate activities.

Each week there is a three-hour class during which the teams will meet to discuss expectations, plans and progress. Usually, the first hour or so will be devoted to general topics of interest to the whole class, while the second and third hours will be used by teams to work together on their activities. Students are expected to attend all classes since they are vital meetings of the software team.

Methods of Communication

We will communicate with you during the weekly sessions, via your university email and through announcements on iLearn. Queries to convenors can either be made during the weekly meeting, placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLearn.

Unit Schedule

	Week	Topic	Activity	Deliverable
Sprint 0	1	Welcome and Introduction of the project	Team formation	
	2	The technology stack	Meet the peers	Proposal
	3		Team Presentation	Slides, log
Sprint 1	4	Team Tools		
	5			
	6	Working in teams		
	7		Sprint review and retrospective	Log, peer feedback
Sprint 2	8		Mid-term presentation	Slides
	9	Delivering effective technical presentations		
	10		Sprint review and retrospective	Log, peer feedback
Sprint 3	11	Reflecting on Skills: SFIA		
	12			Repo

	13	Final presentation and demo	Slides, reflection, log
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The schedule is tentative, and may be subject to changes if circumstance requires.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Ask a Study Coach](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit <https://students.mq.edu.au/support/technology/service-desk>.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via student surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page.

In response to feedback we received from student after the previous offering, this unit will focus during the semester on formative feedback, allowing the team and individual students to demonstrate that they can continually improve processes and performance.

Unit information based on version 2026.02 of the [Handbook](#)