



# COMP4050

## Software Engineering Practices

Session 2, Special circumstance 2020

*Department of Computing*

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#### **Notice**

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

## General Information

Unit convenor and teaching staff

Convenor and lecturer

Kate Stefanov

[kate.stefanov@mq.edu.au](mailto:kate.stefanov@mq.edu.au)

Contact via Contact via Email

After workshops or by appointment

Credit points

10

Prerequisites

200cp at 1000 level or above including (COMP2050 or COMP255) and (COMP3010 or COMP333)

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.

## 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

COMP4050 applies an agile method to the engineering of features in a non-trivial software project. Students work as a team on a project that uses technology with which they are already familiar or that has a relatively short learning curve. Normally the project will not be developed from scratch. Rather, COMP4050 approximates the normal situation in real-world software development where a team is required to understand, enhance and fix existing software.

The three main assessment items are focused on the software artefact(s) being developed by the class in teams. The items will be assessed in a continuous manner with feedback being provided frequently by the unit convenor to each student.

Students will be asked to document their contributions and associated evidence in each of the three assessment areas of Planning and Estimation, Development and Review as the semester unfolds. E.g., documentation of a development activity might include a link to the associated commits and pull requests in the source code repository. Or documentation of planning and estimation contributions might cite the role a student has played in the discussion that took place in a class session.

Based on the supplied evidence and the convenor's own 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.

The team contribution assessment item captures contribution to the functioning of the team rather than specific contribution to development of the software artefact (which is captured by the other three assessment items). E.g., a high team contribution mark might be earned by a student who often comes up with useful suggestions in planning discussions for features proposed by other team members or who volunteers to present some useful technology to the team so everyone can learn about it. Students are encouraged to think of ways in which they would like to contribute but the unit convenor will also suggest opportunities. Students should plan to attend all classes since they are vital meetings of the software team.

Participation will be assessed according to the following standards:

- \* Distinction/High Distinction: An extremely valuable team member who contributes strongly in many, varied ways to the smooth and efficient functioning of the team.
- \* Credit: A team member who makes multiple varied contributions to the team's operations, not just in a single particular way.
- \* Pass: A team member who makes a small number of contributions to the way the team operates or whose contributions have a single focus

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Planning and Estimation</u>	30%	No	Throughout
<u>Development</u>	30%	No	Throughout
<u>Review</u>	30%	No	Throughout
<u>Team contribution</u>	10%	No	Throughout

### Planning and Estimation

Assessment Type <sup>1</sup>: Project

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **Throughout**

Weighting: **30%**

This assessment item measures student contributions to team planning and estimation 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, including taking into account review of experiences in previous periods.

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

Assessment Type <sup>1</sup>: Project

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **Throughout**

Weighting: **30%**

This assessment measures student contribution to the team's software development activities, including development of tests for a proposed feature, coding the feature, debugging, ensuring that tests pass and submission to the team's version control repository.

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

## Review

Assessment Type **1**: Project

Indicative Time on Task **2**: 25 hours

Due: **Throughout**

Weighting: **30%**

This assessment item measures student contribution to team review activities. Included are activities such as code and test review of features developed by other team members, merging features into the baseline version of the system, and reflection on achievements in a development period.

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

## Team contribution

Assessment Type **1**: Project

Indicative Time on Task **2**: 10 hours

Due: **Throughout**

Weighting: **10%**

The participation assessment item captures overall contribution to the functioning of the team rather than specific contributions to the software artefact (which is captured by the other three assessment items).

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

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<sup>1</sup> 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
- the [Writing Centre](#) for academic skills support.

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

## Delivery and Resources

The focus of the unit is on development periods of a few weeks duration where milestones such as new features, bug fixes and the like are proposed, planned, delivered and reviewed. Students will develop code by themselves or in pairs, but students should aim to participate in each aspect of the project rather than focusing one or two aspects. 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.

In each week there is a three hour class during which the teams will meet to discuss expectations, plans and progress. Roughly speaking, 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.

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

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

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/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 [ask.mq.edu.au](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Student Support

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

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

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

For Comp4050 in S2 2020, some classes will be conducted on campus, face to face and the rest will be online. Students are expected to come on campus in weeks 1, 7, 10 and 13.

Alternative arrangements will be made for students unable to do so.

## Changes since First Published

Date	Description
16/07/2020	The staff details were missing I have noted in the last section that for students who are unable to come on campus for weeks 1,7,10 and 13, alternative arrangements will be made.