COMP6750

Applications, Modelling and Development

Session 1, Special circumstances 2021

School of Computing

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Disclaimer

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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 activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face 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

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Credit points
10

Prerequisites

Corequisites

Co-badged status
COMP2750

Unit description
This unit is an intermediate unit for the processes, methods, techniques and tools that organisations use to determine how they should conduct their business, with a particular focus on how computer-based technologies can most effectively contribute to the way business is structured. Study focuses on the fundamental concepts and models of applications development so that they can understand they key processes related to building functioning applications and appreciate the complexity of applications development. The unit emphasises program development and incorporates the software development life cycle, requirements gathering, designing a solution, and implementing and testing a solution in a programming language.

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: Demonstrate the ability to communicate software requirements and designs, clearly and effectively.

ULO2: Practice the key phases of the software development life cycle (SDLC) including requirements engineering, analysis, design, basic development and testing.

ULO3: Demonstrate an understanding of alternative SDLC models

ULO4: Demonstrate an understanding of the concepts and tools needed to successfully design and build an application

ULO5: Integrate an application with a database or other form of persistent storage

General Assessment Information

If you receive special consideration for the final exam, a supplementary exam will be scheduled in the interval between the regular exam period and the start of the next session. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the policy prior to submitting an application. You can check the supplementary exam information page on FSE101 in iLearn (bit.ly/FSESupp) for dates, and approved applicants will receive an individual notification one week prior to the exam with the exact date and time of their supplementary examination.

Late Submission

No extensions will be granted without an approved application for Special Consideration. There will be a deduction of 10% of the total available marks made from the total awarded mark for

each 24 hour period or part thereof that the submission is late. For example, 25 hours late in submission for an assignment worth 10 marks – 20% penalty or 2 marks deducted from the total. No submission will be accepted after solutions have been posted.

Assessment Tasks

Name	Weighting	Hurdle	Due
Diagnostic Quiz in Workshops	25%	No	Weeks 4,7, and 11
Requirements Gathering and Analysis	25%	No	Study Break Week-1
Application Design	25%	No	Week-9
Application Development and Testing	25%	No	Week-13

Diagnostic Quiz in Workshops

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 14 hours
Due: **Weeks 4,7, and 11**
Weighting: **25%**

Quizzes to determine students individual strengths, weaknesses, knowledge and skills to develop a baseline of what students know about the topic.

On successful completion you will be able to:

- Demonstrate the ability to communicate software requirements and designs, clearly and effectively.
- Practice the key phases of the software development life cycle (SDLC) including requirements engineering, analysis, design, basic development and testing.
- Demonstrate an understanding of alternative SDLC models
- Demonstrate an understanding of the concepts and tools needed to successfully design and build an application

Requirements Gathering and Analysis

Assessment Type [1]: Case study/analysis
Indicative Time on Task [2]: 20 hours
Due: **Study Break Week-1**
Weighting: **25%**

This assignment will develop and test your skills in requirements gathering, specification, analysis and modelling.

On successful completion you will be able to:

- Demonstrate the ability to communicate software requirements and designs, clearly and effectively.
- Practice the key phases of the software development life cycle (SDLC) including requirements engineering, analysis, design, basic development and testing.
- Demonstrate an understanding of alternative SDLC models

Application Design

Assessment Type [1]: Design Task
Indicative Time on Task [2]: 20 hours
Due: **Week-9**
Weighting: **25%**

This assignment will develop and test your skills in designing applications for the given case study

On successful completion you will be able to:

- Demonstrate the ability to communicate software requirements and designs, clearly and effectively.
- Practice the key phases of the software development life cycle (SDLC) including requirements engineering, analysis, design, basic development and testing.
- Demonstrate an understanding of alternative SDLC models
- Demonstrate an understanding of the concepts and tools needed to successfully design and build an application
- Integrate an application with a database or other form of persistent storage

Application Development and Testing

Assessment Type [1]: Design Implementation
Indicative Time on Task [2]: 20 hours
Due: **Week-13**
Weighting: **25%**

This assignment will develop and assess your design, development and testing applications for the given case study.

On successful completion you will be able to:

- Demonstrate the ability to communicate software requirements and designs, clearly and effectively.
- Practice the key phases of the software development life cycle (SDLC) including requirements engineering, analysis, design, basic development and testing.
- Demonstrate an understanding of alternative SDLC models
- Demonstrate an understanding of the concepts and tools needed to successfully design and build an application
- Integrate an application with a database or other form of persistent storage

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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
- the Writing Centre 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

Delivery and Resources

CLASSES

COMP6750 is taught via lectures and SGTAs/Practical Classes.

Lectures:

- Lectures are used to introduce new material, provide motivation and context for your study, guide you in what is important to learn and explain more difficult concepts.
- There are 2 hours of lectures per week (This will be a pre-recorded content) with a follow-up class

SGTAs/Practical Classes:

- **Note**: Practical Classes commence in Week-2
- These are small group classes which allow you to interact with your peers and with a tutor who has a sound knowledge of the subject. This also gives you a chance to practice your technology skills.

- You will need to enrol and attend the Practical Class that you've enroled in.
- Practical Classes will be providing you with practical experience of design and development processes. The content of the workshop may overlap or sometimes be ahead of the lecture content.
- If your workshop falls on a public holiday, you are expected to attend & participate in another workshop as a makeup class
- For details of days, times and rooms consult the timetables webpage.

RECOMMENDED TEXTS AND/OR MATERIALS

Textbook

There are no required textbooks for this unit. However, every week you will be provided with lecture notes and references for further reading

UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

Websites

The web page for this unit can be found at: here

echo360

Digital recordings of lectures are available. Read instructions here.

Discussion Boards

The unit makes use of discussion boards hosted within ilearn. Please post questions of general interest there (for example, about assessment tasks), they are monitored by the unit staff but students may also provide answers.

FEEDBACK

You have many opportunities to seek and to receive feedback. The feedback that you receive also plays an important role in your learning. Make sure you read the feedback you are given, attend lectures which provide assignment feedback and compare your solution with sample solutions provided. During lecture consultations, you are encouraged to ask the lecturer questions to clarify anything you might not be sure of. You may also arrange to meet with your tutor or the lecturer. Consultation hours will be provided in some of the weeks. Each week, you will be given activities and problems to solve in the workshops. This will at times involve contributing to a group of students and presenting solutions to the class. The solutions provided will help you to understand the material in the unit and prepare you for the work in assignments. You must keep up with these problems every week. Assignments have been specially designed to deliver continuous feedback on your work.

Each week you should:

- Attend lectures, take notes, ask questions

- Attend your practical classes and seek feedback from your tutor on your work
- Read assigned reading material/Watch lecture recording, add to your notes and prepare questions for your lecturer or tutor
- Start working on any assignments immediately after they have been released.

Lecture notes/videos are made available each week but these notes are intended as an outline of the lecture only and are not a substitute for your notes or reading of the other additional material.

Unit Schedule

Tentative teaching schedule, subject to change:

1	Unit Overview + Information Systems + SDLC process	Y.Wang	No Workshops this week
2	Development Methodologies + Agile Modelling	Y.Wang	
3	Project Management	Y.Wang	
4	Discovering Requirements	Y.Wang	Online Quiz 1 due
5	Documenting System Requirements through diagrams-1	C.Ramakrishnan	
6	Documenting System Requirements through diagrams-2, Validation, and Prototyping	C.Ramakrishnan	
Teaching Break (2 weeks) 2nd April 2021 to 18th April 2021 **Assignment-1 will be due sometime in the first week of the study break** **Students are expected to catch up with unit content (Weeks 1-6) and continue working on Assignment 2**			
7	Designing Databases	C.Ramakrishnan	Online Quiz 2 due
8	Designing Input, Output, Test cases	C.Ramakrishnan	
9	Human-Computer Interaction	C.Ramakrishnan	Assignment-2 due
10	Testing and Quality Assurance	C.Ramakrishnan	
11	Client-side Development	Y.Wang	Online Quiz 3 due
12	Server-side Development and Testing	Y.Wang	
13			Assignment-3 due

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (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
- Grade Appeal Policy
- Complaint Management 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). 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) 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 ask.mq.edu.au or if you are a Global MBA student contact 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) 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

If you are a Global MBA student contact 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/.

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

Changes to the Assessments. No final exam in S1, 2021 offering