COMP6180

System Analysis and Design

Session 1, In person-scheduled-weekday, North Ryde 2025

School of Computing

Contents

General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites

Corequisites

Co-badged status

Unit description
This unit provides a foundation to understanding contemporary methodologies to manage the information systems development life cycle. It explores principles and techniques for analysing and designing information systems, together with using tools to aid this process, with an emphasis on a user-centric approach to system development and human factors in system design.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals (UNSDGs) 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: Apply user-centric approach to system analysis and design

ULO2: Develop prototypes to evaluate and validate system design

ULO3: Appraise and communicate the result of analysis and design with different stakeholder groups

ULO4: Evaluate appropriate methodologies, techniques and architectures for user-centric systems

ULO5: Identify privacy, security and ethical issues in system design

General Assessment Information

Release Dates:

- Case Study - to be released no later than week 4
- Design Project - to be released no later than the first week of Recess
- Logbook - Parts A, B, C, D to be released in week 4, week 6, week 9, week 12 respectively

Requirements to Pass this Unit:

To pass the unit you need to obtain a grade of 50% or above overall. There are no hurdle assessments.

Late Assessment Submission Penalty:

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is **11:55 pm**. A 1-hour grace period will be provided to students who experience a technical concern.

Special Consideration:

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. 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 https://connect.mq.edu.au.

Assessments where Late Submissions will be accepted:

- Case Study - YES, Standard Late Penalty applies
- Project and Logbook - NO, unless Special Considerartion is granted

We strongly encourage all students to actively participate in all learning activities. Regular engagement is crucial for your success in this unit, as these activities provide opportunities to deepen your understanding of the material, collaborate with peers, and receive valuable feedback from instructors, to assist in completing the unit assessments. Your active participation not only enhances your own learning experience but also contributes to a vibrant and dynamic learning environment for everyone.

Assessment Tasks

Name	Weighting	Hurdle	Due
Case Study	30%	No	23:55 Friday 11/04/25 (Week 7)
Design Project	50%	No	23:55 Friday 23/05/25 (Week 11)
Logbook	20%	No	23:55 Friday 6/06/25 (Week 13)

Case Study

Assessment Type [1]: Case study/analysis
Indicative Time on Task [2]: 30 hours
Due: **23:55 Friday 11/04/25 (Week 7)**
Weighting: **30%**

A case study of a chosen system project.

On successful completion you will be able to:

- Appraise and communicate the result of analysis and design with different stakeholder groups
- Evaluate appropriate methodologies, techniques and architectures for user-centric systems
- Identify privacy, security and ethical issues in system design

Design Project

Assessment Type [1]: Project
Indicative Time on Task [2]: 50 hours
Due: **23:55 Friday 23/05/25 (Week 11)**
Weighting: **50%**

A design project focusing on user-centric system design. 20 of the 50 marks for this assessment will be individual tasks and project presentation that is individually graded. 30 of the 50 marks will

be group work including prototype and technical report.

On successful completion you will be able to:

- Apply user-centric approach to system analysis and design
- Develop prototypes to evaluate and validate system design
- Appraise and communicate the result of analysis and design with different stakeholder groups
- Evaluate appropriate methodologies, techniques and architectures for user-centric systems
- Identify privacy, security and ethical issues in system design

Logbook

Assessment Type [1]: Log book
Indicative Time on Task [2]: 18 hours
Due: **23:55 Friday 6/06/25 (Week 13)**
Weighting: **20%**

An individual week-by-week reflection on the learning journey through the seminars and workshop participation, and assignments describing activities and tasks completed in those.

On successful completion you will be able to:

- Apply user-centric approach to system analysis and design
- Develop prototypes to evaluate and validate system design
- Appraise and communicate the result of analysis and design with different stakeholder groups
- Evaluate appropriate methodologies, techniques and architectures for user-centric systems
- Identify privacy, security and ethical issues in system design

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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

Class

Each week you should register for 2 hours of seminar and 2 hours of SGTA class. Both seminar and SGTA classes start from Week 1. For details of days, times and rooms consult your timetable.

All classes will be run on campus.

Mandatory Text

Kendall, K.E. and Kendall, J.E., *2024 Systems Analysis and Design*. Pearson.

Seminar handouts will list appropriate Web based references and further reading for some of the rapidly evolving technologies discussed in this unit. Seminar handouts will be available for download from the unit Website.

Website and Access to Unit Material

The web page and content for this unit can be found at iLearn: https://ilearn.mq.edu.au. Note that the unit content is not publicly available and requires for you to log in to access.

Method of Communication

We will communicate with you via your university email or through announcements on iLearn. Queries to teaching staff can either be placed on the iLearn discussion board or sent to their university email address from your university email address.

Unit Schedule

The weekly schedule below is tentative. Efforts will be made to adhere to the schedule; however, we reserve the right to update it as appropriate.

Module 1 – System Analysis and Design Fundamentals

Week1: Core Concepts

Week2: System Development Life Cycle and Project Management

Module 2 – System Analysis

Week3: Information Gathering Interactive Methods

Week4: Information Gathering Unobtrusive Methods

Week5: Modelling Organisational Systems

Week6: Data Flow Diagrams and Data Dictionaries

Module 3 – System Design

Week7: The Essentials of Design: Input and Output

Week8: The Essentials of Design: Databases, Privacy and Security

Week9: HCI and User-Centred Design

Week10: Prototyping and Ethics

Module 4 – System Implementation, Testing and Maintenance

Week11: Implementation, Testing, Deployment and Maintenance

Week12: Guest lecture

Week13: Revision/Reflection

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
- 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). 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 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/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- 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 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.

Unit information based on version 2025.04 of the Handbook