COMP2150

Game Design

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

School of Computing

Contents

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General Information

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Credit points
10

Prerequisites
COMP1151 or COMP1150 or MMCC1011

Corequisites

Co-badged status

Unit description
This unit covers the theory and practice of designing games, using an iterative, player-centric
approach. Students will be introduced to different aspects of game design and will develop
their game design skills through hands-on creation and evaluation of their own games.

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 the process of iterative, player-centric game design to produce a range of
low-to-high fidelity game prototypes.

ULO2: Analyse and critique existing games according to the principles of game design.

ULO3: Employ level and system design theories to prototype games using relevant digital tools.

ULO4: Collaborate with fellow designers to conceptualise game experiences and craft game mechanics to facilitate them.

ULO5: Communicate design goals and reasoning through appropriate documentation.

ULO6: Evaluate game prototypes using formal playtesting methods and apply findings to iterate on their design.

General Assessment Information

Assessment Task Release Dates

- **Game Analysis:** To be released no later than Monday 24th February.
- **User Experience Research Activity:** To be released no later than Monday 7th April
- **Level Design:** To be released no later than Monday 24th March.
- **Tabletop Game Design and Playtesting**: To be released no later than Monday 28th April

Requirements to Pass this Unit

To pass this unit you must:

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

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. For any late submission of time-sensitive tasks, such as scheduled tests/ exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for Special Consideration. 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.

Assessments where Late Submissions will be accepted:

- **Game Analysis:** Late Submissions will NOT be accepted unless Special Consideration is approved.
- **User Experience Research Activity:** Late Submissions WILL be accepted in accordance with the policy above.

- **Level Design:** Late Submissions WILL be accepted in accordance with the policy above.
- **Tabletop Game Design and Playtesting**: Late Submissions WILL be accepted in accordance with the policy above.

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 http://connect.mq.edu.au/.

Assessment Tasks

Name	Weighting	Hurdle	Due
Level Design	25%	No	Sunday 13th April 23:55
Tabletop Game Design and Playtesting	50%	No	Wednesday 11th June 23:55
Game Analysis	15%	No	Students choose in which of weeks 3-13 to submit
User experience research activity	10%	No	Sunday 8th June 23:55

Level Design

Assessment Type [1]: Design Task
Indicative Time on Task [2]: 17 hours
Due: **Sunday 13th April 23:55**
Weighting: **25%**

Design, implement and document a game level using a commercial game engine. Students are expected to demonstrate an understanding of the principles of challenge, reward, progress and spatial and temporal arrangement amongst other design considerations. As well as producing the level students will also be required to submit accompanying design documentation justifying their design decisions.

On successful completion you will be able to:
- Apply the process of iterative, player-centric game design to produce a range of low-to-

high fidelity game prototypes.

- Employ level and system design theories to prototype games using relevant digital tools.
- Communicate design goals and reasoning through appropriate documentation.

Tabletop Game Design and Playtesting

Assessment Type [1]: Report
Indicative Time on Task [2]: 38 hours
Due: **Wednesday 11th June 23:55**
Weighting: **50%**

Design and implement a multiplayer card/board game with a resource economy and inter-player dynamics. Students are expected to demonstrate an understanding of the principles of balancing a resource economy and creating strategic play. Students will be required to submit full design documentation, justifying their design decisions. The tabletop game must also be evaluated through a program of playtesting to determine whether it meets its desired goals. Students are expected to demonstrate an understanding of the processes of gathering both qualitative and quantitative data on players' behaviour and experience while playing the game, and evidence how they used this information to improve its design.

On successful completion you will be able to:

- Apply the process of iterative, player-centric game design to produce a range of low-to-high fidelity game prototypes.
- Employ level and system design theories to prototype games using relevant digital tools.
- Collaborate with fellow designers to conceptualise game experiences and craft game mechanics to facilitate them.
- Communicate design goals and reasoning through appropriate documentation.
- Evaluate game prototypes using formal playtesting methods and apply findings to iterate on their design.

Game Analysis

Assessment Type [1]: Media presentation
Indicative Time on Task [2]: 13 hours
Due: **Students choose in which of weeks 3-13 to submit**
Weighting: **15%**

Students will analyse a game based on the design principles taught in lectures and present their analysis during practical classes (in a 10 min pre-recorded video presentation). Students are expected to be able to analyse a game according to the experience it conveys and how that

experience is rooted in the mechanics and dynamics of the game. Students will be assigned specific weeks in which to present. The presentation will focus on the topic of previous week's lecture.

On successful completion you will be able to:

- Analyse and critique existing games according to the principles of game design.

User experience research activity

Assessment Type [1]: Reflective Writing
Indicative Time on Task [2]: 6 hours
Due: **Sunday 8th June 23:55**
Weighting: **10%**

You will take part in a user testing experience for another game or research project, and write a reflection on the experience.

On successful completion you will be able to:

- Analyse and critique existing games according to the principles of game design.
- Evaluate game prototypes using formal playtesting methods and apply findings to iterate on their 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

Week 1

Lectures, practicals and laboratories all start in week 1.

Classes

Each week, COMP2150 has two hours of lectures, a two-hour practical and a two-hour laboratory. Please use the Class Finder tool in eStudent to access your timetable:

https://students.mq.edu.au/study/enrolling/create-timetable).

Live lectures are structured as interactive, active-learning classes. You will get more value from the lectures by attending in person and contributing. However, lectures will be live-streamed and made avaliable to re-watch for revision or if you are unable to attend in person.

Two-hour practical classes are practice-based classes designed to give you experience and insight into the design process by having you work with other students and create games every week. These classes offer insight into the design processes and practices used in industry.

Two-hour laboratory sessions are design to give you practice with the Unity game engine, building on your experience from first year. These classes offer you skills in a industry-level game engine and are important for your major assignments.

Required and Recommended Texts and/or Materials

Prescribed Textbooks

The textbook for this unit is:

- Schell, J., 2019, The Art of Game Design: A Book of Lenses, 3rd edition, Morgan Kaufmann, ISBN-10: 1138632058 | ISBN-13: 978-1138632059

Additional References

- Adams, E., 2010: Fundamentals of Game Design, 2nd. ed., New Rdiers, ISBN-10: 0321643372 | ISBN-13: 978-0321643377
- Totten, C.W. 2014, An Architectural Approach to Level Design, A K Peters/CRC Press ISBN-10: 1466585412 | ISBN-13: 978-1466585416
- Adams, E., Dormans, J., 2012 Game Mechanics: Advanced Game Design, New Riders; ISBN-10: 0321820274 | ISBN-13: 978-0321820273
- Novak, J., Castillo, T. 2008 Game Development Essentials: Game Level Design, Cengage Learning, ISBN-10: 1401878644 | ISBN-13: 978-1401878641
- Swink, S. 2008, Game Feel: A Game Designer's Guide to Virtual Sensation, Morgan Kaufmann, ISBN-13 978-0-12-374328-2

These recommended texts are not compulsory for the subject, however, they do provide reliable and relevant resources to support the course material. These texts may be useful for later subjects that you will study as part of your degree. You are also encouraged to check for other sources, including alternative books and on-line material.

Other Readings

Other reading(s) for this subject will be provided via on-line material on the Web. In addition to text, these readings may include videos or other media. These links will be provided via iLearn in the relevant weeks.

Unit Webpage and Technology Used and Required

Online Resources

The unit website can be found through the University's Online Learning at MQ website (iLearn): http://ilearn.mq.edu.au

Students should check this site for regular updates.

Technology Used and Required

Unity 3D will be used for the Level Design Task (refer to the unit's ilearn site for the version in use this year). The free version of this can be downloaded at http://unity.com/products, and is installed on the computers in 4RPD 110. If you require more access to the lab computers, please see the Lab Access Form at https://ilearn.mq.edu.au/mod/questionnaire/view.php?id=7466533**.**

Other technology for the Tabletop Game Design task will be advised during semester.

Various commercial games will be referred to as examples in class.

Methods of Communication

We will communicate with you via your university email or through announcements on iLearn. General unit, class or assessment related enquiries should be posted to the relevant discussion forum on iLearn so that all students can benefit from the response. Private or personal queries to convenors can sent to the unit convenors via email from your student email. Emails from non-student emails, such as personal or work accounts, will not be responded to.

Unit Schedule

Refer to the unit's ilearn site for weekly schedule

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/

Academic Success

Academic Success 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.

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.

Student feedback from the previous offering of this unit was very positive overall, with students pleased with the clarity around assessment requirements and the level of support from teaching staff. As such, the only change to the delivery of the existing unit material is some simplification of assessment structure.

We have also added additional class time (computer laboratories) focussing on the use of the Unity game engine to support assignment work.

We will continue to strive to improve the level of support and the level of student engagement.

Unit information based on version 2025.04 of the Handbook