COMP2150

Game Design

Session 1, In person-scheduled-weekday, North Ryde 2024

School of Computing

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General Information

Unit convenor and teaching staff
Convenor
Cameron Edmond
cameron.edmond@mq.edu.au

Lecturer
Mitchell McEwan
mitchell.mcewan@mq.edu.au

Practical Demonstrator
Oliver Smith
oliver.smith@mq.edu.au

Practical Demonstrator
Sandra Trinh
sandra.trinh@mq.edu.au

Practical Demonstrator
Izzy White
izzy.white@mq.edu.au

Credit points
10

Prerequisites
(COMP1150 or COMP111) or (MMCC1011 or MAS111)

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 intermediate-level games.

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

ULO3: Prototype novel level-design implementations within an existing game engine.

ULO4: Collaborate with fellow designers to imagine game experiences and design gameplay mechanics to achieve them.

ULO5: Communicate design goals and reasoning through appropriate documentation.

ULO6: Evaluate game prototypes by playtesting, and use the results to refine the design.

General Assessment Information

Design Task

Your engagement in the design task assessment is assessed on a weekly basis in the practical classes. However, your final overall mark will be determined at the end of semester based on moderation across classes and the overall product of your engagment. A preliminary mark will be awarded half-way through semester (end Week 6) as a milestone and to help you track your performance.

Late Assessment Policy

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day an assessment task 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. Submission time for all assessments is set at **11:55 pm**. A 1-hour grace period is 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, students need to submit an application for Special Consideration.

Assessments where Late Submissions will be accepted

In this unit, late submissions will be accepted as follows:

- **Design Task:** Late Submissions will NOT be accepted unless Special Consideration is approved.
- **Weekly Quizzes:** Late Submissions will NOT be accepted unless Special Consideration is approved.
- **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**: Late Submissions WILL be accepted in accordance with the policy above.
- **Game Playtesting:** Late Submissions WILL be accepted in accordance with the policy above.

Special Considerations

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 ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due
Weekly Design task	10%	No	Weekly
Weekly quizzes	10%	No	Weekly
Game Analysis	15%	No	In class
Level Design	20%	No	Week 7
Tabletop game design	20%	No	Week 13
Game playtesting	20%	No	Week 13
User experience research activity	5%	No	Week 15

Weekly Design task

Assessment Type [1]: Design Task
Indicative Time on Task [2]: 0 hours
Due: **Weekly**
Weighting: **10%**

Engagement with and contributions to weekly design tasks.

On successful completion you will be able to:

- Apply the process of iterative, player-centric game design to produce intermediate-level games.
- Collaborate with fellow designers to imagine game experiences and design gameplay mechanics to achieve them.
- Evaluate game prototypes by playtesting, and use the results to refine the design.

Weekly quizzes

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 8 hours
Due: **Weekly**
Weighting: **10%**

Weekly online quizzes covering the theory presented in lectures.

On successful completion you will be able to:

- Apply the process of iterative, player-centric game design to produce intermediate-level games.
- Analyse and critique existing games according to the principles of game design.

Game Analysis

Assessment Type [1]: Media presentation
Indicative Time on Task [2]: 15 hours
Due: **In class**
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.

Level Design

Assessment Type [1]: Design Task
Indicative Time on Task [2]: 20 hours
Due: **Week 7**
Weighting: **20%**

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 intermediate-level games.
- Prototype novel level-design implementations within an existing game engine.
- Communicate design goals and reasoning through appropriate documentation.

Tabletop game design

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

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.

On successful completion you will be able to:

- Apply the process of iterative, player-centric game design to produce intermediate-level games.
- Collaborate with fellow designers to imagine game experiences and design gameplay mechanics to achieve them.
- Communicate design goals and reasoning through appropriate documentation.

Game playtesting

Assessment Type [1]: Lab report
Indicative Time on Task [2]: 20 hours
Due: **Week 13**
Weighting: **20%**

Playtest your designed tabletop game to evaluate 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, to provide information to improve its design.

On successful completion you will be able to:

- Evaluate game prototypes by playtesting, and use the results to refine the design.

User experience research activity

Assessment Type [1]: Reflective Writing
Indicative Time on Task [2]: 2 hours
Due: **Week 15**
Weighting: **5%**

You will take part in a user testing experience for another game or research project, and write a short 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 by playtesting, and use the results to refine the 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 and practicals start in week 1.

Classes

Each week, COMP2150 has two hours of lectures and a two-hour practical. 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.

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 (Version 2022.3.18 LTS). The free version of this can be downloaded at http://unity3d.com/get-unity, 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.

COVID Information

For the latest information on the University's response to COVID-19, please refer to the Coronavirus infection page on the Macquarie website: https://www.mq.edu.au/about/coronavirus-faqs. Remember to check this page regularly in case the information and requirements change during semester. If there are any changes to this unit in relation to COVID, these will be communicated via iLearn.

Unit Schedule

See below for the initial unit schedule. Some topics and weeks may change throughout semester to best meet the needs of the cohort. Please see iLearn for the most up-to-date version of this schedule.

Week	Topic	Assessments
1	Unit Introduction Principles of Game design	
2	Agile Game Design and Development	
3	Toys, Games and Discovery	
4	Challenge and Drama	
5	Level Design	
6	Protoyping for Level Design	
7	Pitching and Communicating your Design	Level Design Task due
8	Systems, economies, choices	
	Break	
9	Multiplayer design	
10	Playtesting	
11	Worldbuilding and Self-Expression	
12	UI, Aesthetics and Game Feel	
13	Revision/Ask Us Anything!	Game Design and Playtesting Report due
14		
15		User Experience Research Activity 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
- 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 ask.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 AskMQ, 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

- User experience research activity introduced.
- Weekly Design Task weighting changed (12% to 10%).
- Weekly Quzzes weighting changed (13% to 10%).

Changes since First Published

Date	Description
05/03/2024	Added missing practical demonstrator email (Izzy White), who joined after the unit guide had been approved.

Unit information based on version 2024.03 of the Handbook