COMP2150

Game Design

Session 1, Special circumstances 2021

School of Computing

Contents

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 Michael Hitchens michael.hitchens@mq.edu.au Contact via email Mitchell McEwan mitchell.mcewan@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

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. A submission that is more than 120 hours late will receive a mark of zero (0) and/or a fail grade.

Weekly Participation

The **practical** classes in this subject are designed to let you practise the elements of design we discuss in lectures each week, using a variety of paper-prototyping exercises and working with other students. They form an important component of your learning in this unit. Students will be formed into groups each week and work on a design problem. Students are expected to actively participate in their group's work on the design, both by discussing ideas and by contributing ideas. There will also normally be an opportunity to provide feedback to other groups and this is also part of the required participation. To satisfy this hurdle requirement you must successfully participate in at least eight (8) of the weekly practical sessions.

Weekly Quizzes

To satisfy this hurdle you must attempt at least eight (8) of the weekly quizzes.

Assessment Tasks

Name	Weighting	Hurdle	Due
Weekly participation	0%	Yes	Weekly
Weekly quizzes	5%	Yes	Weekly
Game Analysis	20%	No	In weekly tutorial (once per team)
Level Design	25%	No	Friday April 23rd (week 7)
Game playtesting	25%	No	Friday June 18th
Tabletop game design	25%	No	Friday June 18th

Weekly participation

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

This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Participation in 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]: 6 hours
Due: **Weekly**
Weighting: **5%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Weekly online quizzes covering the theory presented in lectures.UL

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]: 19 hours
Due: **In weekly tutorial (once per team)**
Weighting: **20%**

Students will analyse a game based on the design principles taught in lectures and present their analysis to their tutorial class 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: **Friday April 23rd (week 7)**
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 intermediate-level games.
- Prototype novel level-design implementations within an existing game engine.
- Communicate design goals and reasoning through appropriate documentation.

Game playtesting

Assessment Type [1]: Lab report
Indicative Time on Task [2]: 20 hours
Due: **Friday June 18th**
Weighting: **25%**

Playtest the tabletop game designed above to evaluate whether it meets the desire 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.

Tabletop game design

Assessment Type [1]: Design Task
Indicative Time on Task [2]: 20 hours
Due: **Friday June 18th**
Weighting: **25%**

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.

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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

Each week COMP2150 has two hours of lectures and a two-hour tutorial. Please see the Timetable at http://www.timetables.mq.edu.au. for details

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. You should be familiar with accessing through links to on-line sources of information. It is important to realise that there will be additional costs to you which may not be present in traditional presentation of education materials. Such costs include connection, time charges and access to specific information on the Web. Your Internet provider can supply you with more details.

UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

Online Resources

The official location (URL) of unit information once you have loaded your WWW browser is: http://ilearn.mq.edu.au

Once you have enrolled in the unit, you must gain access to comp2150 website. We will be using the University's Online Learning at MQ website (iLearn). Students should check this site for regular updates.

Technology Used and Required

Unity 3D. The free version of this can be downloaded at http://unity3d.com/get-unity

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

Unit Schedule

1	Unit Introduction Revision of MDA/Kinds of fun. Player-centric design.	
2	Iterative Design. Prototyping and playtesting Design Documents	
3	Challenge and Drama	
4	Level design - Laying out challenges in space/time. Teaching the player, Difficulty	
5	Level design - Architectural design, white-boxing, molecule diagrams	
6	Games as systems. Toys, resource economies. Interesting choices.	Assignment 1 due
7	Multiplayer Dynamics	
8	Playtesting World Building	
9	Story and Characters	
10	Aesthetics and Game Feel	
11	Puzzles/Challenges/Rewards Immersion/presence/player experience/motivations (intrinsic vs extrinsic)	
12	Self Expression Serious Games	
13	Guest Lecture	
14		
15		Game design and playtesting report 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

The only significant changes are

- the weekly designs tasks being a hurdle requirement in 2021
- Expansion of playtest task due compared to 2020

Changes since First Published

Date	Description
08/02/2021	Missing word in the weekly class participation requirement
05/02/2021	More information on hurdles