



COMP2150

Game Design

Session 1, Weekday attendance, North Ryde 2020

Dept of Computing

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	3
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	6
<u>Unit Schedule</u>	7
<u>Policies and Procedures</u>	8
<u>Changes from Previous Offering</u>	9
<u>Changes since First Published</u>	10

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General Information

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Credit points

10

Prerequisites

(COMP1000 or COMP115) and ((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://students.mq.edu.au/important-dates>

Learning Outcomes

- 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:** Communicate design goals and reasoning through appropriate documentation.
- ULO5:** 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. No submission will be accepted after solutions have been posted.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Game Analysis</u>	15%	No	In tutorial, each group will be choose a different week
<u>Weekly quizzes</u>	5%	Yes	Each week
<u>Level Design</u>	30%	No	Friday Week 6 (April 3rd)
<u>Weekly participation</u>	0%	Yes	Weekly
<u>Game playtesting</u>	25%	No	Friday week 15 (June 19)
<u>Tabletop game design</u>	25%	No	Friday week 11 (May 22nd)

Game Analysis

Assessment Type ¹: Media presentation

Indicative Time on Task ²: 19 hours

Due: **In tutorial, each group will be choose a different week**

Weighting: **15%**

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.

Weekly quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 6 hours

Due: **Each week**

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.

Level Design

Assessment Type ¹: Design Task

Indicative Time on Task ²: 20 hours

Due: **Friday Week 6 (April 3rd)**

Weighting: **30%**

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.

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.
- Prototype novel level-design implementations within an existing game engine.
- Evaluate game prototypes by playtesting, and use the results to refine the design.

Game playtesting

Assessment Type ¹: Lab report

Indicative Time on Task ²: 20 hours

Due: **Friday week 15 (June 19)**

Weighting: **25%**

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

Tabletop game design

Assessment Type ¹: Design Task

Indicative Time on Task ²: 20 hours

Due: **Friday week 11 (May 22nd)**

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.
- Communicate design goals and reasoning through appropriate documentation.

¹ If you need guidance or support to understand or complete this type of assessment, please contact the Learning Skills Team

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 three 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 Riders, 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

Week	Lecture Topic	Assessments
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	

Week	Lecture Topic	Assessments
10	Aesthetics and Game Feel	
11	Puzzles/Challenges/Rewards Immersion/presence/player experience/motivations (intrinsic vs extrinsic)	Assignment 2 due
12	Self Expression Serious Games	
13	Guest Lecture	
14		
15		Assignment 3 due

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). 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](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/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 improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

Student Enquiry Service

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

Equity 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.

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

This is the first offering of this unit. It inherits some material from COMP260

Changes since First Published

Date	Description
20/02/2020	Amendment for SGTA participation hurdle