Course Outline COMP7128 Game Design (2)	BINUS UNIVERSITY
	Study Program Computer Science
Effective Date 01 February 2018	**Revision** 2

1. Course Description

This course comprises general game theories, game design concepts, and implementation. It gives students basic knowledge of the player-centric approach to the process of game design and its implementation.

2. Graduate Competency

Each course in the study program contributes to the graduate competencies that are divided into employability and entrepreneurial skills and study program specific outcomes, in which students need to have demonstrated by the time they complete their course.

BINUS University employability and entrepreneurial skills consist of planning and organizing, problem solving and decision making, self management, team work, communication, and initiative and enterprise.

2.1. Employability and Entrepreneurial Skills

Aspect	Key Behaviour

2.2. Study Program Specific Outcomes

Study Program Specific Outcomes
(SO-2) - Able to design software application solution based on problem analysis which can be solved with structured approach in informatics area
(SO-3) - able to assess technology trend in informatics area to deliver alternative solution of software development
(SO-8) able to produce multimedia-based software applicable to solve the problems in industry

3. Topics

- Designing and Developing Games
- Understanding Player and Machine
- Concept and World
- Core Mechanics
- Gameplay
- Game Balancing
- General Principles of Level Design
- Character Development
- Creative and Expressive Play
- Storytelling
- Design Issues for Online Gaming
- User Experience
- Money from Game

4. **Learning Outcomes**

On successful completion of this course, student will be able to:
- LO 1: Explain General Game Theories
- LO 2: Explain Game Development Process
- LO 3: Create Game Design Documentation
- LO 4: Create an Appropriate Game Design

5. **Teaching And Learning Strategies**

In this course, the lecturers might deploy several teaching learning strategies, including Case Study, Class Presentation, Brainstroming, and Lecture.

6. **Textbooks and Other Resources**

   6.1 Textbooks
   1. Ernest Adams. (2014). *Fundamentals of game design*. 03. New Riders Publishing. USA. ISBN: 9780321929679.
   2. Scoot Rogers. (2014). *Level Up The Guide to Great Video Game Design*. 02. John Wiley & Sons, Inc. United Kingdom. ISBN: 978-1-118-87716-6.

   The book in the first list is a must to have for each student.

   6.2 Other Resources
   1. Game Design Document
   2. http://www.gewang.com/publish/files/2016-nime-gamedesign.pdf
   3. http://www.citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.10.9203&rep=rep1&type=pdf
   4. http://www.oecd.org/edu/ceri/39414829.pdf
   5. http://www.stanford.edu/~jbboin/doc/gamedesign.pdf
   6. http://www.gamasutra.com/view/feature/131791/the_anatomy_of_a_design_document_.php
   7. http://www.gamasutra.com/view/feature/131818/the_anatomy_of_a_design_document_.php
   8. http://www.developer.mozilla.org/en-US/docs/Games/Publishing_games/Game_monetization
   9. http://www.gameanalytics.com/blog/42-ways-to-monetize-your-mobile-game.html
   10. http://www.gamasutra.com/blogs/SebastianLong/20171002/306649/What_Is_Games_User_Experience_UX_and_How_Does_It_Help.php
   11. http://www.gameanalytics.com/blog/5-tips-to-improve-your-games-user-experience.html
   12. http://www.benzinga.com/14/09/4883412/online-gaming-advantages-disadvantages-threats-and-their-solutions
   13. http://www.sundance.org/blogs/program-spotlight/the-art-of-storytelling-in-gaming
   14. http://www.gamasutra.com/view/feature/131086/techniques_of_written_storytelling_.php
   15. http://www.theatlantic.com/entertainment/archive/2011/09/the-power-of-creativity-how-game-design-changes-the-way-we-think/245441/
   16. http://www.psychologyofgames.com/2013/11/the-psychology-of-video-game-avatars/
   17. http://www.dramatoolkit.co.uk/drama-games/category/character
   18. http://www.contentedwriter.com/principles-of-game-design-visual-style-and-gameplay/
   19. http://www.gamedevelopment.tutsplus.com/tutorials/a-beginners-guide-to-designing-video-game-levels--cms-25662
   20. http://www.gamedesignconcepts.wordpress.com/2009/08/20/level-16-game-balance/
   21. http://www.gamasutra.com/blogs/DanFelder/20151012/251443/Design_101_Balancing_Games.php
   22. http://www.gamasutra.com/view/feature/135102/what_makes_social_games_social.php
   23. http://www.karlkapp.com/game-element-core-mechanic/
   24. http://www.cas.mcmaster.ca/~se3gb3/SE3GB3/2013/slides/The%20Dimensions%20of%20a%20Game%20World.pdf
   25. http://www.littlesky.org/?q=node/1
   26. http://www.gamedesigning.org/career/sell-game-idea/
   27. http://www.darklorde.com/the-five-domains-of-play/
   28. http://www.peachpit.com/articles/article.aspx?p=2168935&seqNum=4
   29. http://www.benzinga.com/14/09/4883412/online-gaming-advantages-disadvantages-threats-and-their-solutions

7.   Schedule

Theory

Session/ Mode	Related LO	Topics	References
1 F2F	LO 1	Designing and Developing Games - Task Approach - Key Components - Game Structure - Design Process - Team Roles - Anatomy of Game Designer	- Designing and Developing Games - Fundamentals of game design, Chapter 2 - Game Design Document - Anatomy of Game Designer Part 1, http://www.gamasutra.com/view/feature/131791/the_anatomy_of_a_design_document_.php - Anatomy of Game Designer Part 2, http://www.gamasutra.com/view/feature/131818/the_anatomy_of_a_design_document_.php
2 F2F	LO 1	Understanding Player and Machine - VandenBerghe's Five Domains of Play - Demographic Categories - Gamer Dedication - Binary Thinking - Home Game Consoles - Personal Computers - Portable Devices - Other Devices	- Understanding Player and Machine - Fundamentals of game design, Chapter 4 - Binary Thinking, http://www.peachpit.com/articles/article.aspx?p=2168935&seqNum=4 - Five Domains of play, http://www.darklorde.com/the-five-domains-of-play/
3 GSLC	LO 1 LO 2 LO 3	Concept and World - Getting an Idea - Idea to Game Concept - Game World - Game World Purpose - Game World Dimensions - Realism	- Concept and World - Fundamentals of game design, Chapter 7 & 8 - 5 ways to protect your video game idea, http://www.gamedesigning.org/career/sell-game-idea/ - Game Development : Choosing Game Genre, http://www.littlesky.org/?q=node/1 - The Dimension of Game World, http://www.cas.mcmaster.ca/~se3gb3/SE3GB3/2013/slides/The%20Dimensions%20of%20a%20Game%20World.pdf
4 F2F	LO 1 LO 2 LO 3	Core Mechanics - Core Mechanics Definition - Key Concepts - The Internal Economy - Progression Mechanics - Tactical Maneuvering Mechanics - Social Interaction Mechanics - Core Mechanics and Gameplay - Core Mechanics Design	- Core Mechanics - Fundamentals of game design, Chapter 14 - Game Element : Core Mechanic, http://www.karlkapp.com/game-element-core-mechanic/ - What makes social games social ?,

		- Random Numbers and the Bell-Shaped Curve	http://www.gamasutra.com/view/feature/135102/what_makes_social_games_social.php
5 F2F	LO 1 LO 2 LO 3	Gameplay - Making games Fun - Hierarchy of Challenges - Skill, Stress, and Absolute Difficulty - Commonly Used Challenges - Actions - Saving the Game	- Gameplay - Fundamentals of game design, Chapter 13 - Making Games Fun, http://www.stanford.edu/~jbboin/doc/gamedesign.pdf - Game Play and Game Mechanic, http://www.oecd.org/edu/ceri/39414829.pdf
6 F2F	LO 1 LO 3	Game Balancing - Balanced Game Definition - Avoiding Dominant Strategies - Incorporating the Element of Chance - Making PvP Games Fair - Making PvE Games Fair - Managing Difficulty - Understanding Positive Feedback - Other Balance Considerations - Design to Make Tuning Easy	- Game Balancing - Fundamentals of game design, Chapter 15 - Game Balance, http://www.gamedesignconcepts.wordpress.com/2009/08/20/level-16-game-balance/ - Design 101 : Balancing Games, http://www.gamasutra.com/blogs/DanFelder/20151012/251443/Design_101_Balancing_Games.php
7 F2F	LO 2 LO 3	General Principles of Level Design - Level Design Definition - Key Design Principles - Layouts - Expanding on the Principles of Level Design - The Level Design Process - Pitfalls of Level Design	- General Principles of Level Design - Fundamentals of game design, Chapter 16 - Principles of game design visual style and gameplay, http://www.contentedwriter.com/principles-of-game-design-visual-style-and-gameplay/ - A Beginner's guide to Designing Video Game Levels, http://www.gamedevelopment.tutsplus.com/tutorials/a-beginners-guide-to-designing-video-game-levels--cms-25662
8 F2F	LO 3 LO 4	Character Development - Character Design Goals - Player and Avatar Relationship - Character Depth - Audio Design	- Character Development - Fundamentals of game design, Chapter 10 - The Pschology of Video Game Avatar, http://www.psychologyofgames.com/2013/11/the-psychology-of-video-game-avatars/ - Game Character, http://www.dramatoolkit.co.uk/drama-games/category/character
9	LO 2	Creative and Expressive Play	- Creative and Expressive

GSLC	LO 4	- Self-Defining Play - Creative Play - Other Forms of Expression - Game Modification	Play - Fundamentals of game design, Chapter 9 - The power of creativity : How game design Changes the way we think, http://www.theatlantic.com/entertainment/archive/2011/09/the-power-of-creativity-how-game-design-changes-the-way-we-think/245441/ - Game Design for Expressive Mobile Music, http://www.gewang.com/publish/files/2016-nime-gamedesign.pdf
10 F2F	LO 3 LO 4	Storytelling - Stories in Game - Key Concepts - Storytelling Engine - Linear Stories - Nonlinear Stories - Granularity - Plot Mechanism - Emotional Limits - Scripted Conversation & Dialog Trees - When to Write the Story - Other Considerations	- Storytelling - Fundamentals of game design, Chapter 11 - Techniques of written storytelling applied to game design, http://www.gamasutra.com/view/feature/131086/techniques_of_written_storytelling_.php - The art of storytelling in Gaming, http://www.sundance.org/blogs/program-spotlight/the-art-of-storytelling-in-gaming
11 GSLC	LO 4	Design Issues for Online Gaming - Online Games Definition - Advantages of Online Games - Disadvantages of Online Games - Design Issues - Technical Security - Social Problems	- Design Issues for Online Gaming - Fundamentals of game design, Chapter 17 - Security Design in Online Games, http://www.citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.10.9203&rep=rep1&type=pdf - Advantages and Disadvantages threats and their solutions, http://www.benzinga.com/14/09/4883412/online-gaming-advantages-disadvantages-threats-and-their-solutions
12 F2F	LO 2 LO 3 LO 4	User Experience - UX Definition - Player-Centric Interface Design - Design Process - Managing Complexity - Interaction Models - Camera Models - Visual Elements - Audio Elements - Input Devices - Navigation Mechanisms - Accessibility Issues	- User Experience - Fundamentals of game design, Chapter 12 - 5 ways to improve your game's user experience, http://www.gameanalytics.com/blog/5-tips-to-improve-your-games-user-experience.html - What is Game User experience (UX) and how does it help ?,

13 F2F	LO 4	Money from Game - Direct Payment Models - Indirect Payment Models - World Markets	http://www.gamasutra.com/blogs/SebastianLong/20171002/306649/What_Is_Games_User_Experience_UX_and_How_Does_It_Help.php
			- Money from Game - Fundamentals of game design, Chapter 6 - 42 ways to monetize your mobile game, http://www.gameanalytics.com/blog/42-ways-to-monetize-your-mobile-game.html - Game Monetization, http://www.developer.mozilla.org/en-US/docs/Games/Publishing_games/Game_monetization

8. Evaluation

Theory

Assessment Activity	Weight	Learning Outcomes			
		1	2	3	4
Assignment	20%	√	√	√	√
Mid Exam	30%	√	√	√	
Final Exam	50%		√	√	√

Practicum

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Final Evaluation Score

Aspects	Weight
Theory	100%
Practicum	0%

9. A. Assessment Rubric (Study Program Specific Outcomes)

LO	Indicators	Proficiency Level			
		Excellent (85 – 100)	Good (75 – 84)	Average (65 – 74)	Poor (<= 64)
LO 1	1.1. Ability to Define Basic understanding of game theories	have a solid understanding about game theories and case study	have a solid understanding about game theories	have enough understanding abut game theories	Theory of Game are inadequate
	1.2. Ability to recognize game development need	Have a solid information about Game Development needs	Have a good information about Game Development needs	Have enough information about Game Development needs	Have inappropriate information about Game Development needs
LO 2	2.1. Ability to distinguish game pipeline process	Have an excellent knowledge about game pipeline process	Have a good knowledge about game pipeline process	Have an average knowledge about game pipeline process	Have a poor knowledge about game pipeline process
	2.2. Ability to compare Game Development Process	have a solid understanding about Game Development Process	have a good understanding about Game Development Process	have an average understanding about Game Development Process	have a poor understanding about Game Development Process
LO 3	3.1. Ability to create documentation for game	have an excellent documentation for game	have an good documentation for game	have an average documentation for games	have inadequate documentation for game
	3.2. have ability to interpret the content of design documentation	design document interpretation are relevant and clearly stated	design document interpretation are competent	design document interpretation are incomplete	design document interpretation are inadequate
LO 4	4.1. Ability to develop content to support appropriate game design	have excellent practices to create contents	have good practices to create contents	have average practices to create contents	have inadequate practices to create contents
	4.2. Ability to identify the design document content effectively	have excellent identification for appropriate game design	have good identification for appropriate game design	have average identification for appropriate game design	have poor identification for appropriate game design

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