Form 2B

City University of Hong Kong

Information on a Course
offered by Department of Computer Science
with effect from Semester B in 2013 / 2014

Part I

Course Title: Computer Games Design

Course Code: CS5367

Course Duration: One Semester

Credit Units: 3

Level: P5

Medium of Instruction: English

Prerequisites: Nil

Precursors: Nil

Equivalent Courses: Nil

Equivalent to the Old Course Code & Title: IT5307 Computer Games Design

Exclusive Courses: Nil

Part II

Course Aims

This elective course aims at introducing various topics related to the production of computer games. The course will cover the technological aspects for implementing computer games. The scenario writing, designing of characters, game production and marketing will also be included.

Course Intended Learning Outcomes (CILOs)

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting (if applicable)
1.	describe the characteristics, requirements and challenges of various game genres and game platforms;	20%
2.	explore the core mechanics and game play of the game design;	20%
3.	develop critical thinking skill on game design with respect to gameplay, level design and characters setting;	20%
4.	create a well-balanced game with comprehensive documentation;	20%
5.	evaluate and justify the critical factors of succeeding game design.	20%

Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

Teaching pattern:

Suggested lecture/tutorial/laboratory mix: 2 hrs. lecture; 1 hr. tutorial.

TLA	Remarks	ILOs to be addressed
Lecture	Lectures will cover the essential technologies, requirements and theories of computer game design.	1, 2, 3, 4, 5
Tutorial	Tutorials will be in form of case studies, analytical discussion and programming exercises. Case studies and analytical discussion are designed to review the material covered in the lectures and widen students' exposure on the related topics. Programming exercises provide hand-on experience on computer game programming that provides technical competence of computer game design.	1, 2, 3, 4, 5
Assignment	Students will conduct a survey on computer games. The survey aims to encourage students to explore the current trend and technologies of computer game design. Students are required to perform critical assessment and discover potential improvement of their findings.	1, 2, 3, 5
Project	Student will design and develop a computer game with the following requirements:	1, 2, 3, 4, 5

	• demonstrate a good understanding on the characteristics and requirements of a given game genre. • apply appropriate technologies in game design. • provide documentation and critical assessment on the game developed.	

Assessment Tasks/Activities

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

CILO No.	Type of Assessment Tasks/Activities	Weighting (if applicable)	Remarks
CILO 1	**Quiz/ Examination** Students are expected to identify the characteristics, requirements and challenges of various game genres and game platforms. **Assignments/ Project** The ability of student to design a game that fulfills the requirement and constraint of a given game genre and platform will be another measurement.	20%	
CILO 2	**Quiz/ Examination** The ability to identify and articulate the core mechanics and game play of the game design will be the measurement of this CILO. **Assignments/ Project** Students are expected to apply the core mechanics and game play in their game design. The completeness of various elements in their design will be the measurement of the CILO.	20%	
CILO 3	**Quiz/ Examination** Students are expected to demonstrate the ability to evaluate and justify game design especially with respected to gameplay, level design and character design. **Assignments/ Project** This CILO will be measured by the quality of justification provided by students on their game design. The justification should be based on, but not limited to, the material covered in this course.	20%	
CILO 4	**Assignments/ Project** This CILO primary measures the balance and creativity of various game elements of	20%	

	students' work. The completeness and quality of game documentation will be another measurement.		
CILO 5	**Quiz/ Examination** Students are expected to identify, articulate and analysis the success factors of a game design. **Assignments/ Project** Students are expected to identify and evaluate the success factors of their work.	20%	

Grading of Student Achievement: Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

Examination duration: 2 hours

Percentage of coursework, examination, etc.: 40% CW; 60% Exam

Grading pattern: Standard (A+AA-…F)

For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.

This is a CEF approved course, students who want to apply for CEF claims must achieve at least 70% minimum attendance and obtain at least 50% passing mark for the assessment of the course.

Part III

Keyword Syllabus

Game Scenario Designing, User Interface, Character Design, Programming Platforms, Real-Time Control, Hardware controllers for games, Network Communication for Games, Artificial Intelligence, Programming Techniques for Games, Physical Animation, Quaternion.

Syllabus

- Game Design Documents
- Gameplay
- Storytelling
- Character Creation and Development
- Artificial Intelligence
- Core Mechanics
- Level Design
- Game Balancing
- User Experience

Recommended Reading
Text(s)

Andrew Rollings and Dave Morris, "Game Architecture and Design", New Riders, 2004. (ISBN-13: 978-0-7357-1363-5)

Ernest Adams and Andrew Rollings, "Fundamentals of Game Design", Prentice Hall, 2007. (ISBN: 0-13-168747-6)

Michael E. Moore and Jennifer Sward, "Introduction to the Game Industry", Prentice Hall, 2007. (ISBN: 0-13-168743-3)

Online Resources