

# THE HONG KONG INSTITUTE OF EDUCATION

## Course Outline

### Part I

Course Title:	Understanding Digital Games 數碼遊戲初探
Course Code:	GEH1011
Department:	MIT
Credit Point:	3
Contact Hours:	39
Pre-requisite(s):	GEE1001

### Part II

#### 1. Synopsis

This course aims to provide a holistic understanding of digital games in our society. It offers opportunities for students to examine the history, technology and taxonomy of interactive digital games. The theory and practice of digital game design will be studied. Through hands-on game playing, students will explore the rules, culture, ethics, personal and social issues associated with commercial games. Their personal experiences can then initiate the kinds of learning entailed in playing educational games and to promote playful teaching and learning environments.

#### 2. Course Intended Learning Outcomes (CILOs)

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

- CILO<sub>1</sub>: Construct your own gaming experience (if any) in relation to the historical and technological development of the game industry.
- CILO<sub>2</sub>: Correlate the theory and practice of digital game design.
- CILO<sub>3</sub>: Analyse the essential elements of game play and what contribute a great game to you.
- CILO<sub>4</sub>: Construct the ethical and thoughtful response to the personal, social, cultural and health issues of game play in the society.
- CILO<sub>5</sub>: Develop the perspective of how games can be used in education or learning.

### 3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
1. Overview of the history of digital games and the influential digital games in these periods: <ol style="list-style-type: none"> <li>a. Origins of an industry (1960 – 1979).</li> <li>b. Nintendo generation (1980 – 1989).</li> <li>c. Computer revolution (1990 – 1994).</li> <li>d. Empires of Sony and Microsoft (1995 – 2002).</li> <li>e. Interactive and online game industry (the new millennium).</li> </ol>	<i>CILO<sub>1</sub></i>	Lectures, demonstrations, hands-on practices and discussion
2. Understanding different hardware and platforms for digital games <ol style="list-style-type: none"> <li>a. Salient characteristics of game consoles and input devices.</li> <li>b. Processing power and connectivity of platforms.</li> </ol> 3. Salient characteristics of game consoles and input devices.	<i>CILO<sub>1</sub></i>	Lectures, demonstrations, discussion, hands-on practices and exploration of console hardware
4. Digital game taxonomy and classification <ol style="list-style-type: none"> <li>a. Examination of different game genres and the difficulty to delineate these genres.</li> <li>b. Recognizing various classification schemes (e.g. ESRB) from different countries.</li> </ol>	<i>CILO<sub>2,3</sub></i>	Lectures, demonstrations, discussion, video illustrations, hands-on practices and gameplay
5. Theory and practice of digital game design <ol style="list-style-type: none"> <li>a. The two polarized views of ludology and narratology by game scholars.</li> <li>b. The game design schemas: rules, play and culture.</li> <li>c. The essential elements of gameplay: anticipatory versus complex systems, levels, non-linearity and modeling reality.</li> <li>d. Processes of producing a digital game from the preproduction phase, the production phase to the postproduction phase.</li> </ol>	<i>CILO<sub>2,3</sub></i>	Lectures, demonstrations, discussion, video illustrations, hands-on practices and gameplay
6. Personal, social, cultural and health issues of digital games affirmed by hands-on examples <ol style="list-style-type: none"> <li>a. Gender, age and culture bias.</li> <li>b. Identity, community and play time management.</li> <li>c. Violence, masculinity, explicitness, horror and gambling.</li> <li>d. Social interaction and practices of gameplay.</li> <li>e. The virtual world of digital games to the real world, and their issues.</li> </ol>	<i>CILO<sub>4</sub></i>	Lectures, demonstrations, discussion, video illustrations, hands-on practices and gameplay

<p>7. Educational games in school and at home in Hong Kong</p> <p>a. Digital games empowered by learning theories.</p> <p>b. The roles and concerns of parents and teachers.</p> <p>c. Choosing appropriate digital games to promote learning.</p>	<p>CILO<sub>5</sub></p>	<p>Lectures, case study, discussion, video illustrations and hands-on practices</p>
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**4. Assessment**

Assessment Tasks	Weighting (%)	CILO
<p>a. Each student is required to construct an electronic journal to critically examine a sizeable game related to the concepts learnt.</p>	<p>40</p>	<p>CILO<sub>1,2,3</sub></p>
<p>b. Put forth a compelling argument about how the selected game or other games in general can be used to promote effective teaching and learning; or identify the social and/or educational issues in playing the selected game or other games in general.</p>	<p>40</p>	<p>CILO<sub>4,5</sub></p>
<p>c. Demonstrate competent mechanics (spelling, punctuation, grammar, neatness, clarity of expression, organization, presentation, citations, etc.)</p>	<p>20</p>	<p>CILO<sub>1,2,3,4,5</sub></p>

**5. Required Text(s)**

Nil

**6. Recommended Readings**

- 1.) Adams, E. (2014). *Fundamentals of game design (3rd Ed.)*. S.I.: New Riders.
- 2.) Anderson, C., Gentile, D., & Buckley, K. (2007). *Violent video game effects on children and adolescents: theory, research, and public policy*. New York: Oxford University Press.
- 3.) Brathwaite, B. (2007). *Sex in video games*. MA: Charles River Media.
- 4.) Byron, S., Curran, S., & McCarthy, D. (2006). *Game on! From pong to oblivion. The 50 greatest video games of all time*. London: Headline Publishing Group.
- 5.) Chandler, H. (2014). *The game production handbook (3rd Ed.)*. Burlington, MA: Jones & Bartlett Learning.
- 6.) Dillion, R. (2011). *The golden age of video games: the birth of a multi-billion dollar industry*. Boca Ration, FL: A K Peters/CRC Press.
- 7.) Egenfeldt-Nielsen, S.(2007). *Educational potential of computer games*. London: Continuum.
- 8.) Fencott, C., Lockyer, M., Clay, J., & Massey, P. (2012). *Game invaders: the theory and understanding of computer games*. Hoboken, NJ: John Wiley & Sons.
- 9.) Garralts, N. (2006). *The meaning and culture of grand theft auto: critical essays*. N.C.: McFarland.
- 10.) Gee, J. (2007). *What video games have to teach us about learning and literacy (2<sup>nd</sup> Ed.)*. New York: Palgrave Macmillan.
- 11.) Gee, J. (2007). *Good video games + good learning: collected essays on video games, learning and literacy*. NY: Peter Lang.

- 12.) Gibson, D., Aldrich, C., & Prensky, M. (2007). *Games and simulations in online learning: research and development frameworks*. Hershey, PA: Information Science Pub.
- 13.) Habgood, J., & Overmars, M. (2006). *The Game Maker's Apprentice: Game Development for Beginners*. CA: Springer.
- 14.) Juul, J. (2005). *Half-real: video games between real rules and fictional world*. Cambridge, Mass.: MIT Press.
- 15.) Kutner, L., & Olson, C. (2008). *Grand theft childhood: the surprising truth about violent video games and what parents can do*. New York: Simon & Schuster.
- 16.) McCarthy, D., Curran, S., & Byron, S. (2005). *The art of producing games*. Boston, Mass.: Thomson.
- 17.) Michael, D., & Chen, S. (2006). *Serious games: games that educate, train, and inform*. Boston, MA: Thompson.
- 18.) Novak, J. (2012). *Game development essentials: an introduction (3rd Ed.)*. Clifton Park, NY: Delmar Cengage Learning.
- 19.) Perron, B., & Wolf, M. (Eds) (2009). *The video game theory reader 2*. New York: Routledge.
- 20.) Pivec, M., Koubek, A., & Dondi, C. (2004). *Guidelines for Game-based Learning*. Lengerich, Germany: Pabst Science Publishers.
- 21.) Prensky, M. (2007). *Digital game-based learning*. St. Paul, Minn: Paragon House.
- 22.) Prensky, M. (2006). *Don't bother me, Mom-- I'm learning! : How computer and video games are preparing your kids for twenty-first century success, and how you can help!*. St. Paul, Minn.: Paragon House.
- 23.) Raessens, J., & Goldstein, J. (2005). *Handbook of computer game studies*. MA: MIT Press.
- 24.) Rutter, J., & Bryce, J. (2006). *Understanding digital games*. CA: SAGE Publications.
- 25.) Salen, K., & Zimmerman E. (2004). *Rules of play: game design fundamentals*. Cambridge, Mass.: MIT Press.
- 26.) Shaffer, D. (2006). *How computer games help children learn*. N.Y.: Palgrave Macmillan.
- 27.) Wolf, M., & Perron, B. (Eds) (2003). *The video game theory reader*. N.Y.: Routledge.
- 28.) Rabin, S. (2010). *Introduction to game development (2nd Ed.)*. Boston, MA: Course Technology.
- 29.) Tobias, S., & Fletcher, J. (2011). *Computer games and instruction*. Charlotte, NC: Information Age Publisher.
- 30.) Zagal, J. (2010). *Ludoliteracy: defining, understanding, and supporting games education*. Pittsburgh: ETC Press.
- 31.) 朱耀偉、陳潔詩 (2005) :《虛擬後樂園 : 透視電腦遊戲文化》, 香港, 天窗出版
- 32.) 珍妮·諾瓦科著 (2006) :《遊戲設計完全教程》, 上海, 人民美術出版社
- 33.) 黃石、丁肇辰、陳妍洁 (2008) : :《數字遊戲策劃》, 北京, 清華大學出版社
- 34.) 電子遊戲 (2006) :《維基百科—中文》, 瀏覽日期 : 22-7-2014  
<http://zh.wikipedia.org>

## 7. Related Web Resources

- 1.) Digital Games Research Association, <http://www.digra.org/>
- 2.) JISC Game-based Learning, <http://www.jisc.ac.uk/>
- 3.) Gamasutra, <http://www.gamasutra.com/>
- 4.) Games and Learning, <http://archive.futurelab.org.uk/projects/games-and-learning>
- 5.) Game Learning, <http://www.gamelearning.net/>
- 6.) Game in Education, <http://www.teem.org.uk/publications/>
- 7.) Serious Games Interactive, <http://www.seriousgames.dk/>

## 8. Related Journals

- 1.) Eludamos. Journal for Computer Game Culture, <http://www.eludamos.org/>
- 2.) International Journal of Computer Game Research (ISSN:1604-7982)
- 3.) SAGE. Journal of Games and Culture (ISSN: 1555-4139 & 1555-4120)
- 4.) SAGE. Journal of Simulation and Gaming (ISSN: 1552-826X & 1046-8781)
- 5.) Charles River Media. Journal of Game Development. <http://www.jogd.com/>
- 6.) AACE, Journal of Educational Multimedia and Hypermedia (ISSN: 1055-8896)
- 7.) AACE, Journal of Interactive Learning Research (ISSN: 1093-023X)
- 8.) AECT, Educational Technology and Development (ISSN: 1556-6501 & 1042-1629)
- 9.) British Journal of Education Technology (ISSN: 0007-1013)
- 10.) Computers and Education (ISSN: 0360-1315)
- 11.) EDUCAUSE, <http://www.educause.edu/>
- 12.) Innovate, <http://innovateonline.info/>