CEIT706 Serious Games and Simulations: Theories and Applications Course Syllabus

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Class Hours: Tuesday 13:40 - 16:30 (Seminar Room)

Course Description

Today computer gaming is one of the fastest growing areas of the Information Technologies industry. There is a significant amount of research base on the technical issues of gaming. However non-technical issues are not explored much. Understanding why people play games, why they like some games to others, how the game players interact with each other in gaming environment, what cognitive processes happen in game playing, how gaming approach can be applied to formal learning environments, societal impacts of games and gender issues are only some of the issues that need to be explored by researchers. It is obvious that understanding these processes is central to designing new media and tools that will support human use, augment human learning and enhance communication at the individual and the social levels.

This course will provide students with a sound introduction to the theories of gaming/simulations and examine cognitive/social factors and the design of computer games/simulations. So, the course will have a more psychological and social focus rather than a technical one. It will be organized around a collection of readings and real-world exercises. The format of this course based on reflective thinking. The lectures, presentations, discussion and other resources will be used to support the problems that students are working on throughout the semester.

Objectives

One of the main purposes of this course is to fertilize the discussion on what computer games are actually about, how they can be used for teaching/learning, how gaming affects gamers, how games affect our society, and how they can be used for more productive purposes. This course will help students build a solid foundation that helps them understand, the major issues of computer games and simulations.
Objectives of this course include:

1. Develop a theoretical understanding of cognitive, social and cultural aspects of computer games and simulations
2. Provide an understanding of the social, psychological, cultural and ethical issues associated with game design and use
3. Understand the origins and philosophy of games and video games in human history
4. Explain potentials of games on human psychology and learning
5. Inquire good and bad effects of video games and simulations on players and learners
6. Discover the areas that computer games can be used
7. Understand basic design elements of video games and suggest some design issues by using theoretical foundations
8. Evaluate the computer games with different perspectives
9. Understand the trends of video games and simulation research
10. Conduct a game research by considering the literature and analyze the data
11. Offer a set of first-hand experiences which augment conceptual understanding of course content

Assignments

Weekly Reflections

Each week you will read journal and book articles related that week’s topic and answer several questions asked by instructor. All questions should be answered to show you understand the literature and combine the ideas to prove your arguments. Readings will be provided by course instructor but additional resources are welcome. You are supposed to write a reflection to answer the questions given one week before. Reflections should be 3 to 4 pages by using APA standards. At the end of your reflection you will ask three questions or discussion topics. After a short lecture, selected questions will be asked to whole class. You are supposed to actively participate in class discussions.

Game Review & Presentation & Leading Discussion

You will be analyzing a game considering one of the weekly topics of the course and present it at class. Two weeks before your presentation, you should suggest the game that you want to show, after getting approved from the instructor, you should provide the game installation files either bringing the files to the class or sending electronic resources. You also will provide two or three discussion issues related the game. All class is responsible to play the game and prepare their ideas about discussion question. In the class you will just show the game in 15 minutes and explain how the topic of the week is located in the game. And facilitate a discussion in the class.
**Term Paper**

In term paper you are supposed to show that you grasped the research trends and methods in simulation and gaming research. You will conduct a research and the paper will be data driven; you can use interviews, questionnaires and observations. Each week instructor will ask your ideas about your research till your research question and context is clarified. You should review the literature and write your paper in accordance with journal article’s standard structure.

**Grading**

As stated before the course is organized around a collection of readings and real-world exercises. The format of this course is problem-centered. The lectures, presentations and other resources will be used to support the problems that students are working on throughout the semester.

Grading:

- 5%  Game review (selecting a game, providing install files, providing general overview)
- 10% Presentation & leading discussion on reviewed game
- 10% In class participation, weekly questions & comments (e-mail)
- 30% Weekly reflections
- 45% Term Paper

**Plagiarism**

This course will not allow academic dishonesty. Academic dishonesty includes submitting as one’s own work prepared by others, assisting another student in academic dishonesty, and using quotes and ideas without giving references. Your reflections should be your original ideas. Please add the full reference of any sources (text, image or audio) if any. Any instances of plagiarism means zero point for related assignment. To make sure that you know in what cases you will make plagiarism you are supposed to take and pass a test which was offered by Indiana University. You can Access the test from

[http://www.indiana.edu/~istd/overview.html](http://www.indiana.edu/~istd/overview.html)

At first it provides a tutorial. Please check the tutorial, take test and get a certificate. Print the certificate fill related fields and turn it in the first week of the class.
Weekly Topics and Readings

**Week 1. History of Computer Games**

- The Video Game Revolution (video). http://video.google.com/videoplay?docid=-4729348985218842392#

**Week 2. Philosophy of the Games**


**Week 3. Philosophy of the Computer Games**


**Week 4. Psychology in the Games (Flow and motivation)**

Week 5. Player aggression, violence (emotional connections)

**Mandatory readings**


**Optional readings**

**Week 6.** Diversity in Game Culture (Age, gender, identity and culture issues in the games)


**Week 7.** Social Interaction and Online communities in Games and Virtual Environments (Social presence, online communication, learning communities)


**Week 8.** Learning in Games and virtual environments (Commercial games, simulations, serious games and virtual environments)

**Mandatory readings**

Optional readings


**Week 9.** Design Issues of the Games (Basic game elements, narration, storytelling, scenario development, game genre selection)


**Week 10.** Design Methods of the Games (Game design methodologies, participatory game design, user centered design)

- Scaife, M. and Rogers, Y. (1999). Kids as informants: Telling us what we didn’t know or confirming what we knew already, in A. Druin (Ed.), The design of children's technology (pp.29-50).Morgan Kaufmann, San Francisco, CA

**Week 11.** Usability Evaluation of the Games (Human Game Interaction, Usability, playability, heuristic evaluation of play, computer game criticism, game play analysis)


**Week 12. Games and ethical issues.**


**Week 13. Trends & issues and future of educational game and simulations research (trends in conferences, journal papers, meta analyses)**

- Students will search the articles.

**Additional Resources**

Games, Learning and Society Conference
http://www.glsconference.org/2010/

You can reach abstracts of past conferences

Women in Games Conference
http://www.womeningames.com/

There are variety of resources related gender differences in gaming
Digital Games Research Association Conference
http://www.digra.org/dl
You can reach abstracts or full papers of DIGRA conference presentations

Journal of Simulation and Gaming
http://online.sagepub.com
You can access the articles via METU’s library

Computers in Human Behavior
http://www.sciencedirect.com
You can access the articles via Science Direct database (METU library supports it)

Games, Gamers and Gaming Culture.
http://www.igda.org
http://www.ludology.org/
http://gamestudies.org/