

Course Syllabus

VIDEOGAMES DEVELOPMENT

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Program: Computer Science

1. Course number and name

CCPG1022 - VIDEOGAMES DEVELOPMENT

2. Credits and contact hours

3 credits and 3 contact hours

3. Instructor's course or coordinator's name

SIXTO ERNESTO GARCIA AGUILAR

4. Text book, title, author, and year

- Schell, Jesse. The Art of Game Design: A Book of Lenses (Tercera Edición)
 - a. Other supplemental materials
- Millington, I., Funge, J.. Artificial Intelligence for games (Segunda Edición)

5. Specific course information

- a. Brief description of the content of the course (catalog description)

This course allows students with different skills, not only programming, but also with narrative, creative and design skills to participate in the design and development of a prototype of a video game. It starts with the creation of a board game to then take its elements and transform them into a video game. For this transformation, the students review the design principles of a video game, the characteristics of the interfaces according to the genre of video games used, as well as the integration with algorithms and artificial intelligence methods for these virtual environments. A lot of consideration is taken in the game mechanics necessary for the game to allow a balance between the skills that the player develops or must develop along the stages of the game and the difficulties or challenges that he faces, in such a way that the Game could be fun and immersion occurs.

- b. This course is: Selected elective

6. Specific goals for the course

- a. Specific outcomes of instruction
 - 1.- Design a video game prototype considering the dimensions of the genres used for its development
 - 2.- To understand the repercussions or impacts of the elements of a video game on the life or behavior of its users or players for the design of a video game
 - 3.- To integrate artificial intelligence algorithms in a video game necessities for the interaction between the elements of the game and the player
- b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course



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7. Brief list of topics to be covered

- 1.- Introduction to video games
- 2.- History and evolution of video games
- 3.- Genres of video games and types of players
- 4.- Principles and interfaces of design
- 5.- Topics of design for genres
- 6.- Introduction of artificial intelligence in video games
- 7.- Ethics in video games

