CSC/CPE 378: Interactive Entertainment Engineering

1. CSC/CPE 378: Interactive Entertainment Engineering

2. **credit units**: 4  **contact hours**: 6

3. **Course Coordinator**: Foad Khosmood

4. **Textbook**: (and/or other required material) Aaron A. Reed, *Creating Interactive Fiction with Inform 7*, CENGAGE, 2011.
   a. **References**: Inform 7 references (inform7 free application), Greenfoot / Java documentation (greenfoot.org), HTML 5 / Enchant.JS / Javascript documents (enchantjs.com)

5. a. **Course Description**: Project-based, software oriented, design of interactive entertainment applications. Topics may include interactive storytelling, game physics, game AI, scripting, and development of virtual worlds using modeling and rendering tools. Projects require significant programming. 3 lectures, 1 laboratory. Crosslisted as CPE/CSC 378.
   b. **Prerequisite**: CSC/CPE 103.
   c. **Required/Elective/Selective Elective for CPE, CSC, EE, SE**

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6. a. **Course Goals/Outcomes**
   The student should:
   - be able to design and develop works of interactive fiction and 2D graphical computer games
   - understand and appreciate the importance of game narrative, game AI and user experience
   - be familiar with game design and development process for independent digital games
   - know critical vocabulary for evaluation and criticism of interactive entertainment experiences
   - work in groups to develop and pay test a digital entertainment product
   - become familiar with a number of classic games of historical importance
   - develop games on a mobile platform or using an alternative input device (touch, gesture, sound, etc.)

   b. **How Student Outcomes addressed**
7. **Major Topics Covered: (number of lecture hours each)**

- Narrative design in games (3 hours)
- Development of interactive fiction experiences using a high level programming language (6 hours)
- Game design principles and practices (6 hours)
- Development of games in two dimensional graphical environments (6 hours)
- User interaction issues with web-based, mobile and gesture-controlled environments (3 hours)

Classic games (3 hours)