

LINC 60K: GAME-BASED LEARNING

Foothill College Course Outline of Record

| Heading | Value |
|------------------------------------|--|
| Units: | 1 |
| Hours: | 1 lecture per week (12 total per quarter) |
| Advisory: | Basic computer skills and knowledge of Macintosh or Windows operating systems; basic skills and knowledge using web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 243. |
| Degree & Credit Status: | Degree-Applicable Credit Course |
| Foothill GE: | Non-GE |
| Transferable: | CSU |
| Grade Type: | Letter Grade (Request for Pass/No Pass) |
| Repeatability: | Not Repeatable |

Student Learning Outcomes

- A successful student will define the advantages and disadvantages of games and game-based learning for different learning groups, such as elementary, middle school, high school, college, and adult professional.
- Analyze existing computer games and student-created games for their potential for student learning
- Design an educational game that includes learning objectives

Description

Intended for educators who want to explore computer-based and internet games that engage students in science, engineering, and other content learning. Participants will analyze existing games for their educational value, create their own simple educational game and determine how students learn when they create a game. Participants will use a systematic method of game design to identify goals, develop a game, and evaluate the learning outcomes.

Course Objectives

The student will be able to:

- Analyze existing computer games and student-created games for their potential for student learning
- Design an educational game that includes learning objectives
- Develop the content assets that were blueprinted in the design phase
- Beta test the game play environment and interactions
- Plan the classroom implementation for method of delivery, procedures, resources, and scaffolding activities
- Determine and develop formative and summative evaluation of the project

Course Content

- Analyze existing computer games and student-created games for their potential for student learning
 - Clarify the the instructional problem
 - Identify the instructional goals, the learning environment, and learner's existing knowledge and skills
 - Analyze existing games for value in integrating into the curriculum
 - Analyze software tools, both locally installed on the computer or online, where students create the games
- Design an educational game
 - Identify learning objectives
 - Select the game design software
 - Design the game assets or objects
 - Design the interaction of assets
 - Design the graphical user interface
- Develop the content assets that were blueprinted in the design phase
 - Create storyboards
 - Write content
 - Design graphics
 - Review and revise
- Beta test game design
 - Evaluate functionality and logical flow
 - Evaluate graphical user interface design
 - Evaluate game play for fun and engagement
- Plan the implementation phase
 - Set up method of delivery and procedures
 - Prepare he learners including training them on new tech tools
 - Ensure that all resources are in place
- Develop formative and summative evaluation of the project
 - Formative assessment: peer and teacher reviews
 - Summative assessment
 - Student self-reflection

Lab Content

Not applicable.

Special Facilities and/or Equipment

- When offered on/off campus: Lecture room equipped with overhead projector and a demonstration computer connected online. Computer laboratories equipped with online PCs and Macintosh computers, network server access, and printers.
- When taught via Foothill Global Access on the Internet: Students must have currently existing email accounts/email address and ongoing access computers with email software, GUI web browsing capability, FTP, and access to the Internet.

Method(s) of Evaluation

The student will demonstrate proficiency by:

- Developing a game-based project
- Presenting the project to peers for feedback
- Making constructive contributions to class discussions
- Providing peer reviews to other class members showing their own understanding of the class content

Method(s) of Instruction

During periods of instruction the student will be:

- Listening actively to lecture presentations delivered in student-centered learning style by taking notes, following demonstrations, or completing an activity

- B. Participating in facilitated discussions of live presentations, readings or video presentations
- C. Presenting in small group and whole class situations

Representative Text(s) and Other Materials

Dickey, Michele D. *Aesthetics and Design for Game-based Learning*. New York: Routledge Taylor & Francis Group, 2015. Print.

Instructor-assigned notes and materials.

When course is taught online: Additional information, notes, handouts, syllabus, assignments, tests, and other relevant course material will be delivered by email and on the World Wide Web, and discussion may be handled with internet communication tools.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

- A. Writing assignments include an instructional design plan, peer evaluations, and critical analysis of game-based educational projects, technology tools, systems, or processes.
- B. Outside assignments include conducting project development, writing the instructional plan, reading, and participating in online peer collaboration activities.

Discipline(s)

Instructional Design/Technology