LINC 79D: COLLABORATION IN VIRTUAL EDUCATIONAL ENVIRONMENTS

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2024
Units:	2
Hours:	2 lecture per week (24 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; this course uses VR headsets and hand controllers as part of instruction.
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

- Research advantages and limitations of using immersive media technologies for collaborative projects.
- Use immersive media technologies to collaborate on the design and development of an interactive virtual educational environment.

Description

Intended for educators and industry professionals, this course examines the ways in which immersive media technologies (virtual reality, augmented reality, and mixed reality) allow for communication and collaboration within virtual environments. Students explore and evaluate a variety of emerging collaborative environments in virtual and mixed reality, analyzing their potential according to educational frameworks. Additionally, students use immersive media to collaborate on the design and development of an interactive virtual educational environment.

Course Objectives

The student will be able to:

1. Demonstrate the ways in which immersive media technologies support communication and collaboration within virtual environments
2. Identify advantages and limitations of using immersive media technologies for collaborative projects
3. Critically evaluate a variety of emerging collaborative environments in virtual and mixed reality, and analyze their potential for use in educational settings
4. Use immersive media technologies to collaborate on the design and development of an interactive virtual educational environment

5. Apply educational frameworks to evaluate and analyze the effectiveness of virtual and mixed reality collaborative environments in supporting educational outcomes

Course Content

1. Collaboration in immersive virtual environments
   a. Definition of collaborative virtual environments
   b. Immersive media technologies that support collaboration
   c. Types of virtual communication and collaboration
2. Advantages and limitations
   a. Advantages to collaboration
   b. Limitations of collaboration
   c. Impact of immersive media on collaboration and communication
   d. Best practices for using immersive media for collaborative projects
   e. Inclusivity and accessibility considerations
3. Exploration and evaluation
   a. Emerging collaborative environments in virtual and mixed reality
   b. Evaluation and analysis of environments for educational settings
   c. Application of education technology frameworks within virtual environments
4. Design and development
   a. Selecting applications and environment templates
   b. Curating and developing assets
   c. Creative collaboration within virtual spaces
   d. Hands-on experience creating a virtual educational environment
5. Sharing, revision, and feedback
   a. Sharing and exploring peer created environments
   b. Cross-platform testing and evaluation
   c. Feedback and revision
   d. Integrating projects and environments into educational curriculums

Lab Content

Not applicable.

Special Facilities and/or Equipment

1. When offered on/off campus: Lecture room equipped with projector, whiteboard, and a demonstration computer connected online. VR laboratories equipped with computers or laptops with internet access and VR headsets.
2. When taught via the internet: Students must have current email accounts and ongoing access to computers with web browsing capability and internet access. Students will need VR headsets for this course. Headsets can be borrowed at no cost if needed.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Developing a collaborative immersive media 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

Methods of Instruction may include but are not limited to the following:

Lecture presentations delivered in student-centered learning style, during which students take notes, follow demonstrations, or complete an activity

Facilitated discussions of live presentations, readings, or collaborative activities in virtual learning environments
Student presentations in small group and whole class situations

Representative Text(s) and Other Materials

Stevens, Renee. Designing Immersive 3D Experiences: A Designer's Guide to Creating Realistic 3D Experiences for Extended Reality. 2021.

Instructor-assigned notes, materials, and resources, including instructional materials, open education resources, multimedia, and websites.

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

1. Reading assignments include analysis of texts, selected examples, and student projects
2. Writing assignments include a course project and multiple developmental projects, reflections, discussion responses, and peer feedback on projects
3. Outside assignments include project planning and development, participation in online peer collaboration activities, and project development through an iterative process

When taught online, these methods may take the form of multimedia and web-based presentations. Assignments will be submitted online as well.

Discipline(s)

Instructional Design/Technology