LINC 60E: EDUCATIONAL APPLICATIONS FOR EMERGING TECHNOLOGIES

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2025
Units:	3
Hours:	3 lecture per week (36 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.
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

Description

This course provides a hands-on overview of emerging technologies from an educational perspective. Students explore new technologies, such as virtual/augmented reality and generative artificial intelligence, and analyze their use for instructional purposes based on educational frameworks, standards, and policies. Issues of equity and accessibility, along with practical strategies for integrating these experiences into the classroom, are centered in discussions throughout the course. Students will create projects, lessons, and content that support teaching and learning goals using emerging technologies. Through this course, students will stay informed about current trends and future directions of emerging technologies and identify opportunities for innovation in educational contexts.

Course Objectives

The student will be able to:

1. Understand the primary elements, methods, tools, and applications related to emerging technologies.
2. Identify and evaluate the potential of various emerging technologies for enhancing educational practices and outcomes.
3. Develop instructional materials and activities that leverage the capabilities of emerging technologies.
4. Evaluate emerging technologies based on educational technology frameworks, standards, and subject area applications.
5. Address ethical, privacy, and accessibility issues related to the use of emerging technologies in education.
6. Follow a design thinking process to design, develop, implement, and evaluate a student-centered project that utilizes emerging technologies to meet a specific educational objective.

Course Content

1. Understanding emerging technologies
    a. Definition and scope
    b. Current trends and future directions
    c. Methods and tools
    d. Applications in education
2. Evaluate educational potential
    a. Curriculum goals and objectives
    b. Potential benefits
    c. Challenges and limitations
    d. Logistics and sustainability considerations
    e. Training and development needs
3. Develop instructional materials
    a. Designing technology-enhanced lessons
    b. Tools for content creation
    c. Best practices for technology integration
    d. Adaptations and alternatives
    e. Gathering and incorporating feedback
4. Apply educational frameworks
    a. Evaluative methods
        i. Frameworks: SAMR, TPACK
        ii. Standards: Common Core, ISTE
    b. Integration strategies across disciplines
    c. Applications in different contexts
        i. Sciences
        ii. Humanities
        iii. 4Cs
        iv. Workforce/entrepreneurship
5. Address ethical and accessibility issues
    a. Ethical considerations
        i. Privacy and data protection
        ii. Ethical use
        iii. Potential for perpetuating biases
        iv. Digital divide and equity concerns
    b. Accessibility considerations
        i. Universal Design for Learning (UDL) principles
        ii. Assistive technology and tools
    c. Legal and policy considerations
        i. Legal standards
        ii. School and district policies
6. Design and implement projects
    a. Applying design thinking to educational projects
    b. Defining goals and objectives
    c. Collaboration and teamwork strategies
    d. Implementation in educational settings
    e. Gathering and analyzing data
    f. Reflection and iteration for improvement

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. Computer laboratories equipped with computers or laptops with internet access
2. When taught via the internet: Students must have current email accounts and ongoing access to computers with web browsing capability and internet access
3. Some technologies may require the use of specialized devices such as VR headsets. In these cases, the technologies will be provided to the student for use during the course at no cost

Method(s) of Evaluation

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

Developing a project that utilizes emerging technologies
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 video presentations
Presentations in small group and whole class situations

Representative Text(s) and Other Materials

Fadel, Charles, et al.. Education for the Age of AI. 2024.

Donally, Jaime. The Immersive Classroom: Create Customized Learning Experiences with AR/VR. 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