AI-Powered Esports & Game-Based Learning
A 1-credit Online Graduate Course
Syllabus

Course Description

Participants In this course, educators will explore how artificial intelligence (AI) and gaming can transform classroom engagement. Participants will learn how to integrate AI-powered esports, gamification, and educational game platforms into their teaching to enhance student motivation and learning outcomes. By examining Minecraft, Roblox, AI-driven esports, and gamification in physical education, educators will gain hands-on experience in designing AI-enhanced learning activities.

This course is designed for educators of all levels who want to leverage cutting-edge technology to make learning interactive, engaging, and student-centered.

Learner Outcomes

Students will:

- **Analyze** how AI is used in esports and game development to personalize student learning.
- **Integrate** Minecraft Education Edition, Roblox, and Overplay.com into lesson plans for gamified learning.
- **Apply** AI-enhanced physical education strategies using **AR sports** such as Hado.
- **Implement** AI tools like **Goblin Tools, Kahoot!, and Quillbot** to personalize and gamify math and science instruction.
- **Design and submit** an AI-powered educational game activity for classroom implementation.

Course Requirements

AI-Powered Esports & Game-Based Learning is a 20 hour, one credit graduate level course completed over four weeks.

Hardware & Computer Skills Requirements

Students may use either a Macintosh computer or a PC with Windows 2000 or higher. Students should possess basic word processing skills and have internet access as well as an active email account. Students are also expected to have a basic knowledge of how to use a Web browser such as Internet Explorer, Mozilla Firefox, Safari, etc.

Student Requirements

1. Participation: Actively participate in all activities
2. Reading assignments: Complete all readings and reflection assignments
3. **Design and submit** an AI-powered educational game activity for classroom implementation.

Course Evaluation

Assignment	Points	Grading Scale	
Participation	25	95-88	A
Assignments	45	87-81	B
Final Project	25	80-73	C
Total Points	95		

Student Academic Integrity
Participants guarantee that all academic class work is original. Any academic dishonesty or plagiarism (to take ideas, writings, etc. from another and offer them as one's own), is a violation of student academic behavior standards as outlined by our partnering colleges and universities and are subject to disciplinary action.

Course Schedule

Module One: AI in Esports & Game Development
Contents:

1. How AI is used to **develop gamified learning experiences**.
2. AI-powered personalization in educational gaming.
3. Using AI-driven game mechanics for **adaptive learning**.
4. AI-enhanced data tracking for **student performance analytics**.

Module Two: AI-Powered Learning in Minecraft & Roblox
Contents:

1. **Minecraft Education Edition**:
    - AI-powered **problem-solving in STEM, history, and social studies**.
    - Creating AI-driven **immersive learning environments**.
2. **Roblox for Education**:
    - AI-enhanced game development and coding with **Roblox Studio**.
    - Using **Overplay.com** to design gamified math, coding, and science lessons.

Module Three: AI & Augmented Reality (AR) in Physical Education
Contents:

Hado - AI-Powered AR Sport:

1. Using **Hado**, an AI-driven AR game, to get students engaged in **active learning**.
    - AI-driven performance analysis in PE.
    - How AR games increase **student motivation and physical activity**.

Module Four: Gamifying Math & Science with AI Tools
Contents:

1. **Goblin Tools**: AI-driven **task management and productivity enhancement**.
2. **Kahoot! & Kahmingo**: Using AI-powered quizzes for **personalized learning paths**.
3. **Quillbot**: Enhancing **science and math writing** using AI.

Final Project & Assessment: AI-enhanced Classroom Activity Design

Explore Overplay.com and choose an AI-powered educational game.
Design a classroom lesson that integrates this AI-enhanced game into the curriculum.
Write a lesson plan that outlines:

- **Learning objectives**
- **How AI enhances the game-based learning experience**
- **Assessment strategies**