



TIP 749: GAMING AND APPLICATION DESIGN

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CREDITS 3

DR. MIA KIM WILLIAMS

FACE-TO-FACE COURSE, LMS SUPPORTED

Technology, Innovation and Pedagogy: The goal of the program in Technology, Innovation, & Pedagogy is to develop educational professionals and classroom teachers that have foundational theoretical knowledge of technology infused pedagogy for transformative teaching and learning.

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A. COURSE DESCRIPTION

Lecture/Discussion (3) Prerequisite: none. Design and develop computer-based games and mobile applications for educational contexts. Explore various design tools and examine research and implementation issues related to gaming in various educational settings. Letter graded. Non-repeatable. No fees.

B. PREREQUISITES

none

C. RELATIONSHIP OF THE COURSE TO THE PROGRAM KNOWLEDGE BASE

This course is part of the Technology and Innovation PhD program's Integration and Innovation Cognate. The course provides students with the tools to stay current in the constantly changing field of Educational Technology. Students will explore current and future trends that aim to transform learning and instruction through the integration of technology in the classroom.

D. COURSE GOALS AND OBJECTIVES

Through this course students will:

- Understand current and future technology trends in gaming
- Unpack game design and development processes
- Design an educational game and produce appropriate design documentation
- Design and Build a digital application (prototype is acceptable)
- Summarize research on educational games
- Explore integration of gaming in pedagogical practices

E. RELATED STANDARDS

International Society of Technology in Education Standards (ISTE)

For Teachers

Facilitate and inspire student learning and creativity
Design and develop digital age learning experiences and assessments
Model digital age work and learning
Promote and model digital citizenship and responsibility
Engage in professional growth and leadership

For Students (UNC students would be able to apply these standards)

Creativity and innovation
Communication and collaboration
Research and information fluency
Critical thinking, problem solving, and decision making
Digital Citizenship
Technology Operations and Concepts

Association for Educational Communications and Technology (AECT)

AECT Standard 1 (Content Knowledge): Candidates demonstrate the knowledge necessary to create, use, assess, and manage theoretical and practical applications of educational technologies and processes.

AECT Standard 2 (Content Pedagogy): Candidates develop as reflective practitioners able to demonstrate effective implementation of educational technologies and processes based on contemporary content and pedagogy.

AECT Standard 3 (Learning Environments): Candidates facilitate learning (p. 41) by: creating, using, assessing/evaluating, managing, ethics, diversity of learners.

AECT Standard 4 (Professional Knowledge and Skills): Candidates design, develop, implement, and evaluate technology-rich learning environments within a supportive community of practice.

AECT Standard 5 (Research): Candidates explore, evaluate, synthesize, and apply methods of inquiry to enhance learning (p. 4) and improve performance (pp. 6-7).

F. COURSE CONTENT

1. Game Design
 - a. Designer
 - b. Experience
 - c. What is a game?
 - d. Design Elements
 - e. Player and Player’s mind
 - f. Iterative Process and Mechanics
2. Application Development
 - a. Interface
 - b. Building Techniques
 - c. Coding and Tools
3. Gamification- integration of gaming into pedagogy
 - a. Definition and options
 - b. How to gamify
 - c. Affordances and constraints

G. COURSE REQUIREMENTS

REQUIREMENT	PERCENTAGE VALUE
Game Design (including iterative process)	30
Application Development	30
Research Article Review	10
Gamification Project	10
Course participation in readings and discussions	20
Total possible	100

Full descriptions of each assignment will be available in blackboard.

Readings and Discussions

Preparation and participation: Each student will complete all reading assignments and engage in process work and discussions as assigned. This might include discussion boards, collaborate sessions, short assignments, or other projects.

Game Design

Students will design an educational game and develop all of the design documents and non-digital prototype for promoting their game. Students will engage in this as an iterative design process through the semester.

Application Development

Students will create a simple gaming application for mobile devices. This may be in prototype or beta form but must be functional.

Research Article Review

Students will select a research article related to gaming and education and compose a formal article review. Rubric will be provided.

Gamification Project

Students will design an educational experience (classroom, online, professional or adult learning, etc.) that integrates elements of game design and play. Students will present this by engaging the class in a small element of their experience.

H. GRADING CRITERIA (Method of Evaluation): Letter Grade

Your grade will be determined based on the total percentage grades from all work completed.

A=94-100; A-=92-93; B+=90-91; B =85-89; B-=82-84; C+=80-81; C=76-79; C-=73-75; F = 0-72

I. REQUIRED TEXTS/READINGS

Schell, J. (2008). The art of game design: A book of lenses. FL: Taylor and Francis Group.

Tekinbas, S. & Zimmerman, E. (2004) Rules of Play: Game Design Fundamentals. MA: Massachusetts Institute of Technology.

J. SUGGESTED READINGS (excerpts from these will be provided via blackboard)

Alessi, S.M. & Trollip, S.R. (2000). Multimedia for learning: Methods and development (3rd ed.). New York: Allyn & Bacon.

Hockenberry, C. (2010). iPhone app development: The missing manual. CA: O'Reilly Media Inc.

COURSE POLICIES

Attendance and Participation

You are expected to attend all synchronous sessions on time and for the full length of class. Asynchronously, you are expected to stay up to date on what is expected and participate with group members and in discussions or assignments. If I find that you are not participating, I will request a meeting to address the situation. Non-participation will adversely impact your grade.

Late and Missing Assignments

Submission of ALL assignments is expected to be on time and in the prescribed format and manner. Work and projects are expected by class time on the designated due date.

Electronic submission of assignments that are not in the specified format (software available on campus), will also be considered late. These assignments will be rejected and issued ZERO points until resubmitted. Resubmission will be expected by the beginning of the next class session. Your final assignment grade will be reduced by 10% of the possible points for this delay.

Generally, late assignments are not accepted. Exceptions may be arranged by communicating your extenuating circumstance to your instructor **prior** to the due date. Students frequently ask for an extension when their computer or storage device crashes and they lose an assignment. A backup storage device is a requirement for this course. You will NOT be granted an exception for late work in this situation. You should dutifully back up all your work every time you work on it. That way you if a crash occurs you only lose work from the last session.

Please practice safe storage :)

Written Assignment and Communication Policy

All assignments and written communications in this class (including email and discussion board postings), are expected to be word-processed and conform to University-level writing standards. Your writing should be professional, clear, and when appropriate or required, include proper citations of expert knowledge and media in American Psychological Association (APA) format. Errors in spelling and/or grammar are expected to be rare. Colloquial, informal writing is not appropriate. When grading or reviewing student work that does not meet these standards, your instructor will return the work for revision. The revised assignment will be issued ZERO points until resubmitted. Revisions will be due at the beginning of the next class session. Once re-graded, 10% of the total points possible will be deducted from your score.

The course BlackBoard shell contains a support button with web-based resources to help you with your writing skills in areas such as APA, grammar, second language issues, etc.

Additionally, the Writing Center on the Greeley campus offers one-on-one support for students. Appointments are recommended.

If more than one assignment is rejected for writing issues, a Personal Improvement Referral may be submitted to your department chair. At their discretion a Personal Improvement Plan may be issued.

CEBS Statements

Diversity Statement

The CEBS Diversity and Equity Committee provides the following accommodation and inclusivity statements approved by Leadership Council. The statements should be included in syllabi to communicate to students the importance CEBS places on creating accommodating and inclusive classroom environments.

Accommodations Statement

Students who believe that they may need accommodations in this class are encouraged to contact the Disability Support Services, Voice/TTY (970) 351-2289, or fax (970) 351-4166, or visit www.unco.edu/dss as soon as possible to ensure that accommodations are implemented in a timely fashion.

Inclusivity Statement

The College of Education and Behavioral Sciences (CEBS) supports an inclusive learning environment where diversity and individual differences are understood, respected, appreciated, and recognized as a source of strength. We expect that students, faculty, administrators and staff within CEBS will respect differences and demonstrate diligence in understanding how other peoples' perspectives, behaviors, and worldviews may be different from their own.

Other University Policies

Appropriate Use of Electronic Communications

Discussion boards and email communications are an important instructional tool this course. Here are some of the most important rules for this class regarding the use of discussion boards and email:

1. Don't say anything in the discussion that you would not say in a face-to-face classroom situation. Use your professional judgment.
2. Contributions to discussion board should be for "the good of the group"; email me directly with questions or issues that only apply to you.

3. Be polite. Choose your words carefully. Do not use derogatory or sarcastic statements.
4. Contribute constructive comments and suggestions.
5. “Flaming” – expressing anger, often rudely – has no place in a classroom situation, either in the discussion area or in private email. Students receiving any sort of inappropriate email from other students should forward a copy to the instructor.
6. Don’t use all capital letters. This is considered to be “shouting,” and is therefore rude. Likewise, don’t use all lower case letters. In other words, use professional writing, not “IM” writing.

Academic Integrity

“Plagiarism” means using another’s words, ideas, materials or work without properly acknowledging and documenting the source. Students are responsible for knowing the rules governing the use of another’s work or materials and for acknowledging and documenting the source appropriately (such as using APA style for citations and references).

It is expected that members of this class will observe strict policies of academic integrity and will be respectful of each other. Any instances in which cheating including plagiarism and unauthorized use of copyrighted materials, computer accounts, or someone else’s work is determined will be referred to Student Services and will be investigated to its full extent.

For detailed information about plagiarism and UNC’s Student Conduct information Academic Integrity policy visit this site: <http://library.unco.edu/assistance/plagiarism.htm>

FERPA and Privacy Regulations

The Family Educational Rights and Privacy Act (FERPA) and UNC policies are designed to protect student privacy. The following is a brief overview of the main ways your private information will be treated in this class:

- Your grades will never be posted in a personally identifiable manner
- Your name and UNC email address are available in BlackBoard to all other enrolled members of the class. Your name may be used as a folder and/or document name on a network server used in conjunction with the class. These services are integral to this course; there is no way to use them anonymously.
- Your instructor will not discuss your grades in the presence of anyone else even if you give verbal permission to do so. It takes written authorization from you for an instructor to share any of your private information. See release form in bb.
- Your instructor may request written authorization from you to facilitate communications and the sharing of information. You are free to accept or reject these requests for authorization.

If you do not understand any of these policies, ask your instructor or consult UNC privacy policies at <http://www.unco.edu/regrec/FERPA/>

Religious Accommodations for Students

Students who need to be absent from class due to the observance of a religious holiday or participate in required religious functions must notify the faculty member in writing as far in advance of the holiday/obligation as possible. Students will need to identify the specific holiday or obligatory function to the faculty member. Students will not be penalized for missing class due to religious obligations/holiday observance. The student should contact the class instructor to make arrangements for making up tests/assignments within a reasonable time.

Military Personnel Statement

A student who is a member of the National Guard, Reserve, or other U.S. Armed Forces branch and is unable to complete classes because of military activation may request complete or partial administrative unrestricted withdrawals or incompletes depending on the timing of the activation.

Draft for Curriculum Review