MISSISSIPPI STATE UNIVERSITY
COLLEGE OF EDUCATION

DEPARTMENT of INSTRUCTIONAL SYSTEMS and WORKFORCE DEVELOPMENT
COURSE SYLLABUS

Course Prefix and Number: TKT 4443/6443

Course Title: Design of Instructional Games and Simulations

Credit Hours: Three (3) semester hours

Type of Course: Lecture

Catalogue Description: Prerequisites: TKT 4753/6753, or consent of instructor. An exploration of games and simulations: the evaluation, design, and infusion of games and simulations in instructional settings.

College of Education Conceptual Framework:

The faculty in the College of Education at Mississippi State University are committed to assuring the success of students and graduates by providing superior learning opportunities that are continually improved as society, schools, and technology change. The organizing theme for the conceptual framework for the College of Education at Mississippi State University is educational professionals - dedicated to continual improvement of all students’ educational experiences. The beliefs that guide program development are as follows:

1. KNOWLEDGE - Educational professionals must have a deep understanding of the organizing concepts, processes, and attitudes that comprise their chosen disciplinary knowledge base, the pedagogical knowledge base, and the pedagogical content knowledge base. They must also know how to complement these knowledge bases with the appropriate use of technology.

2. COLLABORATION - Educational professionals must continually seek opportunities to work together, learn from one another, forge partnerships, and assume positions of responsibility.

3. REFLECTION - Educational professionals must be willing to assess their own strengths and weaknesses through reflection. They must also possess the skills, behaviors, and attitudes necessary to learn, change, and grow as life-long learners.

4. PRACTICE - Educational professionals must have a rich repertoire of research-based strategies for instruction, assessment, and the use of technologies. They must be able to focus that array of skills on promoting authentic learning by all students or clients, while exhibiting an appreciation and commitment to the value and role of diversity.
Course Objectives:
Upon completion of this course, students should:

1. Discuss the infusion of games and simulations in instructional settings. 2, 3, 5, 7, 8, 9
2. Analyze and evaluate games and simulations. 4, 5, 7
3. Apply the principles of game and simulation design. 3, 7
4. Design instructional games. 3, 5, 7, 9
5. Discuss trends and issues regarding games and simulations. 3, 5, 7, 11
6. Interpret research regarding games and simulations in written and verbal forms (graduate students). 3, 4, 5, 8, 13, 14

Topics to be Covered:
1. Infusion of Games and Simulations in Teaching and Training (Gredler, 1992; Kinghorn, 1975; Kroehnert, 1991; Ludewig & Swan, 2007; Michael & Chen, 2006; Shelton & Wiley, 2007; Squire, 2011; Whitton, 2010) – 7 hours
   a. Application Areas
      i. K-12 Education
      ii. Higher Education
      iii. Corporate
      iv. Military
   b. Learner Appropriateness
   c. Instructional Appropriateness
   d. Integration Strategies
   e. Reflection
   f. Content/Skill Transfer
2. Evaluation of Games and Simulations (Gredler, 1992; Michael & Chen, 2006; Salen & Zimmerman, 2006; Shelton & Wiley, 2007) – 10 hours
   a. Instructional Value
   b. Audience Appropriateness
   c. Information Quality
   d. Theme, Metaphor, Story, Character Development
   e. Interface Effectiveness
   f. Usability
   g. Engagement
   h. Skill-Level Complexity
   i. Chance
   j. Diversity
   k. Fun
   a. Serious (Educational) Games
   b. Simulations
   c. Edutainment
   d. Ice Breakers
   e. Board Games
   f. Casual Games
   g. Games with Accessories
   h. Motion-Sensor Games
   i. Social Games
   j. Handheld Games
   k. Mobile Games
   l. MMORPGs
   m. Virtual Reality

4. Board Game Design (Kinghorn, 1975; Kroehnert, 1991; Ludewig & Swan, 2007; Michael & Chen, 2006; Myers-Burch, 2001) – 7 hours
   a. Instructional Value
   b. Audience Appropriateness
   c. Theme and Metaphor
   d. Usability
   e. Engagement
   f. Skill-Level Complexity
   g. Chance
   h. Diversity
   i. Fun

   a. Instructional Value
   b. Audience Appropriateness
   c. Storyline and Character Development
   d. Usability
   e. Interactions/Engagement
   f. Skill-Level Complexity
   g. Chance
   h. Diversity
   i. Fun
   j. Application of Technology
6. Trends and Issues of Gaming (Gredler, 1992; Salen & Zimmerman, 2006; Squire, 2011) – 7 hours
   a. Researching Gaming
   b. Hot Topics in Gaming
      i. Violence
      ii. Gender Bias
      iii. Wellness

Textbook:


Methods of Instruction:

The class will be taught by lecture and discussion. The lectures and discussions will focus on design principles for games and simulations, the infusion of games and simulations in instructional settings, and trends and issues of games and simulations. A portion of every class will be hands-on activities, in which students explore and evaluate existing games and simulations on a given topic.

Suggested Student Activities:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>CORRESPONDING COURSE OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Readings Discussion:</strong> Students will write summaries of a given reading or book chapter, they will post their reaction to the reading and will discuss their reactions with other students</td>
<td>1, 3, 5</td>
</tr>
<tr>
<td><strong>Game Analyses:</strong> Students will play games and simulations that are new to them. They will analyze the structure, substance, and functionality of a game and simulation, either by itself or in comparison with a second multimedia product.</td>
<td>2, 3</td>
</tr>
<tr>
<td><strong>Topic Presentation:</strong> Students will present a topic related to design principles or trends and issues of games and simulations</td>
<td>3, 5</td>
</tr>
<tr>
<td><strong>Game Projects:</strong> Students will design and complete pre-production of two original games or simulations and describe their design choices.</td>
<td>3, 4</td>
</tr>
<tr>
<td><strong>Research Paper (Graduate Students Only):</strong> Graduate students will write and present a 10-12 page review of research on an aspect of game and simulation design or the trends and issues surrounding the instructional uses of games and simulations, using APA style.</td>
<td>1, 3, 5, 6</td>
</tr>
</tbody>
</table>
Honor Code:

“As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do.”

See Mississippi State University Honor Code at http://students.msstate.edu/honorcode/

“Mississippi State University recognizes students as adults who are expected to obey the law and the rules and regulations of the university, to take personal responsibility for their conduct, to respect the rights of others, and to have regard for the preservation of state and university property, as well as the private property of others” visit: http://www.msstate.edu/dept/audit/91100.html

Academic honest is expected. Academic misconduct is a serious offense. If a student is found guilty of academic misconduct, the instructor will impose the maximum penalty allowed by Mississippi State University. Visit: http://www.msstate.edu/dept/audit/1207A.html

Technology:
Application software program used in the course is primarily the Microsoft Office Suite. Other software may be used as deemed appropriate by the instructor.

Diversity:
Representation of diversity is a key component of game and simulation design. It is a topic that will be covered in the class lectures and discussions and must be addressed in class activities and projects.

Student with Disabilities:
Students with disabilities are encouraged to discuss their needs with the instructor, preferably during the first week of the semester. All reasonable accommodations will be made to see that disabilities do not restrict a student's opportunity to learn. Help is also available from Student Support Services (http://www.sss.msstate.edu/disabilities/, 01 Montgomery Hall, 325-3335).

Field Component:
There is no field component.

Evaluation of Student Progress:

<table>
<thead>
<tr>
<th>ASSIGNMENT</th>
<th>POINTS</th>
<th>CORRESPONDING COURSE OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readings Discussion</td>
<td>150</td>
<td>1, 3, 5</td>
</tr>
<tr>
<td>Game Analyses</td>
<td>150</td>
<td>2, 3</td>
</tr>
<tr>
<td>Topic Presentation</td>
<td>100</td>
<td>3, 5</td>
</tr>
<tr>
<td>Game Project 1</td>
<td>300</td>
<td>3, 4</td>
</tr>
<tr>
<td>Game Project 2</td>
<td>300</td>
<td>1, 3, 5, 6</td>
</tr>
<tr>
<td>Research Paper (Graduate Students Only)</td>
<td>200</td>
<td>1, 3, 5</td>
</tr>
<tr>
<td>Research Paper Presentation (Graduate Students Only)</td>
<td>100</td>
<td>1, 3, 5</td>
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Grading Scale:
- A  90 - 100 %
- B  80 - 89 %
- C  70 - 79 %
- D  60 - 69 %
- F  Below 59 %

Bibliography:


