SYLLABUS

GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
Division of Learning Technologies
Instructional Design and Technology Program (IDT)

EDIT 772 – 6T1
Virtual Worlds, Augmented Reality, and Gaming Applications: Game Design Tools (2 Credits)
Spring 2014
Course meets online via http://MyMasonPortal/Courses

PROFESSOR:
Name: Dr. Kevin Clark
Office hours: By appointment
Office location: Thompson Hall, Room L045
Office phone: (703) 993-3669
Email address: kclark6@gmu.edu

COURSE DESCRIPTION:
• Pre-requisites/co-requisites: There are neither pre-requisites nor co-requisites. However, students should possess basic computer skills (e.g., MS Office, Internet search skills), along with Adobe Acrobat Reader and Adobe Flash Player, both of which are downloadable free of charge at http://www.adobe.com/downloads. Experience in teaching, training, technical development, or equivalent is a plus.

• Course description from the university catalog: Provides basic knowledge of available applications and platforms for creating contextually-based learning environments such as immersive virtual worlds, simulated worlds, alternate reality games, and massive multiplayer online role playing games for e-learning.

• Additional description details: This course is designed to teach the fundamentals of educational video game and media design including the principles of learning theory, and instructional strategies that are relevant to instructional design. Students will learn how educational video games and media can be utilized to enhance and support teaching and learning.

• Delivery method: The course will be taught in an asynchronous (not “real time”) format using the Blackboard Learning Management system housed in the MyMason portal. The course will utilize readings, threaded discussions, lectures, and projects.

• Technical requirements: To participate in this course, students will need the following resources:
  o High-speed internet connection with access
  o Apple QuickTime Player: http://www.apple.com/quicktime/download/

LEARNER OUTCOMES:
At the conclusion of this course, students will be able to:
• Apply a working knowledge of instructional systems design (ISD) to the design of educational video games and media
• Explore and provide an overview of educational video games and media
• Identify and compare various types of educational video games and media
• Produce a low-fidelity prototype of a game design concept using electronic media of choice

PROFESSIONAL STANDARDS:
This course adheres to the standards established by the Association for Educational Communications and Technology (AECT):

Standard 1 – Design
• 1.3.1 Create a plan for a topic of a content area
• 1.3.2 Create instructional plans
• 1.3.3 Incorporate contemporary instructional technology processes
• 1.4.1 Produce instructional materials which requires use of multiple media
• 1.4.2 Demonstrate personal skill development with at least one authoring tool

Standard 2 – Development
• 2.3.1 Design and produce audio/visual instructional materials
• 2.3.2 Design, produce, and use digital media and technologies
• 2.4.1 Use authoring tools to create effective instructional products
• 2.4.3 Combine electronic and non-electronic tools to develop instructional products
• 2.4.4 Use telecommunications tools to create instructional materials

REQUIRED TEXT:

COURSE RESOURCES
• Scratch (http://scratch.mit.edu)
• AppInventor (http://appinventor.mit.edu)
• Stencyl (http://www.stencyl.com)
• GameMaker (http://www.yoyogames.com/studio)
• Game Salad (http://gamesalad.com)
• Kodu (http://www.kodugamelab.com)

COURSE ASSIGNMENTS AND REQUIRED DELIVERABLES

ASSIGNMENTS
There are four (4) assignments required for successful completion of this course.
1. Case Study (20 points)
   In addition to the technology described in the Case Study, select three other game development
and/or gamification tools that could be utilized to accomplish the same goals. Your write should be no more than 3 pages (single spaced) and should describe how these tools would be implemented.

2. **Game Design Document – (40 points)**
   Student teams will be formed based on the grouping in previous classes. Below are recommend team assignments:
   - Team 1: Rosinski, Wilkerson (may need to add a member)
   - Team 2: Bedrossain, Cody, Comendador, Karras (may need to remove a member)
   - Team 3: Jackson, Thomson, Wilson

   The teams will select a topic and develop a game design document, which will detail their approach to the design and development of an instructional game or gamification component. The document will include the design concept and related materials in a professional document to the instructor. The design document will include the following components:
   - Concept
   - Outcome
   - Instructional objectives
   - Characters
   - Environment
   - Gameplay
   - Reward structure
   - Look and feel
   - Technology used

3. **Game Design Prototype (20 points)**
   Based on the Game Design Document, the student teams will select a game design tool (sample tools are listed in Course Resources) to create a small working prototype. The prototype will be evaluated based on:
   - Content
   - Technology
   - Interactivity
   - Ease of Use
   - Look and Feel

4. **Participation (20 points)**
   Teams will be expected to post components for peer review by Saturday. There will be a total of four (4) peer reviews, provided by each student to the team projects. Students can begin to provide reviews at the beginning of the week (Sunday), but it must be completed by the end of the week (Friday).

   **Total Possible Points for all Deliverables:** 100

**GRADING POLICIES**

- **General information:** The evaluation of student performance is related to the student’s demonstration of the course outcomes. All work is evaluated on its relevance to the specific assignment, comprehensiveness of information presented, specificity of application, clarity of communication, and the analytical skills utilized, as documented in the respective grading rubrics at the end of this syllabus and on the Bb course site.

- **Grading scale:** The grading scale used in this course is the official George Mason University scale for graduate-level courses. Decimal percentage values ≥.5 will be rounded up (e.g., 92.5% will be
rounded up to 93%); decimal percentage values <.5 will be rounded down (e.g., 92.4% will be rounded down to 92%).

A = 94-100; A - = 90-93; B+ = 86-89; B = 83-85; B- = 80-82; C = 70-79; F = 69 and below

Note: Late assignments will be penalized 10% for each class session past the due date.

Student performance is based on the requirements documented in the grading rubrics for each assignment. In the event that, following discussions with the instructor, a student feels that his/her grade is unfair, the grade may be appealed using the university’s appeal process described at http://www.gmu.edu/catalog/apolicies/index.html#Anchor56.

GMU POLICIES AND RESOURCES FOR STUDENTS

a. Students must adhere to the guidelines of the George Mason University Honor Code [see http://oai.gmu.edu/the-mason-honor-code/].

b. Students must follow the university policy for Responsible Use of Computing [see http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/].

c. Students are responsible for the content of university communications sent to their George Mason University e-mail account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason e-mail account.

d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students’ personal experience and academic performance [see http://caps.gmu.edu/].

e. Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [see http://ods.gmu.edu/].

f. Students must follow the university policy stating that all sound-emitting devices shall be turned off during class unless otherwise authorized by the instructor.

g. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [see http://writingcenter.gmu.edu/].

PROFESSIONAL DISPOSITIONS
Students are expected to exhibit professional behavior and dispositions at all times.

CORE VALUES COMMITMENT
The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. [http://cehd.gmu.edu/values](http://cehd.gmu.edu/values).

For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See [http://gse.gmu.edu](http://gse.gmu.edu)].
### COURSE SCHEDULE:

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC/LEARNING EXPERIENCES</th>
<th>READINGS AND ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PART 1 – GETTING STARTED</strong></td>
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</table>
| Week 1 Jan. 21-24 | • Sign onto Blackboard ([http://MyMasonPortal.gmu.edu](http://MyMasonPortal.gmu.edu)) and make sure you’re listed as a student in the course  
• Review the Welcome Page and Syllabus  
• View the Welcome presentation  
• Post desired outcomes and questions in the Introduction Discussion Thread | • View Week 1 video  
• Week 1 assignments: select case study, choose project topic  
• Read Chapters 1-4  
• Review Blackboard Groups |
| Week 2 Jan. 27-31 | **Which is best, Why, When?**  
• View instructor presentation  
• Discuss potential project topics in your teams  
• Students select case study from text (& Pepboys)  
• Submit team project concept to instructor for approval | • View Week 2 video  
• Week 2 assignments  
• Teams post Concept & Outcome to Bb discussion board  
• Read Chapters 5-6 |
| **PART 2 – BASIC ELEMENTS** | | |
| Week 3 Feb. 3-7 | Foundational Elements  
• Respond to team Concepts & Outcomes in Bb discussion board (Peer Review #1)  
• View Instructor presentation  
• Work on team Game Design project | • Read Chapters 7-9  
• Week 3 assignments  
• |
| Week 4 Feb. 10-14 | **The Process**  
• View Instructor presentation  
• Work on team Game Design project | • Read Chapter 10-12  
• Teams post Objectives, Characters, and Environment to Bb discussion board |
| **PART 3 – DESIGN CONSIDERATIONS** | | |
| Week 5 Feb. 17-21 | Games, Gamification, and Simulations  
• View instructor presentation  
• Respond to team Objectives, Characters, and Environments (Peer Review #2)  
• Read “Basic Games for Teaching Different Types of Content”  
• Work on team Game Design project  
• Teams start working on Game Design prototype | • Read Chapter 13-14  
• Submit Case Study Assignment |
| **PART 4 - DEVELOPMENT** | | |
| Week 6 Feb. 24-28 | **Tools and Storyboarding**  
• View Instructor presentation  
• Work on team Game Design project | • Read Chapter 15-16  
• Teams post Gameplay, Rewards, and |
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<tr>
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<th>PART 5 – CASE STUDIES</th>
<th>Look/Feel</th>
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</thead>
<tbody>
<tr>
<td><strong>Week 7</strong></td>
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<tr>
<td>Mar. 3-7</td>
<td>Work on team Game Design project</td>
<td>Read Chapter 17-18</td>
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<td>Respond to team Gameplay, Rewards, and Look/Feel (Peer Review #3)</td>
<td>Teams post draft/storyboards of Prototype</td>
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<td><strong>PART 4 - DEVELOPMENT</strong></td>
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<tr>
<td><strong>Week 8</strong></td>
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<tr>
<td><strong>Spring Break</strong> Mar. 10-14</td>
<td>Work on team Game Design project</td>
<td>Read Chapter 19-20</td>
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<td>Respond to team Prototypes (Peer Review #4)</td>
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<tr>
<td><strong>Week 9</strong></td>
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<tr>
<td>Mar. 17-21</td>
<td>Work on team Game Design project</td>
<td>Read Chapter 21-22, Pepboys Case Study</td>
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<td>Work on Game Design Document</td>
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<tr>
<td><strong>Week 10</strong></td>
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<tr>
<td>Mar. 24-28</td>
<td>Work on team Game Design project</td>
<td></td>
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<tr>
<td></td>
<td>Work on Game Design Document</td>
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</tbody>
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## ASSESSMENT RUBRICS:

### A. Case Study Grading Rubric (20 points)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Does Not Meet Standards (-20%)</th>
<th>Meets Standards (-10%)</th>
<th>Exceeds Standards (-0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completeness (5 pts):</td>
<td>One or more of the three key elements of the assignment is missing, remainder covered superficially</td>
<td>All three key elements of the assignment are present, but only some covered in a substantive way</td>
<td>All three key elements of the assignment are present and covered in a substantive way</td>
</tr>
<tr>
<td>Clarity (5 pts):</td>
<td>Major points not clearly stated, little or no specific details, examples, or analysis</td>
<td>Major points are stated clearly, some supported with specific details, examples or analyses</td>
<td>Major points are stated clearly, supported by specific details, examples or analysis</td>
</tr>
<tr>
<td>Organization (5 pts):</td>
<td>Paper is unstructured and hard to follow</td>
<td>Structure of the paper is generally clear, little or no use of headings and sub-headings</td>
<td>Structure of the paper is clear and easy to follow, with use of accurate headings and sub-headings</td>
</tr>
<tr>
<td>Language (5 pts):</td>
<td>Rules of English grammar, usage, spelling and punctuation are not followed, multiple language errors</td>
<td>Rules of English grammar, usage, spelling and punctuation are generally followed throughout the paper, one or two minor language errors</td>
<td>Rules of grammar, usage, spelling and punctuation are followed consistently throughout the paper, no language errors</td>
</tr>
</tbody>
</table>
### B. Game Design Document Grading Rubric: Total Possible Points: 40

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Does Not Meet Standards (-20%)</th>
<th>Meets Standards (-10%)</th>
<th>Exceeds Standards (-0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concept (5 pts.)</strong></td>
<td>Concept is not clearly stated</td>
<td>Concept is articulated clearly</td>
<td>Concept is articulated clearly and supported with a variety of data and sources</td>
</tr>
<tr>
<td><strong>Outcome (5 pts.)</strong></td>
<td>Method and content reflects neither SME input nor other data sources</td>
<td>Method and content reflects some SME input, little or no other data sources</td>
<td>Method and content clearly reflects use of substantive SME input as well as other data sources</td>
</tr>
<tr>
<td><strong>Instructional Objectives</strong></td>
<td>Few or none of the instructional objectives are measurable nor supported by the instructional need &amp; task analysis data</td>
<td>Most instructional objectives are measurable and most supported by the instructional need &amp; task analysis data</td>
<td>All instructional objectives are measurable and all supported by the instructional need &amp; task analysis data</td>
</tr>
<tr>
<td><strong>Characters (5 pts.)</strong></td>
<td>Characters do not support and are not consistent with the approach and outcomes</td>
<td>Characters some what support the approach and outcomes</td>
<td>Characters support the approach and outcomes</td>
</tr>
<tr>
<td><strong>Game Play &amp; Reward Structure</strong></td>
<td>Game play and reward structure do not flow logically</td>
<td>Game play and reward structure generally flow logically</td>
<td>Game play and reward structure all flow logically</td>
</tr>
<tr>
<td><strong>Look and Feel (5 pts.)</strong></td>
<td>Look and feel is not consistent with the approach or outcomes</td>
<td>Look and feel is somewhat consistent with the approach and outcomes</td>
<td>Look and feel is very consistent with approach and outcomes</td>
</tr>
<tr>
<td><strong>Technology (10 pts.)</strong></td>
<td>Technology is neither innovative nor appropriate for chosen outcome</td>
<td>Technology is not appropriate for chosen outcome</td>
<td>Technology is innovative and appropriate for chosen outcome</td>
</tr>
<tr>
<td><strong>Presentation (5 pts.)</strong></td>
<td>Presentation did not adhere to PowerPoint© best practices</td>
<td>Presentation generally adhered to PowerPoint© best</td>
<td>Presentation adhered consistently to PowerPoint© best</td>
</tr>
<tr>
<td>documented in the Resources area of the Bb course site</td>
<td>practices documented in the Resources area of the Bb course site</td>
<td>practices documented in the Resources area of the Bb course site</td>
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</table>
C. Peer Review Grading Rubric (20 points)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Does Not Meet Standards (-20%)</th>
<th>Meets Standards (-10%)</th>
<th>Exceeds Standards (-0%)</th>
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</thead>
<tbody>
<tr>
<td>Peer Review #1 (5 pts.)</td>
<td>Does not provide constructive comments (strengths, weaknesses, recommendations for improvement) on the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on some of the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on each of the rubric criteria</td>
</tr>
<tr>
<td>Peer Review #2 (5 pts.)</td>
<td>Does not provide constructive comments (strengths, weaknesses, recommendations for improvement) on the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on some of the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on each of the rubric criteria</td>
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<tr>
<td>Peer Review #3 (5 pts.)</td>
<td>Does not provide constructive comments (strengths, weaknesses, recommendations for improvement) on the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on some of the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on each of the rubric criteria</td>
</tr>
<tr>
<td>Peer Review #4 (5 pts.)</td>
<td>Does not provide constructive comments (strengths, weaknesses, recommendations for improvement) on the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on some of the rubric criteria</td>
<td>Provides constructive comments (strengths, weaknesses, recommendations for improvement) on each of the rubric criteria</td>
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