Course Title: SDE 104 Multimedia Authoring

Course Leader: David Maruszewski

Expected Learning Outcomes for Course

- Demonstrate problem solving skills through verbal and written media
- Apply principles of video game design and issues designers face in game creation
- Define variables, functions and random events
- Create narrative environments, stories and characters associated with games
- Define game genres, and the differences between them, with reference to creating each
- Demonstrate game balancing
- Demonstrate fundamentals of gaming and simulation design in the stages of concept and development
- Work productively in a team environment
- Adeptly simulate in 2 dimensions and 3 dimensions
- Analyze, select and apply tools appropriate for a specific solution
- Logically formulate scripts and/or programs to solve problems
- Understand and articulate interactivity in the gaming industry, including the connectivity between computer art and programming
- Apply programming theory in practical applications
- Demonstrate problem solving skills through verbal and written media
- Apply rudimentary Physics and Trigonometry principles

Assessment

(How do students demonstrate achievement of these outcomes?)

Students are required to complete a final project which was created to test skills gained throughout the course. A full assessment rubric may be created in the future.

Three exams are issued to help confirm the findings of the project grade.

Validation

(What methods are used to validate your assessment?)

Currently, all grades sheets are held for two semesters and composite data is used to show trends. Certain chosen questions on exams should help verify or contradict findings.

Results

1. Students have a lack of desire to follow directions even when directional information is oft present and reminded
2. Many students have problems in time management
3. Physics and Math skills are lacking. It does not appear that most students have a high school level of math knowledge.
4. Students can improve verbally, but on the whole, do much better than writing. Many students seem timid expressing themselves in writing.
5. Students will take more opportunity to do complete work with software than with any other venue

6. Gaming industry knowledge is easily understood by students, although sometimes hard to retain.
7. Students enjoy the creative process, often getting involved in their section of a project.
8. Students can work well in groups but some will take advantage of the group. Some of the people in the group will be timid in making those individuals accountable.
9. Students like to start from scratch. They like to reinvent the wheel. They also like to create their own material.
10. More pure programming is needed earlier in order to handle projects later and then in SDE 205

Follow-up

(How have you used the data to improve student learning?)

1. This is a continuous problem. This improved this semester. More emphasis was put onto student responsibility. Moodle was used to direct students easily.
2. Reorganizing the projects helped with this. Being a 7.5 week course, students can confuse the workload with a 15 week. Keeping them actively engaged to out of class work is important.
3. More Math and Physics problems are handled in class. Math and physics have been spread over many classes now in order to help the students.
4. More writing assignments were implemented and worked. Now, getting them to expand on matters will be looked at.
5. Game engine software was integrated into the teaching model to reach students better
6. Slides were used to generate discussion. We then implemented these ideas in an ongoing game that we are creating. This is ongoing.
7. Projects definitely help the student get interested and learn more. Having a working project brought to fruition is even better.
8. Peer reviews were created to grade all class mates. Still some were reticent to potentially hurt others grades. A different rubric is used and has helped, but students still are not fully honest. Having student comments clears things.
9. This class will focus on coming in on a project and working on it. Students will have to look at past design documents and work. They will also have to use past resources. Students don't like this but it is an industry necessity. I get a little resistance, but I think that I get the point across.
10. This was frontloaded and worked well.

Budget Justification

(What resources are necessary to improve student learning?)

- A modern and relevant game engine is a great tool to get students interested and understand the theory and rudimentary application that we do in class.
- Game theory works well with programming. It allows them something to program. The game engine and other software are useful for the learning experience.
- Space to work on in class that will not be deleted is needed to use open source software.