Course Syllabus - Spring 2016

Course Title/Number: Game Development II: 3D/ IST439 Location: Weisberg Applied Engr Complex 1104 Times: MW, 2:30 pm - 3:45 pm Instructor: Dr. Alice Lin Office: ML 104 Phone: (304) 696-6418 E-Mail: <u>lina@marshall.edu</u>

Office hours: MW 12:30pm - 1:00pm, 3:45pm - 4:15pm, WAEC 1104 T 12:20 pm - 1:50 pm, PH 200 R 12:20 pm - 1:50 pm, ML 104 TR 3:15pm - 3:45pm, WAEC 1104 Other times by appointment

University Policies:

By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to www.marshall.edu/academic-affairs/policies/. Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

Course Description: From Catalog

Covers state of the art techniques for computer game design and development with an emphasis on the 3D graphics and interaction through practical, example driven approaches of game development.

Textbook:

There will be no required textbooks for the course. Some material will be posted on blackboard and some will be handed out in class.

Credit:

The course is three (3) credit hours. It includes classroom lectures, in-class exercises, exam and project.

| Course student learning outcomes | How students will practice each outcome in | How student achievement of each outcome will be |
|-------------------------------------|---|--|
| | this course | assessed in this course |
| Students should be able to | In-class lectures, in-class | The quality of student |
| describe the mathematics | examples, in-class | performance on in-class |
| and algorithms needed for | exercises, presentation, | exercises, project and exam |
| game programming. | project and exam | |
| Students should be able to | In-class lectures, in-class | The quality of student |
| use the technologies and | examples, in-class | performance on in-class |
| techniques to create the | exercises, presentation, | exercises, project and exam |
| modern computer games. | project and exam | |
| Students should be able to | In-class lectures, in-class | The quality of student |
| apply refined programming | examples, in-class | performance on in-class |
| concepts to game structure | exercises, presentation, | exercises, project and exam |
| and assets to create a | project and exam | |
| functional 3D video game. | | |
| Students should be able to | In-class lectures, in-class | The quality of student |
| use professional quality | examples, in-class | performance on in-class |
| software tools to create | exercises, presentation, | exercises, project and exam |
| object models for use in 3D | project and exam | |
| video games. | | |

Course Student Learning Outcomes and Assessment Measures:

Grading Policy:

In-class exercises - 50% Project - 20% Final Exam - 30%

Final letter grades are determined based on the following grading scale:

| 90-100% | Α |
|----------|---|
| 80-89% | В |
| 70-79% | С |
| 60-69% | D |
| Below 60 | F |

The instructor reserves the right to change these values depending on the overall class performance and/or extenuating circumstances.

Attendance Policy:

Attendance is strongly encouraged. Lecture material will not be reiterated for persons failing to attend a previous session. It is the student's responsibility to meet with instructor to discuss absences due to illness or other reasons. The university attendance policy will apply for excused absences.

Withdrawal Policy:

The University withdrawal policy is followed in this course. The last day to drop an individual course for the Spring Semester is March 18, 2016.

Course Schedule:

Please note this is a *tentative* schedule. The instructor reserves the right to make changes as appropriate based on the progress of the class.

| Week | Start date | Topics, Due dates |
|------|------------|--|
| 1 | 1/11 | Syllabus, Introduction |
| 2 | 1/18 | Martin Luther King, Jr. Holiday, Game Design |
| 3 | 1/25 | Game Design |
| 4 | 2/1 | 3D Math |
| 5 | 2/8 | Game Engine |
| 6 | 2/15 | Rendering Pipeline |
| 7 | 2/22 | Game Engine |
| 8 | 2/29 | 3D Math |
| 9 | 3/7 | Game Engine |
| 10 | 3/14 | Texturing |
| 11 | 3/21 | Spring Break, Classes dismissed |
| 12 | 3/28 | Game Engine |
| 13 | 4/4 | Lighting |
| 14 | 4/11 | Camera |
| 15 | 4/18 | Present your projects |
| 16 | 4/25 | Dead Week |
| 17 | 5/2 | Final Exam (May 2, 12:45-2:45) |