

# Common Course Outline

## MULT 210

### Game Programming II

3 Semester Hours

## The Community College of Baltimore County

### Description

**MULT 210 – 3 Credits – Game Programming II** builds on skills learned in MULT 110, Game Programming I. Students learn collision detection, multiplayer support, trigonometry and the application of basic Newtonian physics in electronic games. Additional topics include the use of graphics, audio and high score list support. **3 credits; 2 lecture hours per week; 2 laboratory hours per week**

**Prerequisite: MULT 110 or consent of the program coordinator**

### Overall Course Objectives

Upon successfully completing this course the student will be able to:

1. discuss historical events in the development of computer games;
2. investigate a well known game developer and produce a profile of the developer's body of work;
3. analyze a published game to determine the
  - a. demographics of its target audience,
  - b. object of the game,
  - c. characters or avatars,
  - d. affordances provided by the user interface,
  - e. rule set, and
  - f. functional structures employed in its production;
4. distinguish characteristics of various genres of games;
5. produce a design document for a game;
6. apply principles of collision detection;
7. incorporate trigonometric functions into game play;
8. support Newtonian motion in game play;
9. support game play with audio;
10. work in a group to create a multiplayer game;
11. construct and conduct usability test on a game; and
12. publish games on the Internet.

## **Major Topics**

- I. History of Computer Games
  - a. Development of computers
  - b. Arcade video games
  - c. Personal computer games
  - d. Console games
  - e. Internet games
- II. Key Players in the Industry
- III. Elements of a Computer Game
  - a. Genre
  - b. Audience/Market
  - c. Object of the game
  - d. Rule set
  - e. Characters
  - f. Key features
  - g. User interface
  - h. Platform
- IV. Computer Game Design Document
- V. Trigonometry Used in Games
- VI. Basic Physics Used in Games
- VII. Collision Detection & Reaction
- VIII. High Score List
- IX. Multiplayer Games

## **Course Requirements**

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following:

- Developer Profile
- Team Project
- Midterm and Final Exams

## **Other Course Information**

This course is a Simulation and Digital Entertainment (SDE) core course and a Multimedia Technology elective.

This course is taught in a computerized environment.

This course is the second course in a required two-course sequence.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

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