Common Course Outline
ARTD 238
INTERACTIVE SCRIPTING II
3 Semester Hours

The Community College of Baltimore County

Description

ARTD 238 – 3 Credits – Interactive Scripting II introduces programming using a structured event driven programming environment with an emphasis on simulation and game applications. Students explore event driven programming concepts, including variables, functions, user centered design, control structures, data structures and random events. Other topics include game hardware integration, usability and algorithm development. Additional lab time outside of class is required for programming assignments.

3 credits; 2 lecture hours per week; 3 laboratory hours per week
Prerequisite: ARTD 153 with "C" or higher or consent of the program coordinator

Overall Course Objectives

Upon successfully completing the course students will be able to:

1. analyze problems to determine appropriate programming solutions;
2. write well written programs in an event driven environment;
3. develop graphical user interface components;
4. incorporate multimedia elements into game programs;
5. create usable objects and events;
6. apply usability testing models;
7. create arrays and loops to control game situations;
8. organize code into functions and subroutines;
9. apply programming environment functions;
10. debug logic based programming errors; and
11. work in teams to develop an interactive multimedia game.

Major Topics

I. Introduction to Game Design
   a. Makeup of a game design project
   b. The game development cycle
   c. Working with programming tools
II. Incorporating Game Elements
   a. Working with objects

b. Managing events
c. Processing strings and numeric constants and variables
d. Generating and managing random events
e. Integrating peripheral game hardware
f. Incorporating multimedia elements
g. Extending programming environment with external controls

III. Subroutines and Functions
a. System functions and subroutines
b. Creating user defined subprograms
c. Passing parameters to subprograms

IV. Decisions in Game Development
a. Relational and logical operators
b. Conditionals
c. Loop structures

V. Tracking Game Values
a. Creation and access of arrays
b. Passing arrays to procedures
c. Using multidimensional arrays

VI. Game Design Model
a. Concept definition
b. Key features
c. Storyboard
d. Usability testing
e. Asset collection
f. Packaging and delivery

Course Requirements

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

1 Team based game design project
5 Homework exercises
Midterm exam
Final Exam