Course Title: Programming for the Artist

Course Number and Section:GAD415   **Term:** Spring
                                                Year: 2007

Number of Contact Hours: 6   **Time:** 3:00 pm Monday and
                                                Wednesday
                                                Place: 180 N. Wabash

Instructor: Lindsay D. Grace

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Office Hours: TBA   Website: http://aii.lgrace.com

Course Description:
This course is an introduction to computer programming from the game design
artist's point of view. After the groundwork is laid in the artistic area, basic
foundations of programming and design for games are presented.

This course will teach the game artist to program. The concepts discussed in this
course are universal to all object oriented and procedural programming languages.
To demonstrate the universal nature of programming fundamentals this course will
be taught using two programming languages. During the first several weeks of the
course, Visual Basic will be used to introduce the concepts of programming. During
the last few weeks of the course, Maya's built in scripting language, MEL will be
taught.
All fundamentals of programming will be taught, including looping, conditional
statements, and procedures.

No prior programming knowledge is assumed.

Credit Value: 4 QHC
Prerequisites: GAD408, MAA320, MAA150, MAA100, 1 math elective

Textbook:

Required Materials
  • USB thumb drive (for execution of programs, storing code and engine)
  • Access to a PC formatted computer (no Macs)
Technology:
***Team chosen programming game programming language**
        Choices include: BlitzBasic, DarkBASIC, et al

Objectives:
Upon successful completion of this course, students should be able to:

- Apply industry-standard storyboard and storytelling techniques to animation
- Observe and document errors in programming
- Identify the programming involved in multimedia
- Identify at least 2 programming languages
- Understand the nature of object-based programs
- Created procedures, function statements, and variables by using programming language concepts
- Create arrays and loops

Methods of Instruction: Lab and lecture

Methods of assessment:
Participation: 5%

Projects:
Group Game Project (week 7):   30%
Individual MEL Project: 30%

Exams and Quizzes:
Midterm Exam (week 5):   20%
Quizzes / Class Assignments   15%

Program Goals:

- Prepare students for successful employment, both short and long term.
- Instill in them the technical skills necessary for entry-level employment
- Aesthetic and creative awareness for meaningful communication
- Ability to self-teach toward staying proficient in the ever changing technological landscape leading toward a lifelong career.

- Equip students for entry-level jobs
- Give students a solid foundation based on the 12 principles of animation
- Develop strong visual/creative problem solving skills based on traditional drawing skills.
- Promote student professional demeanor, provide students with an understanding of the animation market, and identify and practice characteristics of professional conduct.

Weekly Schedule*

Week 1: Introduction – What is an IDE?
What is a Game Development Environment
In-Class: Find and present two Development Environments (compare)

Overview of Programming Fundamentals
Simple Debugging
Homework: Form teams of 3 and commit to game concept

Week 2: Data Types, Variables
Object Oriented Development
Homework: Commit to game engine
Homework: Find and demonstrate code for a game like your concept

Week 3: Chapter 3 and Supplements:
Collisions
Decisions and Loops
Homework: Flowchart game events
Homework: List MDD (game assets needed)
Homework: Write code to setup game environment (demo required)

Week 4: Chapter 4 and 13
Procedural Development
Native functions and Custom Functions
Homework: Write code to execute 3 primary actions in game

Week 5: Chapter 6
Demonstrate progress in games
Midterm exam

Week 6: Game Work Week

Week 7: Game Competition
Game projects due

Week 8: Introduction to MEL
Homework: Create a simple MEL instruction set

Week 9: MEL Procedures
Adding scripts to the UI
Homework: Individual MEL project proposal

Week 10: MEL Work Week
Homework Complete MEL project

Week 11: MEL Project Competition
Final projects due (with source code)

Grading System:

Point Score range	Letter Grade
93 and above	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
Below 60	F

Course Requirements and Policies

All students must adhere to the guidelines set forth by the Illinois Institute of Art's student handbook.

All assignments are due at the beginning of the class. Students should hand provide a copy of their program on a **PC-formatted** 3.5" inch floppy disk.

Students should always keep a backup copy of their work.

No late assignments will be accepted. In this course, each assignment will build on the previous. Failure to complete the prior week's assignment will make each subsequent week harder. It is in your best interest to complete each assignment on time and to the best of your ability. Always hand in what you have, even if it does not work. **Partial credit is better than no credit at all.**

Attendance / Absences:

Students are expected to attend each class and arrive on time. Any student arriving late for an exam may not be given a chance to complete the exam. Late assignments are deducted one letter grade per day.

Makeup exams and acceptance of late assignments will only be granted in the following circumstances; Medical excuse, emergencies, campus-sponsored activities.

All issues of attendance and tardiness will be handled as school policy dictates and at the discretion of the instructor.

Cheating and Plagiarism:

Any student that cheats or plagiarizes will be reported to the academic standards committee and may be dismissed from the course.

All homework is to be completed independently (except when told otherwise). Any student who is caught or suspected of working in conjunction with any other student will be penalized. Using lines of code borrowed from any source other than the prescribed book for this course will be considered plagiarism. **Do not use websites, message boards, chat rooms, or other related resources to solve homework problems.**

*Schedule subject to change at the instructor's discretion.

I have read the entire syllabus carefully and understand the attendance policies and class policies concerning assignments. I understand that the class runs for six hours each week and I am personally responsible to be present for each session from start to finish. I am now informed that both late arrivals and early exits are noted in the attendance log.

Name (Print) _____

Phone Number _____

Current email _____