Introduction to Programming

Game Design 105
Professor Bethancourt

Meets: W: 2:-4:45 C-456
Class Site: mouseandthebillionaire.com/hostos/GD105/
Email: mbethancourt@hostos.cuny.edu | matt@bethancourts.com
Office: C-417 / T&Th 12:30-2
Phone: 562.686.3296

Course description:

This course introduces students to the Adobe Flash application and its Actionscript programming language, a leading tool for the creation of online-based interactive media. Students will explore the tools and core concepts of this program and its many interactive possibilities, including the use of illustration, images, text, animation, and sound. The will introduce students to basic object oriented programming through the opportunity to explore Actionscript, which is the underlying coding language of Flash. This course will also serve as an introduction to programming within the Flash environment to create small game interactions.

Prerequisites: DD101 Digital Toolbox, GD101 Intro to Games, MAT100 College Mathematics

Course objectives:

By the end of the course, students will have gained:

- A familiarity with the Flash authoring environment
- An understanding of how Flash can be used to create, animations, websites, and banner advertisements
- A fundamental understanding of the core programming concepts
- The opportunity to build their technical and conceptual skills through various hands-on projects.

Credit Hours: 3 hours

Required readings:

- Reas, Casey & Ben Fry. *Getting Started with Processing*. Sebastapol: O'Reilly, 2010

Expected: While this class has not been designated as 'web-enhanced,' it is expected that students wishing to take full advantage of the class have:

- Familiarity with the Internet;
- Access to the Internet from home or elsewhere
- An active Hostos email account, which they check daily.

Due dates:

Late assignments will not be accepted without a note from a physician or counselor.

Digital Games assignments:

This is a studio course involving a combination of exercises, quizzes and projects. The lecture/discussions will reference and introduce concepts and vocabulary that may at times be unfamiliar and so require students to do independent research. This will be expected.

15% of the grade will be based on engagement and consistent attendance. The balance of the grade will be determined by several exercises and projects undertaken over the 15 week course.

Assignment	Description	Points
Variable Exercise	These exercises will teach students how to code simple interactions in Processing. Students will be given a series of small technical and design exercises to insure that they understand how to implement the techniques and concepts covered in class.	5
Drawing Exercise		5
Interaction Exercise		5
Pseudocode Exercise		5
Text Adventure Game	For this projects students will build an interactive text adventure with a win condition, using techniques from class.	10
Spacewar! Clone	For this projects students will build a clone of the Spaewar! game developed by MIT in 1962. Two user-controlled characters should move around the screen. Combat is not required.	10
Pong Clone	For this projects students will build a clone of Atari's 1972 juggernaut, Pong. Two user-controlled paddles will bounce a ball back and forth. Scorekeeping is optional..	10
Final Game	For the final project students will be required to create a small game-like interaction consisting of two scenes, a playable character and at least one other object. For this game students must: 1. Create a character that can move in four directions with corresponding animations using keyboard control. 2. Have the character hit test another object and respond with another animation. 3. Add one other animation/ability that can be controlled using keyboard input.	15
Quiz 1	Q1	5
Quiz 2	Q2	5
Quiz 3	Q3	5
Attendance / Participation	*See Note on Participation*	20
Total		**100**

Notes on the grading criteria:
Work will be evaluated according to the following criteria:

- Understanding and interpretation of readings
- Research and Analysis of related issues
- Contribution to in-class discussion

Participation:
A student's participation grade is based primarily on their attendance and participation in class. Every student begins the term with 20 participation points. Attendance is mandatory for every single scheduled class. For each class missed, 6 participation points will be deducted. Tardy students will have 2 participation points deducted. More than three absences amounts to a failure, as a student may not earn less than 0 participation points.

Academic policies (from Catalogue):
Hostos Community College believes that developing student's abilities to think through issues and problems by themselves is central to the educational process. Since the Hostos College degree signifies that the student knows the material s/he has studied, and the practice of academic dishonesty results in grades or scores that do not reflect how much or how well the student has learned, understood, or mastered the material, the College will investigate any form of academic dishonesty brought to its attention. If the charge of academic dishonesty is proved, the College will impose sanctions. The three most common forms of academic dishonesty are cheating, plagiarism, and bribery.

Cheating (from Catalogue):
In the collegiate setting, cheating is defined as the purposeful misrepresentation of another's work as one's own. Faculty and students alike are responsible for upholding the integrity of this institution by not participating either directly or indirectly in act of cheating and by discouraging others from doing so.

Plagiarism (from Catalogue):
Plagiarism is a form of cheating which occurs when persons, even if unintentionally, fail to acknowledge appropriately the sources for the ideas, language, concepts, inventions, etc. referred to in their own work. Thus, any attempt to claim another's intellectual or artistic work as one's own constitutes an act of plagiarism.

Bribery (from Catalogue):
In the collegiate setting, bribery involves the offering, promising, or giving of items of value, such as money or gifts, to a person in a position of authority, such as a teacher, administrator, or staff member, so as to influence his/her judgment or conduct in favor of the student. The offering of sexual favors in exchange for a grade, test score, or other academic favor, shall be considered attempted bribery. The matter of sexual favors, either requested or offered, in exchange for a grade, test score or other academic favor, shall also be handled as per the Sexual Harassment procedures of the College.

College attendance policy (from Catalogue):
Students are expected to attend all class meetings in the courses for which they are registered. Classes begin at the times indicated in the official schedule of classes. Arrival in class after the scheduled starting time constitutes lateness.

The maximum number of absences is limited to 15% of the number of scheduled class hours per semester and a student absent more than the indicated 15% is deemed excessively absent. Attendance is monitored from the first official day of classes. In the case of excessive absences or lateness, the instructor has the right to lower the grade, assign a failing grade, or assign additional written work or readings.

Absences due to late registration, change of program, or extenuating circumstances will be considered on an individual basis by the instructor. Each department and program may specify in

writing a different attendance policy. Instructors are required to keep an official record of student attendance and inform each class of the College's or department attendance policy.

NOTE:

- Any work missed during any period of absence must be made up by the student.
- To meet financial aid criteria, a student must attend class at least once in the first three weeks and once in either the fourth or fifth week of class

Course schedule:
Projects must be completed by the start of each class.

Class	Lecture	Due	Reading
1	• Class Introduction • Intro to Variables		Raes/Fry - Chapters 2 and 3
2	• Conditional Statements • User Input	EX1	
3	• Game Jam • Pixels, Drawing	G1	Raes/Fry - Chapter 4
4	• Response, Part 1	EX2	Raes/Fry - Chapter 5
5	• Response, Part 2		Raes/Fry - Chapter 6
6	• Motion, Part 1	EX3	
7	• Game Workshop		Raes/Fry - Chapter 7
8	• Game Jam • Media	G2	Raes/Fry - Chapter 8
9	• Functions		
10	• Intro to Objects		Raes/Fry - Chapter 9
11	• More Objects		
12	• Game Jam • Arrays	G3	Raes/Fry - Chapter 10
13	• Game Workshop		
14	• Game Workshop		
15	• Game Jam	G3	