Introductory Computer Game Programming

CSC427

Spring 2015

# Instructor Information

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| --- | --- | --- |
| Instructor | Email | Office Location & Hours |
| **Elhassan Ahmed** | elhassan.ahmed@csi.cuny.edu | Contact me through email anytime for help(put CSC427 in subject) |

# General Information

## Description

This course covers the process of game development. It also discusses the importance of testing, and how developers use the results of testing to improve their games. Students will be expected to develop simple games, or portions of games, using appropriate game development tools. Students will be using C# and Objective-C. Students will develop games for Windows and IOS based Systems.

## Expectations and Goals

This course will require a lot of work outside the class. Each student or group will develop 4 games in total.

1. 2 games targeting Windows
2. 2 games targeting IOS

Each group will present their game to the class.

You will also learn about vectors and matrixes.

# Course Materials

## Required Materials

Textbooks:

* **XNA Game Studio 4.0 Programming: Developing for Windows Phone 7 and Xbox 360**
* **Programming in Objective-C, 4th Edition:** <http://it-ebooks.info/book/1201/>

## Optional Materials

Software:

* **Visual Studio Express 2012:** <http://www.microsoft.com/en-us/download/details.aspx?id=34673>
* **XNA Refresh 2012:** <https://msxna.codeplex.com/releases/view/117564>
* **Xcode:** <https://developer.apple.com/xcode/>
* **Paint.NET:** <http://www.getpaint.net/>
* **Gimp:** <http://www.gimp.org/>

# Course Schedule

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| --- | --- |
| Monday 8:20 PM – 10:00 PM | 1N-111 |
| Wednesday 8:20 PM – 10:00 PM | 1N-111 |

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| --- | --- |
| February 16 Monday | College Closed |
| February 18 Wednesday | Follow Monday Schedule **(we have a class)** |
| April 3 – April 11 | **(No Class)** |

# Exams and Tests

We will have a final, exams, and quizzes. (Dates will be discussed in the class)

# Grades

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| --- | --- |
| Midterm | 30% |
| Homework, Class/online work, Attendance | 30% |
| Final | 40% |

# Course Topics

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| 1.      Overview; terminology; XNA vs. iOS development |
| 2.      XNA framework |
| 3.      C# |
| 4.      2D Games |
| 5.      iPad – Xcode, Objective C |
| 6.      Collision detection |
| 7.      Audio (sound & music) |
| 8.      Game input devices – gamepad, accelerometer |
| 9.      3D game development (Camera, model, texturing, lighting) ; translation, rotation |