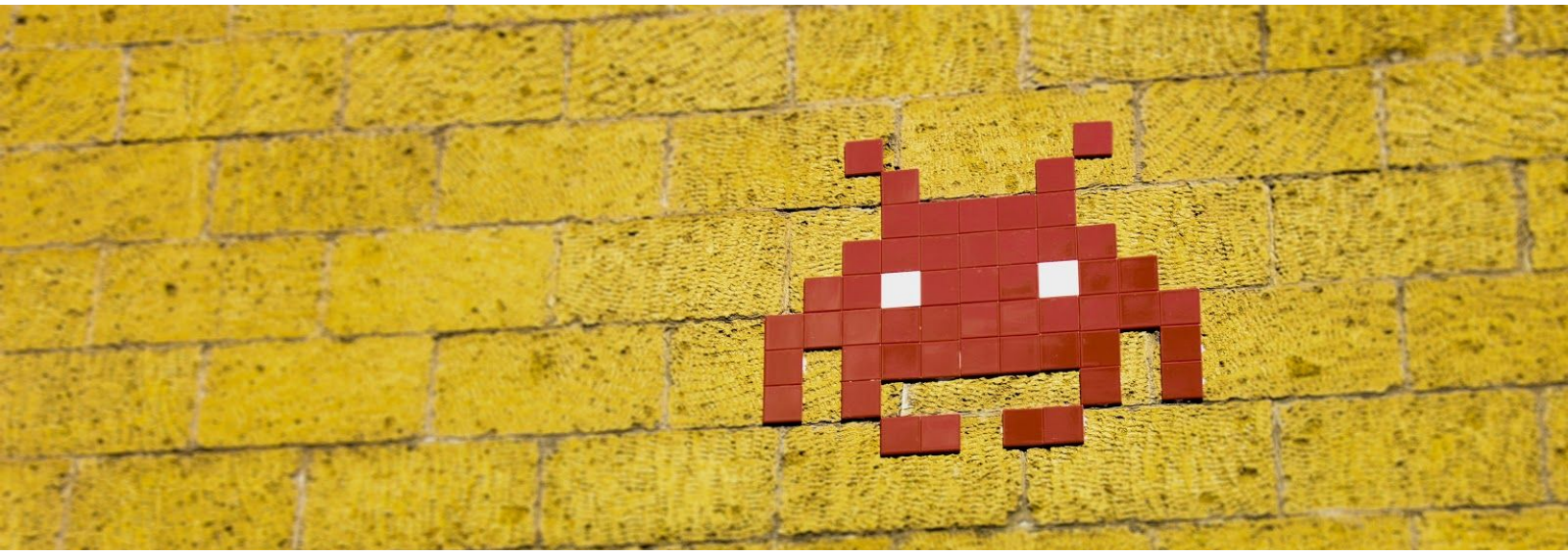
Intro to Game Programming

CS-UY 3113
Fall 2019
MW 10:30 AM - 11:50 AM
2MTC 812



Hello!

My name is Carmine T. Guida and welcome to Game Programming! Games have existed for thousands of years and the advent of video games provides a new medium for expressing your creativity through programming.

What you build in this class will be unique to you!

Email me cguida@nyu.edu with any comments, questions or concerns. Always use your @nyu.edu email address.

What will I learn and be able to do by the end of this course?

You will be able to create simple 2D games. You will learn about vectors, coordinate systems, sprites, collisions, physics, audio and handling input. This will all be done with C++ programming and utilizing the SDL (Simple DirectMedia Layer) libraries along with OpenGL.

Is there a textbook for this course?

There is no textbook for this course. All instruction is through the lectures.

What kind of computer and software do I need?

You need to use either a Mac or Windows computer. You do not need a powerful machine as we are not writing anything super complicated. For Mac users, you'll be using Xcode. For Windows, you will be using Visual Studio. These are both freely available.

What is the schedule of topics each week?

This list might change a bit throughout the semester. The schedule for each week is as follows:

1. Introduction
2. Linear Algebra
3. Basic Graphics with OpenGL
4. Input, Time-Based Movement
5. Sprites and Sprite Animation
6. Game Physics and Fixed Timestep
7. Audio
8. Advanced Collision Detection
9. Level Editing
10. Particle Systems
11. AI Programing
12. Introduction to 3D Graphics
13. Advanced 3D Graphics
14. Shaders and Lighting
15. Using an External Physics Engine
16. Final Project Demos

How does the grading work in this class?

Your grade is based on the following:

These are done on your own:		
Project 1: Draw a Simple 2D Scene	10%	**Due - 9/22/2019 11:59pm**
Project 2: Pong	10%	**Due - 9/29/2019 11:59pm**
Project 3: Lunar Lander	15%	**Due - 10/13/2019 11:59pm**
Project 4: Space Invaders	15%	**Due - 10/27/2019 11:59pm**
These are done in Teams of 2:		
Project 5: Platformer	20%	**Due - 11/10/2019 11:59pm**
Final Project: Students' Choice	30%	**Due - 12/15/2019 11:59pm**

How are the projects submitted?

You must submit your code by the due date as a link to a **GitHub** repository. You will post the links to the Assignments area in NYU Classes. **Do not share your code!**

Your code must compile. Code that does not compile will receive a grade of 0.
Late projects will lose 10 points per day.

Where can I find the resources, libraries, assets, lecture slides for this course?

All of the above are available in the following GitHub repository. Note that lecture slides and project requirements may be delivered as we go:

https://github.com/carmineguida/CS3113

Academic Integrity

Project 5 and the Final are the only team projects, otherwise all work in this class is to be your own! Plagiarism is strictly forbidden! Students are responsible for being familiar with the Student Code of Conduct:

http://engineering.nyu.edu/life/student-affairs/code-of-conduct

Academic Accommodations

If you are a student with a disability who is requesting accommodations, please contact New York University's Moses Center for Students with Disabilities at 212-998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at www.nyu.edu/csd. The Moses Center is located at 726 Broadway on the 2nd floor.