

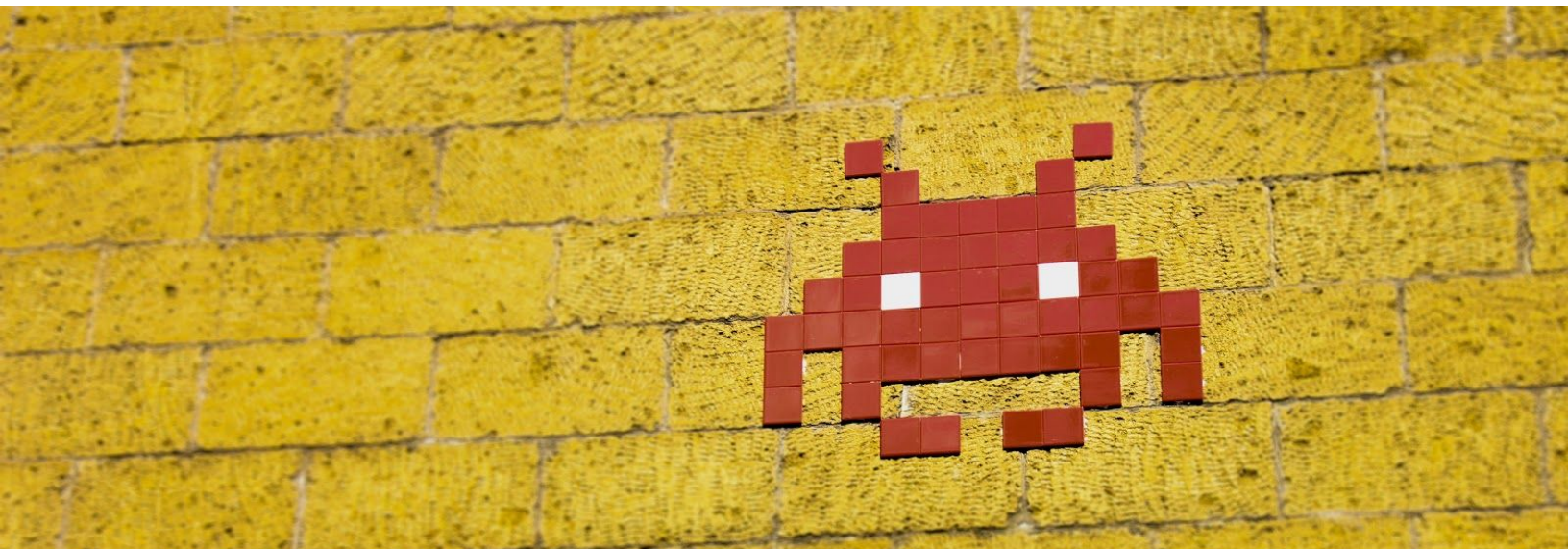
# Intro to Game Programming

**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](mailto:cguida@nyu.edu) with any comments, questions or concerns. Always use your @nyu.edu email address.

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## 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.

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## Is there a textbook for this course?

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

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## 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.

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

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## 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%	<b>Due - 9/22/2019 11:59pm</b>
Project 2: Pong	10%	<b>Due - 9/29/2019 11:59pm</b>
Project 3: Lunar Lander	15%	<b>Due - 10/13/2019 11:59pm</b>
Project 4: Space Invaders	15%	<b>Due - 10/27/2019 11:59pm</b>

These are done in Teams of 2:

Project 5: Platformer	20%	<b>Due - 11/10/2019 11:59pm</b>
Final Project: Students' Choice	30%	<b>Due - 12/11/2019 10:29pm</b>

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## 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.

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## 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/carminегuida/CS3113>

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## 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>

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## 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](mailto: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](http://www.nyu.edu/csd). The Moses Center is located at 726 Broadway on the 2nd floor.

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## NYU School of Engineering Policies and Procedures on Excused Absences – complete policy [here](#)

A. Introduction: An absence can be excused if you have missed no more than **10 days of school**. If an illness or special circumstance has caused you to miss more than two weeks of school, please refer to the section labeled Medical Leave of Absence.

B. Students may request special accommodations for an absence to be excused in the following cases:

1. Medical reasons
2. Death in immediate family
3. Personal qualified emergencies (documentation must be provided)
4. Religious Expression or Practice

Deanna Rayment, [deanna.rayment@nyu.edu](mailto:deanna.rayment@nyu.edu), is the *Coordinator of Student Advocacy, Compliance and Student Affairs* and handles excused absences. She is located in 5 MTC, LC240C and can assist you should it become necessary.

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## NYU School of Engineering Academic Calendar – complete list [here](#).

The last day of the final exam period is **\_December 20th 2019\_**. Final exam dates for undergraduate courses will not be determined until later in the semester. Final exams for graduate courses will be held on the last day of class during the week of **\_December 9th 2019\_**. If you have two final exams at the same time, report the conflict to your professors as soon as possible. Do not make any travel plans until the exam schedule is finalized.

Also, please pay attention to notable dates such as Add/Drop, Withdrawal, etc. For confirmation of dates or further information, please contact Susana: [sgarcia@nyu.edu](mailto:sgarcia@nyu.edu)

