



Welcome to Game Design and Development

This Week's Agenda



Getting Prepared for the Semester

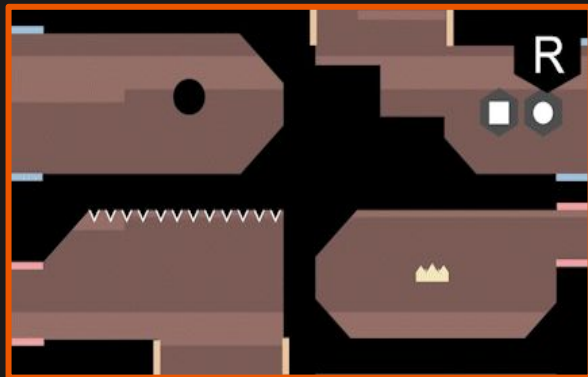
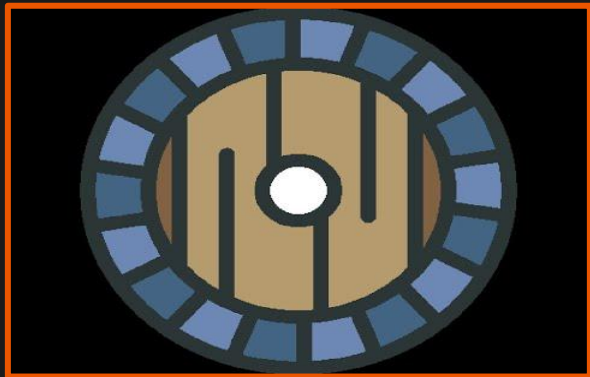
- Introduce yourselves!
- Discuss the Video Game Industry and roles of Game Developers.
- Create the necessary accounts and downloading all the necessary software for the class projects.
- Learn how to copy, edit, and upload project files to GitHub.

Who are we?



My name is Sebastian Grygorczuk! I'm an Independent Game Developer. I have experience in creating games in Unity and LibGDX using C# and Java respectively. I love learning about history and traveling.

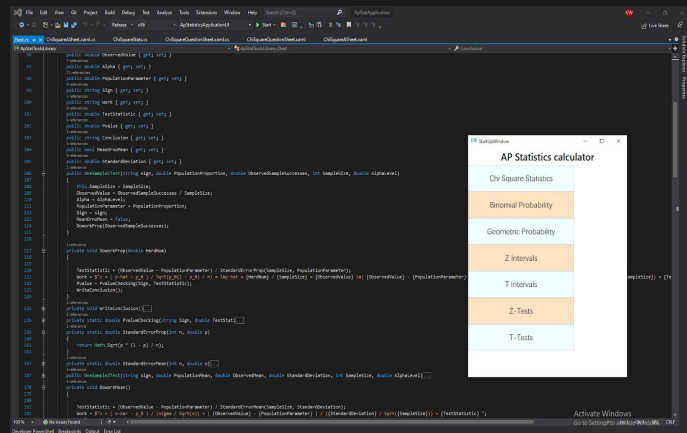
If you'd like to check out my work here's my website, [Orczyk](https://orczyk.com).



Who are we?

Kenneth Wu

Recently graduated High School for Dual Language and Asian studies and will be studying data science at Case Western during the spring. I have experience with Unreal Engine and programming in C# and python.

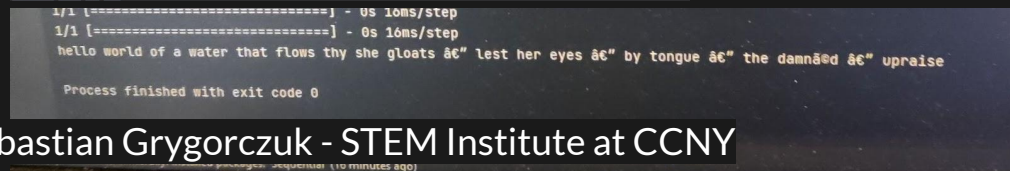


←Recent projects of mine
Mainly involving data science

My final game design project →
Quick dungeon sword fighter
titled swing swing swing



Fun fact: I enjoy playing jazz music.

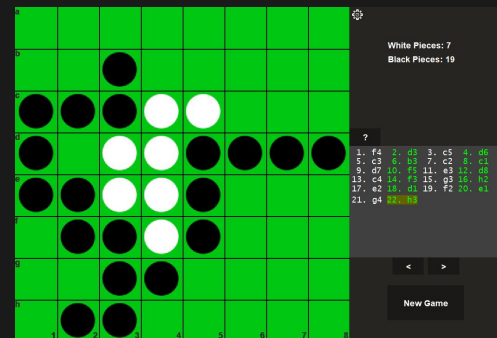
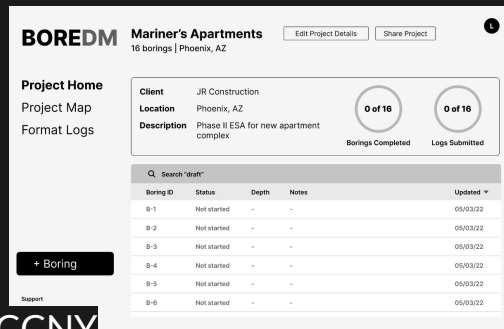
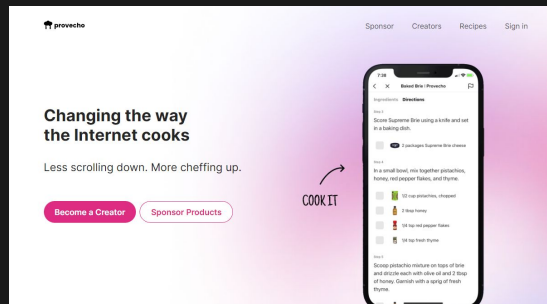


Sebastian Grygorczuk - STEM Institute at CCNY

Who are we?

Haotian Gan

- Studying computer science at the University of Michigan
- My primary background is in web development, but I love all things game development, which is why:
 - I took this course two summers ago
 - This will be my second time being a TA for this course
 - I'm really looking forward to these next six weeks we have together :)



Sebastian Grygorczuk - STEM Institute at CCNY

Introductions

Sebastian's Favorite Game



Kenneth's Favorite Game



Haotian's Favorite Game



How About You?



What's your name?

Are you taking another class during this summer?
If so, what is it?

What's your favorite game and why?

What is your level of experience with
programming/game design?



[Avatar Mixer by Kenny](#)

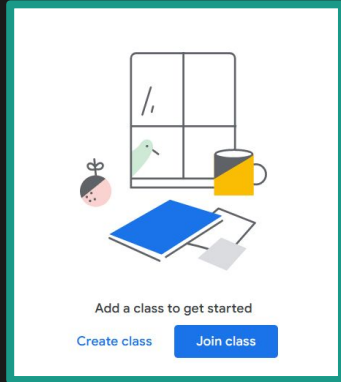
What Is The Goal Of This Class?



The purpose of this course is to provide students knowledge about the game development industry and the many careers that comprise it. Students will also learn the skills necessary for translating ideas into playable games, while preparing them for further study in the fields of engineering and design.



Google Classroom



Class code

Ask your teacher for the class code, then enter it here.

To sign in with a class code

- Use an authorized account
- Use a class code with 5-7 letters or numbers, and no spaces or symbols

If you have trouble joining the class, go to the [Help Center article](#)

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Google Classrooms



Google Classrooms will be the center for all of the class materials. Here you'll find the Textbook, Power Points, and all other resources.

Computer Requirements

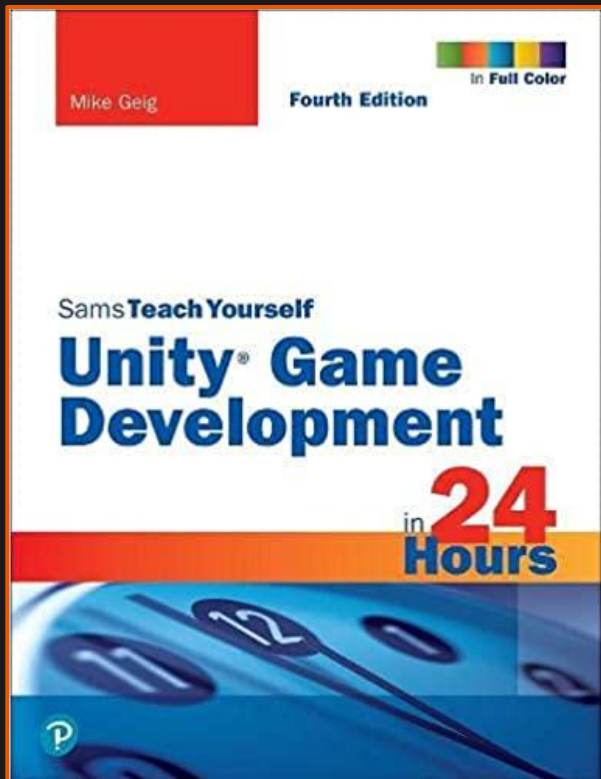


As this is a game development class the number one requirement is a modern computer capable of running the Unity and Visual Studio software. Windows, Mac, and Linux operating systems are compatible with the Unity Game Engine, however, Windows and Mac are highly recommended due to the limitations of Visual Studio on Linux platform.

An additional requirement for the class is a computer mouse. It should be brought to class to make game development easier.

Minimum requirements	Windows	macOS	Linux (Support in Preview)
Operating system version	Windows 7 (SP1+) and Windows 10, 64-bit versions only	High Sierra 10.13+	Ubuntu 16.04, Ubuntu 18.04, and CentOS 7
CPU	X64 architecture with SSE2 instruction set support	X64 architecture with SSE2 instruction set support	X64 architecture with SSE2 instruction set support
Graphics API	DX10, DX11, and DX12-	Metal-capable Intel and	OpenGL 3.2+ or Vulkan-capable, Nvidia and AMD GPUs.

Class Resources



Class Textbook:

- *Unity Game Development in 24 Hours 4th Edition* by Mike Geig

Unity Game Development in 24 Hours 4th Edition is an ideal textbook for this class because it's an introduction to Unity and many of its designer focused tools with programming included, but not programmer focused.

Additional Core Materials:

- [Unity User Manual](#)
- [Unity YouTube Channel](#)
- [Stack OverFlow](#)

Additional Core Materials are official Unity resources that will explain how many of the systems technically work, but will not show expansive examples of how to utilize them.

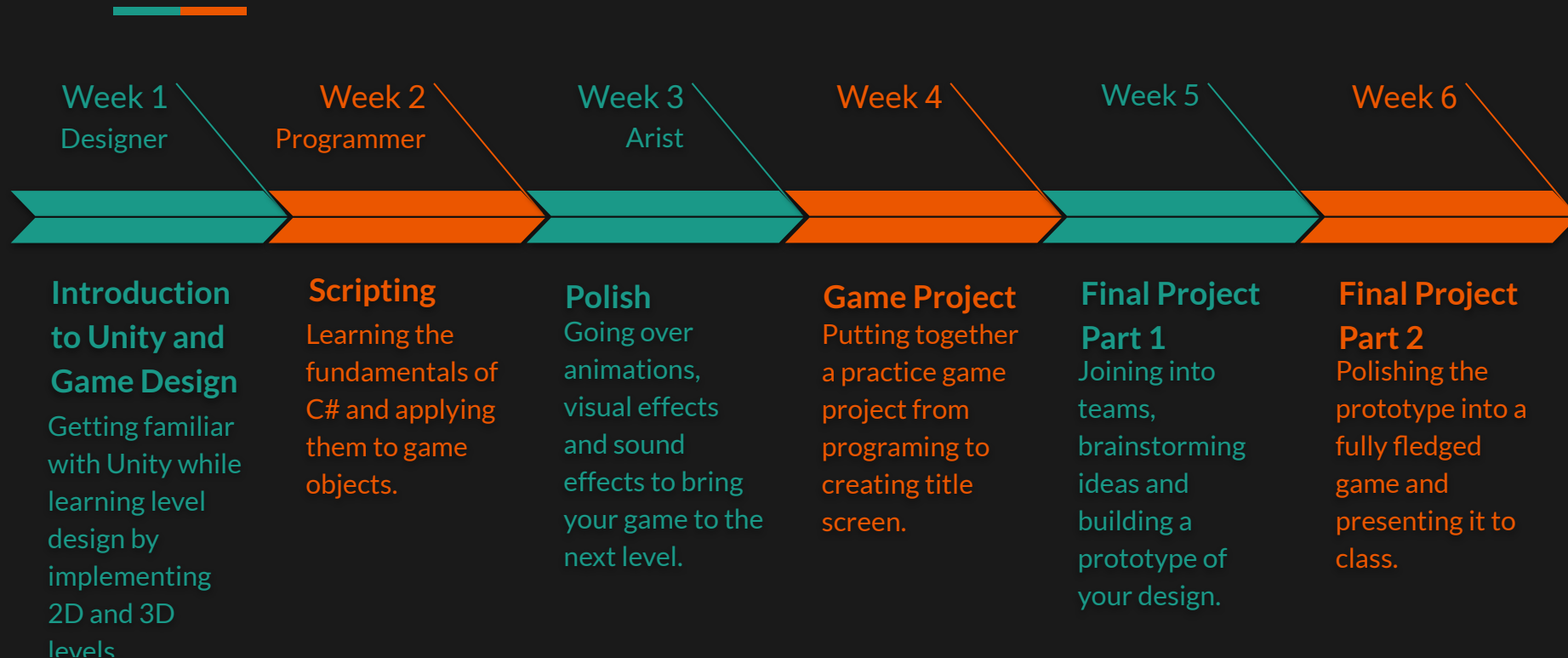
YouTube Resources:

- [Brackeys](#)
- [Code Monkey](#)
- [Blackthornprod](#)
- [Tarodev](#)

Stack Overflow will help you with any programming bugs you may run into.

YouTube Resources are Independent Game Developers putting their craft online and showing how to use the tools Unity provides us.

Class Road Map



Attendance



Attendance

It is very important that students attend every class session to ensure that you are up to date with the topics covered in class. Attendance will be taken immediately at the beginning of each class, so please advise the STEM office of an unexpected absence.

Withdrawal

If you decide any of the classes you are taking aren't something you are interested in you have until **July 8th** to withdraw without it affecting your grade.

Withdrawing after **July 8th**, having 3 consecutive unexcused absences, or having a large sum of unexcused absences will result in a **NCW**, No Credit Withdrawn, which will affect your grades negatively.

Hybrid Class



This is a Hybrid Class that means a portion of it is set to have in class days and online days.

Official Schedule is:

- Monday, Wednesday, and Friday are **in-class** days.
- Tuesday, and Thursday are **online class** via Zoom.

Many of you are already on campus for a morning class so you are welcome to come to classroom for instructions on online days.

I will be in class everyday.

Mondays, Tuesdays, Wednesdays, and Thursdays are going to be new coursework days where we go over new topics that will help you create your game.

Fridays are recitation days where we will go over the homeworks, help anyone that has questions and practice the skills learned through the previous four days.



On **Tuesday** and **Thursday** we will have a Zoom Class setup.

The STEM Institute has a very strong policy on keeping the Camera on during Zoom class.

Please just keep your camera on during the class so we don't have to pause the class to remind you to do so.




Join Zoom Meeting

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Meeting ID: ### #### ###

Grading



STEM Institute works mostly on a Pass/Fail grading system, as long as you do the HWs and Project you will be fine. You're grade will be either

Fail - Below 65%

Pass - 65% - 89%

Numerical - 90% or above

If you rather not use the numerical grade let me know.

All Grades will be submitted on August 12th so if you have any problems with your grade let me know before then.

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30%	Homework
20%	Quizzes
50%	Final Project

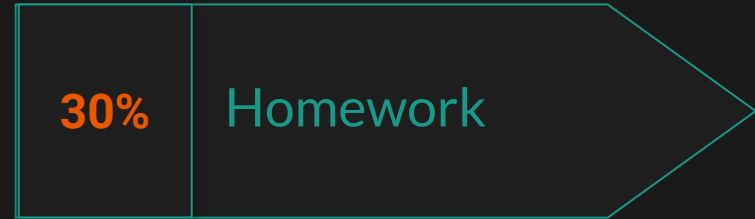
Homeworks



There will be **two** homeworks every **week**, one given on **Monday** that's due Wednesday and one given on **Wednesday** due Friday for the first four week of class. We will go over the homeworks on Fridays.

In the last two weeks we will be developing your games so your homework will be to continue working on your project.

Homeworks will consist of few multiple choice question and a short tasks such as creating a scene or writing a short script and will be done through Google Forms.



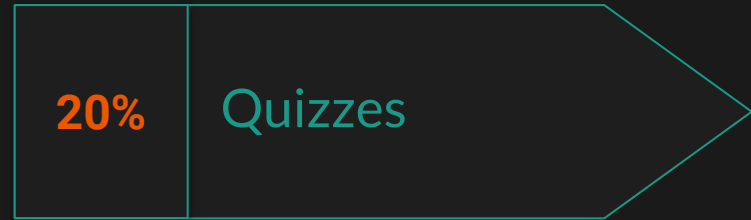
Quizzes



We will have **four** quizzes for the first four weeks of class. They will be small projects within Unity that you will have to complete at the beginning of the class.

Very similar to the task that will be presented in the homeworks, so as long as you do the homeworks you will be ready to take the quiz.

Quizzes will take place on Mondays so you have the weekend to practice.



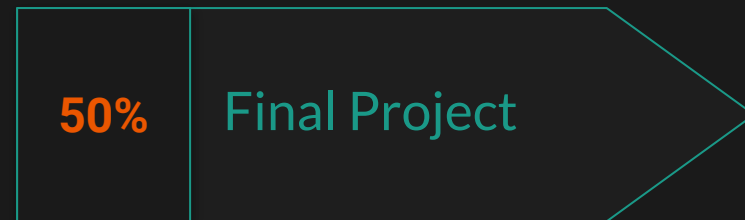
Final Project



Final project will consist of you putting together all of the skills you've learned through the first four weeks and applying them to making your own game.

The project will be done in groups of 2-3 people as Game Development is a highly collaborative space.

The working game will require you to create a **Start Screen** that invites the player, one or more levels with a clear **win and fail states** that uses **visual and sound effects** to provide player feedback, and a **Credits Screen** that shows all the assets you've used and what each person worked on.



Challenge: Game Brainstorming



Get into groups, talk about your favorite games and pick one you're all familiar with and answer these questions:

What emotions is this game trying to make the player experience?

What parts of this game make it fun? Why?

What problems does this game ask the player to solve?

What is the theme of the game? Do the game mechanics support that theme?