

## Top of Mind

- We have a playtest on Friday! Bring in something others can play!
- Helpful Videos:
  - AnimatedSprite2D and TilemapLayer
  - Spawning and UI (older video)
  - GWizz Main Menu Tutorial (very simple)
- Previous Videos
  - Class Recording
  - Instantiating Objects
- **Office Hours:** Thursday 1-5pm. Book here # FCLC Undergraduate Introduction to Video Game Design Syllabus
- **Course Code:** CISC 2540
- **Schedule:** Tuesdays and Fridays, 11:30 - 12:45 PM
- **Instructor:** John Bezark
- **Office Hours:** Thursday 1-5pm. Book here

## Course Description:

An introductory course exploring the fundamentals of digital game design and development. This course will use Godot 4 as the primary game creation tool, and it will cover the basics of game development, coding fundamentals, and game design principles. Students will engage in hands-on projects to develop practical skills in both 2D and 3D game design. Students are not expected to have any prior programming or game design experience.

## Course Objectives:

- Understand the principles of game design and development.
- Gain proficiency in Godot 4.
- Develop basic coding skills relevant to game design.
- Complete three major game design projects: a tabletop game, a 2D game, and a capstone game.
- Enhance writing and oral presentation skills through game-related assignments.
- Be able to better work in teams
- Respond to critical feedback constructively

## Assessment

The work of the class consists of the following:

Assignment	Description	Due Date	Points
Class Participation	Actively participate in class discussions and contribute to group projects.		15
Tabletop Game	A playable prototype of a tabletop game	1/28	16
Tabletop Game Process Paper	Paper which documents process, execution and playtesting of tabletop game	2/7	10
Labs 1-4	4 short coding assignments designed to build proficiency. 6 points each.	2/10, 2/21, 2/25, 3/28	24
2D Game Concept Paper	A brief paper describing your concept for the 2D Game	2/14	10
2D Game	A playable prototype of a 2D game	3/11	25
Capstone Concept Presentation	A brief Presentation describing your concept for the 2D Game	4/1	10
Game Review	Play one of the suggested games and review it!	4/22	10
Capstone Game	A polished game. Can be an evolution of the 2D game or something new.	Final	30
<b>Total Points Possible</b>			<b>150</b>

All assignments will be graded on the due date. Students are always allowed to revise and resubmit work **up until the class before the final.**

**Attendance:** Students are allowed 3 unexcused absences. After this, each unexcused absence will lower your final grade by 1/2 a letter, i.e. B+ -> B or A -> A-

## Course Outline

The course is split into 3 distinct modules each with a unique project: - Week 1-3: Game Design Fundamentals and tabletop design - Week 4-10: 2D Game Design - Week 10-14: 3D Game Design/Final Project Development

## **Week 1 - What is a Game?**

### **Tuesday 1/14**

- Week 1 Slides
- FILL OUT THIS FORM so you can tell me if I'm giving you too much homework!
- Who are you/Syllabus Review
- Professor John
- Game Design Fundamentals

### **Friday 1/17**

- The Iterative Game Design Process 20
- Prototyping
- Playtesting
- Group Work
- **Homework: Game Review**
- **Homework: Tabletop Game**

## **Week 2 - Prototyping and Iteration**

### **Tuesday 1/21**

- MDA Framework - Systems, Loops and Balance
- Prototyping Tabletop Games: Balancing and Mechanics
- Reading: MDA
- MDA Framework
- Systems, Loops and Balance

### **Friday 1/24**

- Playtesting
- Group Work

## **Week 3 Playtesting**

### **Tuesday 1/28**

- Playtesting
- Git Init
- **DUE: Tabletop Game**

### Friday 1/31

- Playtesting
  - Video tutorial on Github and Godot
  - Git Init
  - **Homework: Tabletop Process Paper**
- 

## Week 4 - Hello Godot Getting Started in 2D

### Tuesday 2/4

- Hello Godot
  - Getting started with Godot
  - Video tutorial on Github and Godot
  - Nodes and Scenes
- **Homework: Lab 1**

### Friday 2/7

- Nodes and Scenes
- Genres in 2D
  - 2D Game Brainstorming
- **DUE: Process Paper**
- **Homework: 2D Game Concept**
- **Homework: 2D Game**

## Week 5 - Coding Fundamentals

### Tuesday 2/11

- Git Collaboration and Branches
- Coding Fundamentals
  - Scripts and properties
  - Variables
- **DUE: Lab 1**

### Friday 2/14

- Conditionals, Input
- Lecture Part 1
- Lecture Part 2
- **Homework: Lab 2**
- **Homework: Lab 3**
- **DUE: 2D Game Concept**

## **Week 6 – Input, Interactions and Patterns**

**Tuesday 2/18 - NO CLASS!**

**Friday 2/21**

- Lecture
- Lab Review - 20
- Input map
- Using Nodes together
  - Area2D
  - Camera2D
  - Timer
- Functions/Signals
- **DUE: Lab 2**

## **Week 7 - Level, Environment and UI Design**

**Tuesday 2/25**

- Class Recording
- Area2D Review
- CharacterBody
- CollisionShapes
- Assets
  - Tilemaps
  - Sprite Sheets
  - Parallax layers
  - Where to find assets
    - \* Kraftpix
    - \* Kenny
    - \* Noun Project
    - \* Dotown
    - \* Open Game Art

**Friday 2/28**

- Assets
  - Tilemaps
  - Sprite Sheets
  - Parallax layers
  - Where to find assets

- \* Kraftpix
- \* Kenny
- \* Noun Project
- \* Dotown
- \* Open Game Art
- 2D Components
- Common Patterns (Time permitting)
  - Items
  - Enemies
  - Checkpoints
  - Respawns
  - Killboxes
- **DUE: Lab 3**

## Week 8 - Project Development/Playtesting

### Tuesday 3/4

- Control Nodes
- Sound
- Lighting
- Project Development

### Friday 3/7

- Project Development
- 

### Playtesting

## Week 9 - Hello 3D

### Tuesday 3/11

- Hello 3D
- Capstone Brainstorm
- Introduction to 3D in Godot
- **DUE: 2D Game**

### Friday 3/14

- Materials, Models
- Light, Sound
- **Homework: Lab 4**

- **Homework: Capstone Game**
- **Homework: Capstone Presentation**

## **SPRING BREAK**

### **Week 10 - 3D Environments/Advanced 3D Topics**

**Tuesday 3/25**

- Materials, Models, Lights, Fog, Camera Attributes

**Friday 3/28**

- Animated Characters
  - Mixamo
  - Character Animation COmbiner
- Physics/Sandbox
- **DUE: Lab 4**

### **Week 11 Capstone Presentations**

**Tuesday 4/1**

- Capstone presentations

**Friday 4/4**

- Capstone presentations

### **Week 12 Advanced Topics**

**Tuesday 4/8**

- Advanced Topics
  - Exporting
  - NPCs, Classes and Inheritance...

**Friday 4/10**

- XR

### **Week 13**

**Tuesday 4/15**

- Review ### Friday 4/18 NO CLASS EASTER

## **Week 14 - Review**

**Tuesday 4/22**

- Web Export Github Pages ### Friday 4/25
- Review
- **DUE: Final project playtest**

## **Week 15 - Playtesting and Beyond**

**Tuesday 4/29**

**Friday 5/1**

- Preparing for the Game Industry: Portfolio and Career Paths

## **Final**

- **DUE: Capstone Project**

## **Necessary Materials:**

- Godot 4.3 : An open source 2D, 3D and XR game engine.
- Github Desktop: an industry standard version control system

## **Tools Used**

- Godot 4.3 : An open source 2D, 3D and XR game engine.
- Blender : an open source 3D modeling and animation program.
- Github Desktop: an industry standard version control system

## **Resources and Tutorials**

- Video tutorial on Github and Godot
- Introduction to Coding
- Conditionals and Input
- 9 Ways to Actually Get Game Dev Done On Time
- Resources
- Where do game ideas come from ### Godot
- Source Code
- Docs
- Demo Projects



- Forums
- Godot Discord
- Learn GDScript From Zero
- **TUTORIALS**

## **Git & Github**

- Dan Shiffman's Github for Poets

## **Instructor Details**

John Bezark (he/they) is a Brooklyn based Game Designer, Creative Technologist, Immersive Experience Designer and Video Artist. They graduated from NYU's ITP with an MPS in Interactive Telecommunications and from Fordham University with a BA in Theatrical Directing. John has made everything from Solar Powered Websites to Immersive Game-shows about Systems Thinking.

Nowadays they like to use the Godot Game Engine to create one of a kind immersive and interactive experiences, games and performance art.

When not creating weird things, John also really likes to work in education and he's passionate about teaching others how to design immersive spaces, how to make games and how to see the world through the lens of Systems Thinking.

**Email:** [jbezark@fordham.edu](mailto:jbezark@fordham.edu) Portfolio

**Office Hours by appointment.**