

FCLC Introduction to Video Game Design Syllabus - Spring 2024

Top of Mind:

- Optional 2D Game Reflection Paper
- Lab 4
- Capstone Concept Paper - A brief paper describing your concept for the 2D Game. Due 4/12 @ 11:59 PM.
- Capstone Game - Due on final.
- Capstone Game Process Paper - Paper which documents process, execution and playtesting of Capstone game. Due on final.
- If you need tutorials check out these videos

Course Code: CISC 2540 **Schedule:** Mondays and Thursdays, 2:30 - 3:45 PM

Instructor: John Bezark

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 3D 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
Attendance	2 Excused absences.		10
Class Participation	Actively participate in class discussions		15
Tabletop Game	A playable prototype of a tabletop game	2/1	10
Tabletop Game Process Paper	Paper which documents process, execution and playtesting of tabletop game	2/12	10
Labs 1-4	4 short coding assignments designed to build proficiency. 6 points each.	2/15, 2/22, 3/7, and 4/11	24
2D Concept Paper	A brief paper describing your concept for the 2D Game	2/29	5
2D Game	A playable prototype of a 2D game	3/14	20
2D Game Reflection Paper	Optional paper to reflect on 2D game. Improves 2D game grade.	4/11	+7 to 2D Game
Capstone Concept Paper	A brief paper describing your concept for the 2D Game	4/12 @ 11:59 PM	6
Capstone Game	A polished game. Can be an evolution of the 2D or 3D game.	Final	30
Capstone Game Process Paper	Paper which documents process, execution and playtesting of Capstone game.	Final	20
Total Points Possible			150

Course Outline

The course is split into 3 distinct modules each with a distinct project: - Week 1-4: Game Design Fundamentals and tabletop design - Week 5-10: 2D Game Design - Week 10-14: 3D Game Design/Final Project Development

Week 1 Fundamentals

Thursday 1/18

- CLASS NOTES

- Syllabus Reviews
- Survey
- Git init
- Game Design Fundamentals
- ASSIGN: Tabletop

Week 2 Tabletop Genres? Where to begin?

Monday 1/23 NO CLASS

Thursday 1/25

- CLASS NOTES
- Playtesting
- Prototyping Tabletop Games: Balancing and Mechanics
- Reading: MDA and Magic Circle

Week 3 Iteration and Playtesting

Monday 1/30

- CLASS NOTES
- MDA Framework
- Systems, Loops and Balance
- Group work

Thursday 2/1

- Playtesting
- DUE: Tabletop Game

Week 4 - Getting Started in 2D

Monday 2/5

- Playtesting
- Git review

Thursday 2/8

- Getting started with Godot
- **Homework: Lab 1**

Week 5

Monday 2/12

- Getting started with Godot
- Nodes and Scenes

- **Homework: 2D Game**
 - DUE: Tabletop process paper
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Thursday 2/15

- In Class Project
- Coding Fundamentals
 - Scripts and properties
 - Variables
- DUE: Lab 1
- **Homework: Lab 2**

Week 6

Tuesday 2/20 NO CLASS

- Conditionals, Input

Thursday 2/22

- Area 2D - Puppy Race
- Demo Projects
- Animated Sprites
- Lab Review
- DUE: Lab 2

Week 7

Monday 2/26

- Characters, Levels and Items
- 2D Game Brainstorming

Thursday 2/29 LEAP YEAR! WOW!

- DUE: 2D Game Concept
 - Git Collaboration
 - **Homework: Lab 3**
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Week 8

- Advanced 2D Mechanics

Monday 3/4

- Loading Scenes and Manipulating nodes
- Respawnning
- Combat
- Checkpoints

Thursday 3/7

- project scaffolding
- Sound
- projectiles
- branches and merging
- working time

Week 9

Monday 3/11

- UI
- Project settings

Thursday 3/14

- Project Development

Week 9.5

Monday 3/18

- DUE: 2D Game

Spring & Easter Break 3/21 - 4/1

3D

Week 10

Thursday 4/4

- Introduction to 3D in Godot
- Lighting and Camera Techniques in 3D Games

Week 11

Monday 4/8

- Physics and Interactivity in 3D Environments

Thursday 4/11

- DUE: Lab 4
- DUE: Optional 2D Reflection Paper

Week 12**Monday 4/15**

- Branches
- Exporting
- NPCs, Classes and Inheritance...

Thursday 4/18

- Advanced 3D Game Mechanics: Multiplayer and Networking

Week 13**Monday 4/22**

- Emerging Technologies in Game Design

Thursday 4/25

- Preparing for the Game Industry: Portfolio and Career Paths

Final Week**Monday 4/29**

- DUE: Final project playtest

Finals**Thursday 5/2 Reading Day****Final**

- DUE: Final Project and Process Paper

Necessary Materials:

- Godot 4.2.1 : 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

Tools Used

- Godot 4.2.1 : 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

Godot

- Source Code
- Docs
- Demo Projects
- Forums
- Godot Discord

Godot Videos

- Gwizz
- Lukky
 - All 219 Nodes
- Godotneers

Godot XR

- Malcom Nixon
 - Godot VR Getting Started
 - World Grab Movement
 - Pickable Grab Points
- Bastiaan Olij
- Muddy Wolf

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 Portfolio

Office Hours by appointment.