

Video Game Design and Development 2019 – Syllabus (18 weeks)

Project 1: Puzzle game - 2 weeks

- Unity inspector, hierarchy etc.
- Unity account creation
- Unity teams/git
- Build & Deploy
- Script Execution Order
- Adding components to Game Objects
- Theory: The 4 pillars: action, feedback, result, reward
- Movement: vector
- Theory: Common Math: vector math

Project 3: Zombie Parkour - 3 weeks

- Al: state machine
- Designing Enemy Archetypes
- Pathfinding A*
- Difficulty Curve
- Theory: Level design
- Diegetic UI

Project 2: 2D Platformer - 3 weeks

- Professions in game making
- Theory: Game design pillars
- Unity UI
- Getting references to other objects
- Collision layers, triggers
- Asset Store
- Importing assets
- Movement: physics
- Theory: Common Math: linear interpolation / lerp, trigonometry
- Animation state machine

Project 4: Online FPS PvP - 3 weeks

- Network/Online multiplayer
- Game balance
- Raycast
- Inventory
- Theory: Feedback loops



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Project 5: Dungeon Crawler - 3 weeks

- Procedural Level Gen
- Storing and reading data
- In Game economy
- Scene management
- Dynamic Spawn Game Objects
- Loot Drop Tables
- Theory: Progression Systems
- Al: Decision Trees

Project 6: Keystone Game Project - 4 weeks

- Coming up with constraints, design pillars
- Finding a demographic
- Pitching to an audience
- Mood board
- Storyboard
- Testing and Iteration