

GAME DESIGN & DEVELOPMENT PRINCIPLES

STUDENT COURSE GUIDE • 2026–2027

Course 113605 • Grades 9–12 • 1 Credit • 90 Minutes Daily • Matthew Leffler

Welcome

This is an active, project-based course. You will analyze games, design ideas, create art and interfaces, build levels, learn introductory programming, test and revise your work, document it, and present a finished game.

Your Course Mindset

- Be flexible and adaptable.
- Take initiative and manage deadlines.
- Try—even when the first attempt is not perfect.
- Learn from your podmates.
- Ask questions and solve problems.
- Test, revise, and keep moving.
- Be able to explain the logic behind your work, including AI-assisted work.

Course motto: “What stands in the way becomes the way.”

Class Expectations

- Find your seat and remain there until you leave.
- Collaborate with your pod as directed.
- Respect the physical and digital learning spaces.
- Arrive prepared and make up missed learning.
- Try. An on-time imperfect deliverable can still be revised.

Daily Routine

- Start: check hardware, whiteboard, and Google Classroom.
- Mini-lesson: learn and watch demonstrations.
- Studio: design, build, code, collaborate, and document.
- Testing: playtest, give feedback, report bugs, and revise.
- End: submit/checkpoint work, complete the exit ticket, charge the laptop, and put away headphones.

Grading

Category	Weight
Projects & Game Development	40%
Daily/Weekly Practice	20%
Assessments & Quizzes	15%
Portfolio/Documentation	15%
Professionalism/Participation	10%

AI Use

AI is encouraged, but you must be able to explain the logic behind anything AI produces.

Course Roadmap

- September — game history, genres, analysis, and careers.

- October — careers, visual design, game art, and Godot orientation.
- November — scenes, sprites, animation, levels, story, and UI/UX.
- December — concepts, UI/UX, and first prototypes.
- January — mechanics, playtesting, and GDD foundations.
- February — GDD/TDD, algorithms, logic, and programming.
- March — playable 2D game development.
- April — IP/ethics, QA, iteration, capstone, and presentation.
- May 1 — pacing boundary / closeout if scheduled.

Developer Portfolio

01 About Me • 02 Game History • 03 Game Reviews • 04 Career Research • 05 Game Art • 06 Storytelling • 07 Game Mechanics • 08 GDD • 09 Programming • 10 Game Prototype • 11 Testing & QA • 12 Final Game • 13 Reflection

Final Game

Your final project combines concept, mechanics, story, visuals, programming, usability, testing, documentation, and presentation.

Rubric Area	Points
Concept & Originality	15
Mechanics	15
Story/Structure	10
Visual Design	10
Programming/Functionality	20
Usability & Testing	10
Documentation	10
Presentation	10
Total	100

When You Get Stuck

Getting stuck is normal. Diagnose the problem, try a reasonable solution, ask a useful question, test the result, and revise. The goal is not to avoid mistakes; the goal is to learn how to work through them.

Calendar Note

Dates may shift for district holidays, closures, testing windows, assemblies, or other school events. The official school calendar and teacher directions take priority.