

2025 SI@UCF Python 2 – Object-Oriented Design in Python and Pygame Syllabus

Course Description: This course assumes basic knowledge of standard programming constructs (variables, if, for, lists), and teaches object-oriented design in Python in parallel with the package PyGame. The course then focuses on applying classes and objects in game design and corresponding game design principles. Game Design elements include: movement, collisions, keyboard input, mouse input, multiple screen design, level design for games, interacting objects and methods.

Grading: Homework – 30% (5% each)

Mini Game Jam – 10%

Quizzes – 20% (10% each)

Final Project – 40% (5% Proposal, 25% Code, 10% Presentation)

Day	Lecture	Recitation	Assignments
6/9	I/O, Variables, If statement	Loops	H1: Python Review
6/10	Intro to Classes	Functions, Lists	H2: Simple Poker
6/11	pyGame Intro – movement	pyGame keyboard input	H3: pyGame Draw & Move
6/12	Token Class for pyGame	Standard Class Example	H4: Balloon Pop
6/13	pyGame mouse input	pyGame sound	pyGame Contest
6/16	Inheritance	Quiz Review	H5: Block Invaders!
6/17	File I/O	Quiz #1	H6: pyGame Inheritance
6/18	Fruit Game	Use of Sprites	Mini Game Jam
6/19	Multiple File Games	Use of Sprites	Mini Game Jam
6/20	Split Screen Games	Transformations	Mini Game Jam
6/23	Sushi Game	Game Example	Final Project
6/24	Snake Game	Quiz Review	Final Project
6/25	Connect Four Game	Quiz #2	Final Project
6/26	Final Project Prez	Wordle Example	Final Project
6/27	FIEA Trip	FIEA Trip	Closing Ceremony