Roblox Worlds
Course Syllabus and Lesson Planner

Description:
In this course there are 10 modules teaching students LUA using Roblox Studio This course assumes no prior coding knowledge as students follow the lessons to program multiple interactions within your obstacle course. The course allows students to customize and expand on all lessons as they create their own obstacle course and adding custom LUA scripts in each lesson.

Course Prerequisites (if applicable):
This course does not require any pre-requisite courses.

Course Requirements:
Computer – Students must have access to a computer with internet access and an internet browser. The Computer may run Windows or Mac OS, no chromebooks. They need to have registered for a free Roblox account (lesson will help them).

Course Grading:
Grading will be based on quizzes, project uploads, and teacher requirements.

Lesson Plan:
Each individual lesson is made up of multiple lesson pages to teach a coding concept with text and visuals, provide in lesson practice and a step by step activity for student to add newly learned code to their existing game file.

Module 1 – What is LUA	
1.1 – LUA Variables	LUA storing info
Variables Quiz	
1.2 – LUA Functions	Using LUA functions
Functions Quiz	
1.3 – LUA If Statements	Using if statements
if statement Quiz	
1.4 – LUA Loops	coding loops in LUA
Loops Quiz	
1.5 – LUA Arrays and Dictionaries	Arrays and Dictionaries
Arrays & Dictionaries Quiz	

Module 2 – Roblox Studio	
2.1 – Roblox Studio Setup	Setting up and understanding Roblox Studio
Roblox Studio Quiz	
2.2 – Roblox World Creation	Using the UI to play around creating parts
Roblox World Quiz	
2.3 – Roblox Studio Use	Using more UI icons to transform, color, scale and manipulate parts
Roblox Studio Use Quiz	
Module 3 - JavaScript Fish Game	
3.1 – Platform and Parts	Createing platforms and parts to start your real obstacle course
Platform and Parts Quiz	
3.2 – Parent Folders	Understanding how to create scripts so they include the parts you want effected
Parent Folder Quiz	
3.3 – DeathBlock Script	Adding LUA code to make specific parts in your obstacle course take your players health to zero.
DeathBlock Quiz	
Module 4 – Checkpoints	
4.1 – Setup	Expand obstacle course with more obstacles
Setup quiz	
4.2 – Leaderboard	Creating the leaderboard UI in LUA
Learderboard Quiz	
4.3 – Level Up	Tracking player as they advance in the obstacle course to save their progress
Level Up Quiz	
4.4 – Checkpoint Spawn	When a players dies in your obstacle course, spawn them based on the last checkpoint they reached
Checkpoint Quiz	
Module 5 – Power Ups	

5.1 – PowerUps	Creating powerups in your obstacle course
PowerUp Quiz	
5.2 – Speed	Add the LUA script to give your player a speed boost when they touch the speed power up
Speed Quiz	
5.3 – Jumping	Add the LUA script to give your player a jump boost when they touch the jump power up
Jumping Quiz	
5.4 – Health	Add the LUA script to give your player a health boost when they touch the health power up
First Game Upload	
Exam 1	
Module 6 – Inventory	
6.1 – Tools	Understanding how inventory works in Roblox
Tools Quiz	
6.2 – Display	Displaying your tools
Display Quiz	
6.3 – Tool Event	Using LUA events to enable your tools and use them in game
Tool Event Quiz	
6.4 – Server Script	Understanding which scripts run locally and which scripts run globally (server) for all players
Module 7 – AI	
7.1 – Rigs	Using Rigs to create your AI character into the game
Rigs Quiz	
7.2 - Follow Script	Using a LUA script to have the AI follow or chase your player
Follow Script Quiz	
7.3 - Spawn Script	Spawning and respawning your AI into the game
Spawn Script Quiz	

Second Game Upload	
Module 8 - New Terrain	
8.1 - Ice Blocks	How to create ICE blocks as your tarrain
Ice Block Quiz	
8.2 -Terrian	Overview of terrain properties and how to manipulate them
Terrian Quiz	
8.3 - Icicles	Using Icicles to cause damage or create more obstacles for your player
Icicles Quiz	
Module 9 - Water Terrian	
9.1 - Water	How to create water terrain for swimming
Water Quiz	
9.2 - Oxygen GUI	Allow player to see how much oxygen they have while swimming
Oxygen GUI Quiz	
9.3 - Oxygen Script	Using LUA to control how much damage running out of oxygen can do and how to get it back
Oxygen Script Quiz	
Module 10 - Modeling	
10.1 - Solid Modeling	Create objects like lead pipes to walk through, street lamps and other cool objects
Solid Modeling Quiz	
10.2 - Effects	Using light, particles and constraints
Effects Quiz	
10.3 - Lighting	Adding Day / Night and clock time to you obstacle course
Lighting Quiz	
10.4 - Win	How to complete and finish your obstacle course
Final Game Upload	
Exam 2	