



Augmented Reality & Virtual Reality

Course provides a revolutionary platform that helps teachers and students create AR VR apps without the prerequisite knowledge of programming. With a simple process you can create your own AR VR app by simply creating the 3D model, uploading it, code & deploying your AR VR app without the prerequisite knowledge of engineering.



Requirement :

Software or App : Code EnablAR
Required Laptop with internet connection
No prior knowledge in programming





Block Coding AR VR : Basic

Unit - 1 :

- Software setup
- Setting up the environment
- Adding an Object
- How to position the object
- Adding Multiple Objects
- Scaling the Objects
- Rotating the Objects
- Colouring the Objects
- Destroying the Objects
- Enabling and Disabling the blocks
- Performing some basic operations on objects

Unit - 2:

- Downloading and converting a 3D model
- Importing the 3D model
- Navigation using keyboard movement block
- Moving the objects using keys on the keyboard
- Moving the object using mouse
- Using the keyboard as a input device
- Using the mouse as a input device
- Moving the object using Bluetooth controller
- Finding the objects using movement control block

Unit - 3:

- Understanding the Scaling animation
- Understanding the Rotation animation
- Learning more about position animation
- Applying various animations on multiple objects
- Understanding Duration of an animation
- Looping the animations

Unit - 4:

- Adding text to a 3D object
- Decrementing and incrementing the text
- Changing the lighting of the objects
- Changing the parameters of the text block

Unit - 5:

- Understanding functions and delay blocks
- To use functions and delay blocks on multiple objects
- Introduction to variables
- Introduction to nested if loops

Unit - 6:

Creating a shooting game using monkey heads
Creating a shooting game using heads using monkey heads and drones

Unit - 7:

Understanding VR space
Adding a basic shape (Cube) in virtual reality
Testing the app on PC in VR space

Unit - 8:

Setting up the environment in VR
Importing the 3D model to the environment in VR
Block coding and aligning the 3D modeling in VR
Animating the 3D model in VR
Building the application in VR
Installing and testing the application

Unit - 9:

Setting up the game environment
Importing 3D Models
Aligning the models
Block Coding the Game logic
Testing out the Game functionality on PC
Building the application
Installing and testing the application

Unit - 10:

Understanding AR space
Adding a basic shape in augmented reality
Building the AR application
Getting started with the AR application
Viewing our Model in AR space

Unit - 11:

Importing the 3D model into AR space
Block coding and aligning the 3D model in AR
Animating the 3D model in AR
Building the application
Installing and testing the application

Unit - 12:

Importing 3D models in AR
Aligning the 3D models
Block Coding the game logic
Testing the game on PC
Building the application
Installing and testing the application

Unit - 13:

Creating Github account
Creating a repository
Uploading 3D model in a repository
Importing 3D model in a repository

Unit - 14:

Learning to Bounce objects
Change properties on collision
Applying high and low Friction
Implementing Zero Gravity
Applying gravity across x, y and z axes
Moving a character
Flying an airplane
Implementing bullets in a shooting game
Bowling game
Obtaining field values using things speak





Block Coding AR VR : Intermediate

Unit - 1 :

- Software Setup
- Understanding the AR space
- Adding a basic shape in AR
- Positioning objects in AR
- Understanding different views in AR
- Scaling objects in AR
- Making the objects visible and invisible
- Transforming multiple shapes in AR
- Understanding lighting of the AR space
- Understanding the components

Unit - 2 :

- How to create Github login
- How to create Github repository
- How to upload 3D models in repository
- How to import a 3D model
- How to align a 3D model
- How to animate your 3D model
- How to publish your app

Unit - 3 :

- Importing 3D models for the game in AR
- Aligning the 3D models for the game
- Block Coding the game logic
- Testing the game on PC



Unit - 4 :

- Understanding the VR space
- Adding a basic shape in VR
- Testing the app on PC in VR space

Unit - 5 :

- How to set up an environment
- Importing the 3D model into the environment
- Block coding and aligning the 3D model
- Animating the 3D model
- Building the application

Unit - 7 :

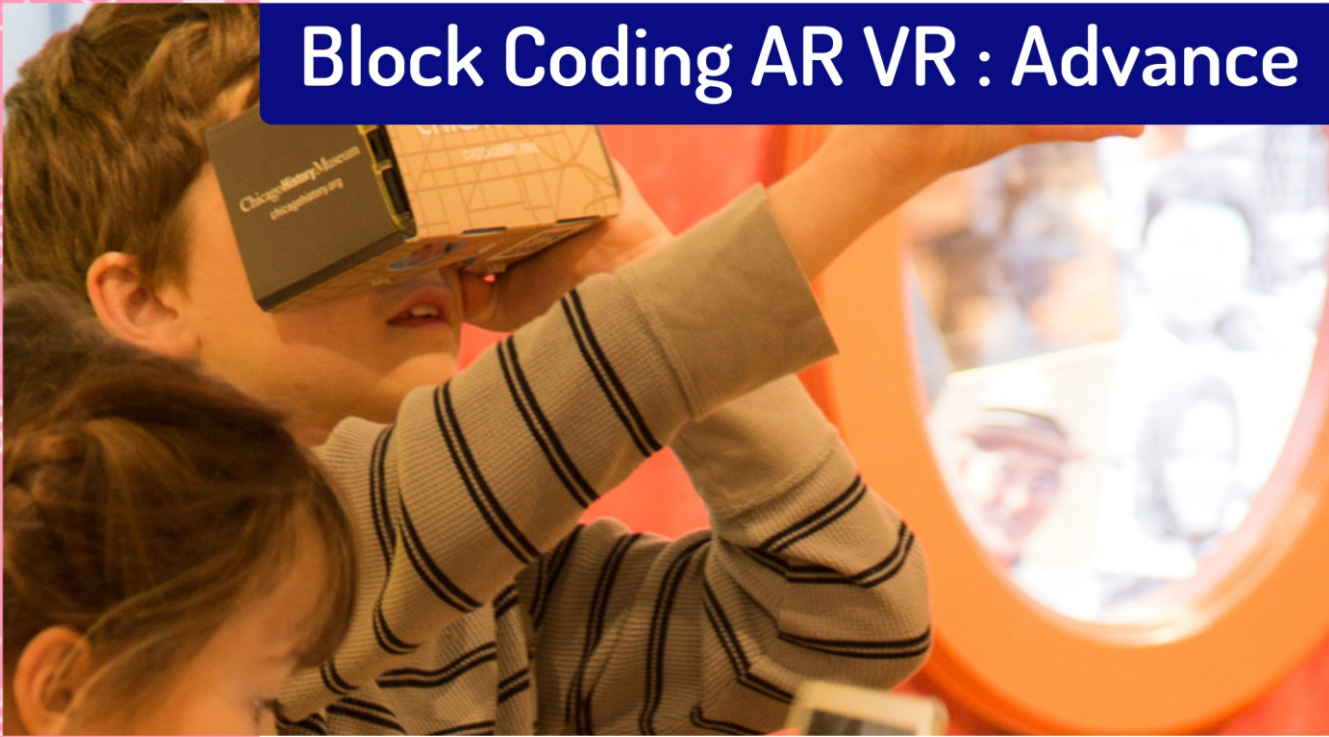
- Moving a character
- Implementing a bowling game
- Applying Physics collision

Unit - 6 :

- Setting up the game environment
- Importing a 3D models for the game
- Aligning the 3D models for the game
- Block Coding the game logic
- Building the app
- Testing the game on PC



Block Coding AR VR : Advance



Unit - 1 :

- How to create an account
- Basics of HTML
- Creating a webpage
- Basic of CSS
- Adding style using CSS
- HTML CSS and JS

Unit - 2:

- Introduction to Vs code
- How to install node.JS
- How to install extensions to run JS code
- How to write a code and view output

Unit - 3 :

- How to create Variables
- How to add constants
- Creating functions
- Types of functions
- Introduction to Objects
- Introduction to Arrays

Unit - 4 :

- Javascript operators
- Arithmetic operator
- Assignment operator
- Equality operators
- Logical operators with non boolean



Unit - 5 :

If else
switch case
for loop
while
do while





Unit - 6 :

- Adding elements in array
- Finding elements in array
- Removing elements
- Sorting an array
- Mapping an array

Unit - 7 :

- Introduction to Advanced Design section
- How to add 3D object
- Modify and align 3D object
- Import 3D model

Unit - 8 :

- High Bounce
- Physics collision
- Implementing friction
- Fetching values using things speak
- Shooting game

