



AR VR TECHNOLOGIES AND ITS APPLICATIONS

DURATION: 26 Weeks

COURSE CONTENTS

ID	TOPICS
1.	Overview of Augmented and Virtual Reality including basic tutorials on C# <ul style="list-style-type: none"> • Fundaments of VR/AR/MR/XR • Real-time examples and analysis • Overview of 3D Maya, Blender and 3d Max • Unreal, 3d Unity, Kundan • Vuforia, Wikitude, LayAR • C# Environment • Program Structure • Basic Syntax
2	Introduction to AR/VR kit <ul style="list-style-type: none"> • How to setup • Demonstration of AR/VR kit
3	Installation of Unity 3D Engine <ul style="list-style-type: none"> • Unity- Installation, Configuration, Features and Architecture
4	Working with Virtual Reality Environment <ul style="list-style-type: none"> • Unity Overview: Windows, Interface, Navigation, Terminology, Game Objects, Hierarchy, Parenting Objects , Asset Store, Importing Plug-ins • Creating a Terrain, Materials, Colors, Transparency • Create a new Project • Create a Scene within the new project • Create an environment for your VR/AR projects • Developing 3D Virtual Reality Environments • Challenges in Virtual Reality Interaction • Working with Characters in Virtual Reality • Animating Virtual Characters' Body Movements in Virtual Reality • Creating animator controller
5	Introduction to 3D Max software <ul style="list-style-type: none"> • Installation of 3D MAX • Features and configuration • Working with 3D models
6	Development of Virtual Reality Applications in Unity 3D <ul style="list-style-type: none"> • Getting Ready to Develop First Virtual Reality Game • Developing basic VR based Mobile Game in Unity and building on an Android Platform • Integration of User Interactions into the Game • Testing of Game

7	<p>Introduction to Augmented Reality Environment</p> <ul style="list-style-type: none"> • Understanding basics of AR and its real world uses • Exploring the Applications of Augmented Reality in Different Industries • Exploring Tools and Software for Augmented Reality Development on Android • Vuforia – Configuration and Integration in Unity • Setting Up the Development Environment • Understanding the Challenges in Augmented Reality
8	<p>Development of Augmented Reality Applications in Unity 3D</p> <ul style="list-style-type: none"> • Basic concept and requirements of Application • Creating basic AR based Mobile Application • Building the application in Android Platform • Integration of User Interactions into the Application
9	<p>Basics of AI using AR and VR</p> <ul style="list-style-type: none"> • Integration of AI in Unity 3D
10	<p>Major Project</p> <ul style="list-style-type: none"> • Development of Major Project