

Branch Name:	Information and Communication Technology
Semester/Year:	Semester I / First Year
Subject Title:	Augmented Reality & Virtual Reality Practical
Subject Code:	2ET2080105P
Pre-requisite:	-

Course Objective:

This course covers the development of Virtual/Augmented reality (VR/AR) worlds, including mathematical basis of motion and physics in VR/AR worlds, human visual perception, design practices to enable immersive experiences for users, and development on heterogeneous device hardware.

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								Total (Marks)
					Theory (Marks)				Practical (Marks)				
	L	T	P	Total	SEE		CCE		SEE		CCE		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	-	-	2	2	-	-	-	-	10	25	10	25	50

Course Outcome:

After learning the course, the students should be able to:

- understand and design of VR/AR technology relates to human perception and cognition
- Ability to design 3D interaction techniques
- Demonstrate understanding of fundamental computer vision, computer graphics and humancomputer interaction techniques related to VR/AR
- Demonstrate insights to key application areas for VR/AR
- Able to create applications of VR to the conduct of scientific research, training, and industrial design.

List of Experiments:

1. Developing architecture of a house using Virtual Reality.
2. Perform CRO based experiment using Virtual Reality.
3. Undertaking qualitative analysis in Chemistry using Virtual Reality.
4. Carry out assembly/disassembly of an engine using Virtual Reality.
5. Explore human anatomy using Virtual Reality.
6. Simulation of circulation of blood in heart.

7. Simulation of Fight/Vehicle/Space Station.
8. Building Electronic circuit using Virtual Reality, given basic electronic components.
9. Developing concept of Virtual class room with multiplayer.