# PESU I/O Growth Acceleration Program

# Course Structure

**Name of Instructor :** Rohan N Kalpavruksha, Roshan N Kalpavruksha

**Workshop Title:** Design of Augmented Reality and Virtual Reality

**Pre Requisites:** None

**Deliverables:**

1. Theoritical Knowledge on AR and VR.
2. Virtual Environment using Sketchup
3. AR product using Unity

**Environment Setup:**

What will students have to come prepared with / Do students have to set up any software or environment before their workshop ?If so please mention all steps in detail. Mention hardware requirements(if any).

* Need to download Unity (Version 19.x) software on their laptop.

**Final project:**

What project will the students implement and present ? Ex : Prototype/product, Implementation Process, Usage of tech to solve problems etc. Mention team size and requirements.

* Augmented Reality Product as a solution to any real world problem
* A virtual environment designed mimicking real world.

Team Size – 3 or 4

# Day-Wise Plan:

## **Day 1**:

**Part 1 - Introduction**

List the introductory topics/concepts to be covered

1. Intro to AR
2. Intro to VR
3. Difference between AR and VR
4. Applications of AR and VR

**Part 2 - Core Concept Teaching**

List the topics that are to be taught in detail in order to start the project.

1. Intro to Vuforia
2. Intro to Unity Software

**Part 3 - Project Initiation and Planning**

How do you plan to interact with students to clarify doubts and help them start working on their project?

1. Coming up with a real world problem which can be solved via AR.
2. Planning on virtual environment required

## Day 2:

**Part 1 - Core Concept Teaching**

Make a detailed list of the topics you want to teach so that students can solve complex problem statements.

1. Sketchup Tools
2. Unity -> Steps to create an AR

**Part 2 - Project Implementation and doubt clarification**

How do you intend to interact with students in order to clear up any doubts and assist them in completing their project?

1. Helping students with hands on session in using Sketchup and Unity.
2. Giving ideas to solve the problem selected better.

**Part 3 - Final project presentation**

Teams need to present their projects in the class.Mention presentation duration and assessment method.

Team Size – 2 or 3

Presentation Duration – 10-15 mins

Assessment – Grading on the quality of virtual environment created and quality of AR solution created using Unity.

**Incase of any queries please contact** [**pesuio.sme@pes.edu**](mailto:pesuio.sme@pes.edu) **.**