MONOLITH
RESEARCH AND TRAINING LABS

MONOLITH
RESEARCH AND TRAINING LABS

WHO ARE WE ?

MONOLITH RESEARCH AND TRAINING LABS is the training arm of Monolith Technologies Private Limited, India. Spread across eight countries in the Asia Pacific and United Kingdom region, Monolith aims to act as a platform that is open to everyone who are looking to upskill and reskill themselves in order to create an ecosystem of adaptive and perceptive manpower that can successively identify and develop products to satisfy the ever-growing demands of the future media communication industry. By creating such a platform for all kinds of learners, from students who are piqued with interest to tech-enthusiasts who are looking for a way to enter the blooming world of creativity and technology, Monolith identifies its diversity in the student demography.

In addition, Monolith's training courses are designed and are being updated based on the advancing technological developments. Students who can keep up with the advancements of the technology can only strategize to produce scalable and sustainable products that could withstand time and inspire others to do the same. Monolith acts as a stage built to value creativity and innovation to such kind of students. By pushing them to pursue their curiosity to manufacture solutions for problem statements of various domains, Monolith engineers the minds of the future.

WE DIRECT YOUR DREAMS

#RoadToFuture

WE INSPIRE

WE MOTIVATE

WE EMPOWER

Genius hour & Learning in groups

Assistance on internship & Guest Lectures from Industry Experts

Brainstorming sessions & Soft skill training

Unreal & Toon Boom Authorized Instructors

1:2 ratio of theory and practical classes

Hands on experience with live projects.

State-Of-The-Art Lab Facilities.

ATC
Toon Boom
Authorized
Training Centre

PARTNERSHIP

EPIC GAMES

Unreal Engine is a very popular 3D Computer Graphics Game Engine developed by Epic Games. Known for its scalability, Unreal Engine can be used to produce a variety of content. With the help of Unreal Engine, several famous games have been produced including Fortnite. The Game Engine is versatile and has applications in Game Development, Advertising, Virtual Production, Virtual Testing, Automotive Product Design and Film Production.

Unreal Engine keeps updating itself to satiate its users which makes it a completely trust-worthy tool for its diverse applications. Unreal Engine proves to be extremely effective in terms of its sustainable solutions and could be the ultimate tool to design Next-gen products.

Monolith Research and Training Labs is an Unreal Authorised Training Centre accredited by Epic Games. The presence of Unreal Authorized Instructors in place at the Academy ensures the highest quality of training and teaching the students will be needing to continuously grow with the evolving Industry requirements.

TOON BOOM

Toon Boom is an Animation production and Storyboarding Software which can be employed to develop films, web animation, games, training applications et cetera. Toon Boom's Harmony is a tool that has high application in the Animation industry. It's built with pencil lines with textures, deformation tools, inverse kinematics, 2D-3D integration and 3D camera. Monolith is an Authorised Training Centre for Toon Boom which is a recognition given to assure the quality of instructor-led training that will be provided by the Training Centre.

MESC

Media & Entertainment Skills Council is an organization that is focused in producing a vibrant eco-system for quality vocational education and skill development. Monolith is recognised by MESC for the skill development workshops and courses that are provided by the academy.
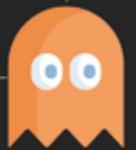
AIXR

AIXR is one of the growing members of AR/VR community. They offer professional development, and connection in the industry. Monolith offers various courses that are verified and with excellent product delivery that can consequently be of great influence in the expanding AR/VR community.

BHARATHIDASAN UNIVERSITY

Bharathidasan University promotes scholarly, scientific and critical inquiry among the learners to move forward in the frontiers of knowledge and enrich and elevate themselves. Courses provided in collaboration with Bharathidasan University will earn completion certificates that are valid across Commonwealth countries.
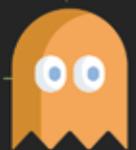
CALL FOR ALL THE CURIOUS MINDS

The world has set a predestined path for everyone. There are conventions and guidelines to guide you through your life. We, on the other hand, urge you to defy them all. There are plenty of fish that swim around together as a school. But the one who swims against the tide lives an adventurous life. And when everyone tells you to pursue a solid career, there is one person who is focusing on what is moving their life, inch by inch, forward. That person is driven by curiosity, which by all means is the ultimate driving force.

And the technology of tomorrow needs those people. The current tech industry is seeking ways to outsource freelancers over hiring them permanently and has this concept called "quiet hiring". They need people who know themselves and what they are strong at. And we will provide the figures that can change your view.

It has been predicted that 2023 will determine the way technology is going to flow in the upcoming decade. The very hyped-up Metaverse will add $5 trillion to the global economy by the end of 2030. AR and VR aren't the only fields of science and technology that have the potential to give the world a new makeover.

Creative fields hold a constant position in the ever-growing tech-world. The animation industry, be it 2D or 3D, is rapidly growing and conveniently sustaining itself among the other creative technology fields. The global animation market was valued at $391 billion in 2021 and is projected to grow to over $587 billion by 2030, making it one of the most reliable yet constantly multiplying fields in the world.

The gaming industry is and has always been a billion-dollar industry: Esports, mobile gaming, and XR gaming are some of the leading revenue collectors. The mobile gaming industry raised around $103.5 billion in the year 2022, whereas PC and console games received around $90 billion. It has been observed that new game development startups and indie developers arise afresh in the gaming kingdom every two months. So, it is safe to say that job opportunities in all the creative technology fields will always see a growth curve.

The fuss is all about creativity because, after producing tonnes of technical minds who operate over digits, the products manufactured at the end of the day will need designing and, obviously, selling. To gather around and convince the audience that they need the product, it will require some pretty strong 4C skills: communication, collaboration, creativity, and critical thinking.

New phases of the technology keep getting released. It's no wonder that curiosity is the ultimate force of life, which will yield creativity that gives way to products that elevate the living standards of humans. That is why we urge you to defy reality to find a persistent spot in this varying world of technology.

ADMISSION PROCESS

GET YOUR PROSPECTUS

Go through the details provided and opt for the course of interest.

ONE-ON-ONE COUNSELLING

Free counselling session to understand the current market demand and field of interest.

ELIGIBILITY CHECK AND SCREENING

Check eligibility for the desired course. The screening process allows us to determine the student's eligibility.

TECHNICAL DISCUSSION

Among the brains of the current leaders of the market, students will be guided through the specifications of selected course.

SUBMISSION OF APPLICATION

Important certifications that convey the student's educational background must be submitted with the necessary details filled in.

EVENTS

Monolith organises workshops, bootcamps, and industrial visits for Engineering Colleges and Arts & Science Colleges. Some of the notable colleges like Vels University, SRM, Saveetha University, Shasun College, St. Joseph College, Crescent University, Alpha College, DG Vaishnav, MOP Vaishnav have visited the academy's campus for Industrial Visit.

Free online events and workshops are held from time to time on stimulating topics that match the current Technological growth. And students from varying backgrounds attend these workshops to upskill and introduce themselves to contemporary technological trend.

INFRASTRUCTURE

Monolith Academy's campus has highly defined and distinguished workspace and lab area. The structurization is sleek, and contemporary.

With state-of-the-art Immersive Lab, Monolith imparts wholistic wisdom through corresponding practical knowledge. An educational institution's organisation gives definition to the institution itself and aids in the process of teaching. Monolith, with its well-furnished study area endorses learning by being a stress-free environment with minimal interiors in the classrooms. Because of its aptly equipped lab and classroom area, Monolith encourages students to practice research and carry out their genius hours that's part of the teaching methodology during class hours. All this converges down together to the best transmission of knowledge to the students.

ROAD TO FUTURE
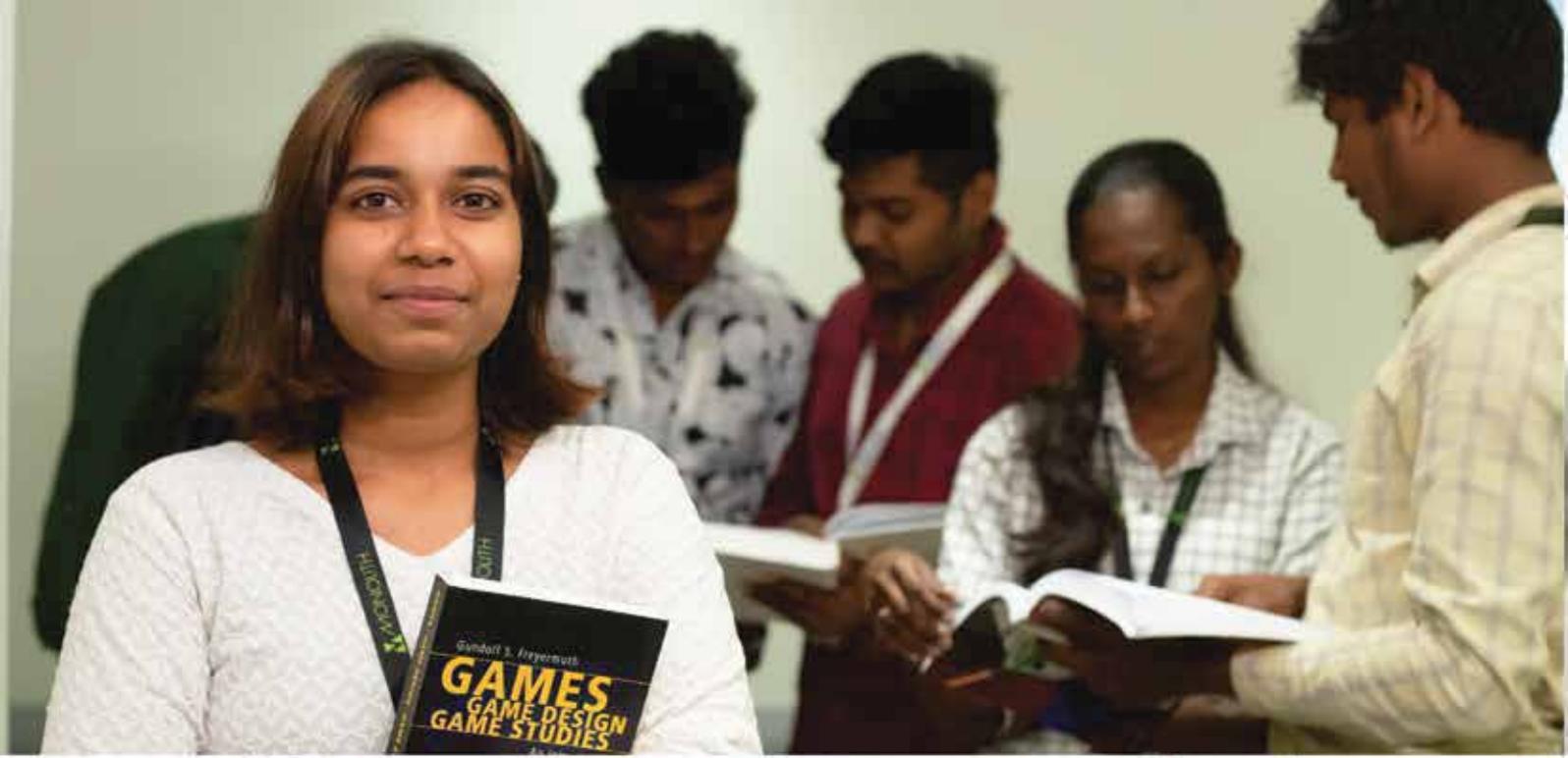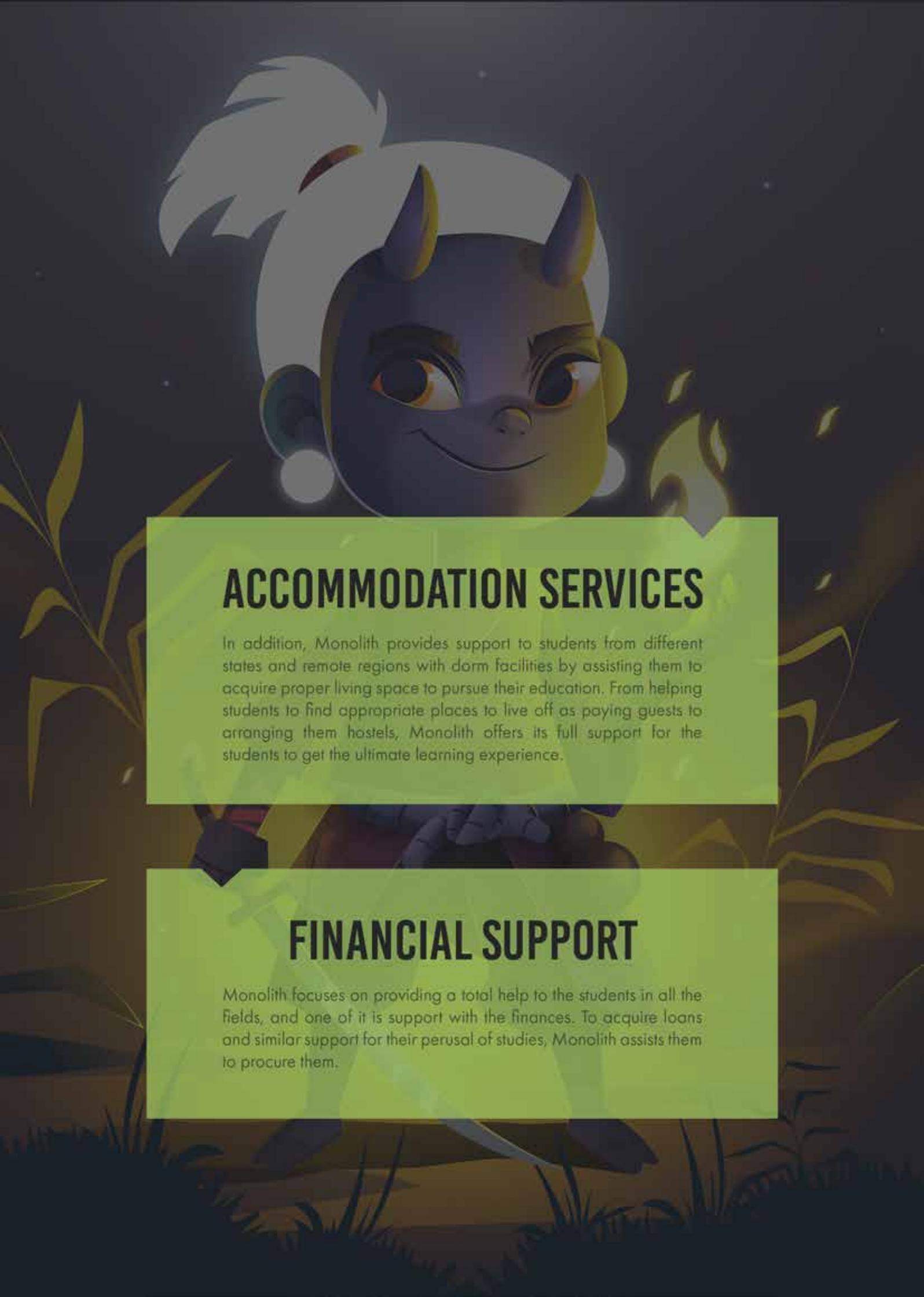
ACCOMMODATION SERVICES

In addition, Monolith provides support to students from different states and remote regions with dorm facilities by assisting them to acquire proper living space to pursue their education. From helping students to find appropriate places to live off as paying guests to arranging them hostels, Monolith offers its full support for the students to get the ultimate learning experience.

FINANCIAL SUPPORT

Monolith focuses on providing a total help to the students in all the fields, and one of it is support with the finances. To acquire loans and similar support for their perusal of studies, Monolith assists them to procure them.
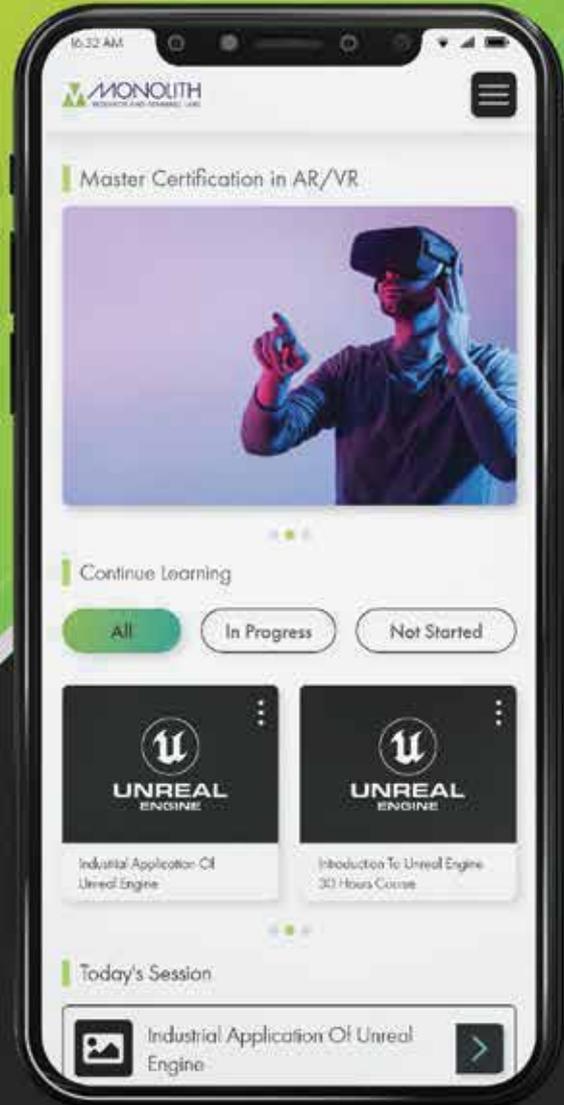
PLACEMENT SUPPORT

Students' judgement is green when they are young. Helping them understand and determine their desired area of interest is the first step in building a solid foundation for their career. Monolith assists them throughout the process and helps students in obtaining positions in the best companies. Students will gain industry experience through internships during the program. These beneficial internships enable them to gain a direct and accurate view of the industry, allowing them to progress to greater heights. With Monolith's huge list of clients, associates, and partners, one hundred per cent placement support is provided.

LEARNING MANAGEMENT SYSTEM

Learning Management Systems are getting highly popular nowadays.
Companies develop their own platforms to promote "Corporate training".

Master Certification in AR/VR

Continue Learning

All | In Progress | Not Started

UNREAL ENGINE
Industrial Application Of Unreal Engine

UNREAL ENGINE
Introduction To Unreal Engine 30 Hours Course

Today's Session

Industrial Application Of Unreal Engine

? WHY LMS?

LMS plays a huge role in remote education for students who can't get access to conventional learning methods. They have positive retention effects and engagement among the audience as they're gamified and added with interactive elements, quizzes, scenario-based questions to elevate the learning experience.

IT IS EFFICIENT.

LMS is an efficient way to incorporate flexible and consistent learning to the students. Monolith provides Free Access for Lifetime through LMS.

IT IS ACCESSIBLE.

As Virtual Learning is gaining popularity because of its efficiency and accessibility, crowds are shifting towards that direction because of the ease of use.

AN ALL-INCLUSIVE SOLUTION.

LMS provides a solution to explore, learn and acquire knowledge on various discipline at the comfort of one's availability and desired location.

Monolith keeps updating the learning portal by continuously uploading educative articles and informative videos to encourage consistent learning as new phases of technology unfolds.

FLIPPED CLASSROOM

What if students did the "classroom" portion of their learning at home and their "homework" in the classroom? That is an simplified description of the flipped classroom approach, where students watch or read their lessons on computers at home and then complete assignments and do problem-solving exercises in class.

KINAESTHETIC LEARNING

In the kinaesthetic learning model, students perform hands-on physical activities rather than listening to lectures or watching demonstrations. Kinaesthetic learning values movement and creativity over technological skills and is most commonly used to augment traditional types of instruction.
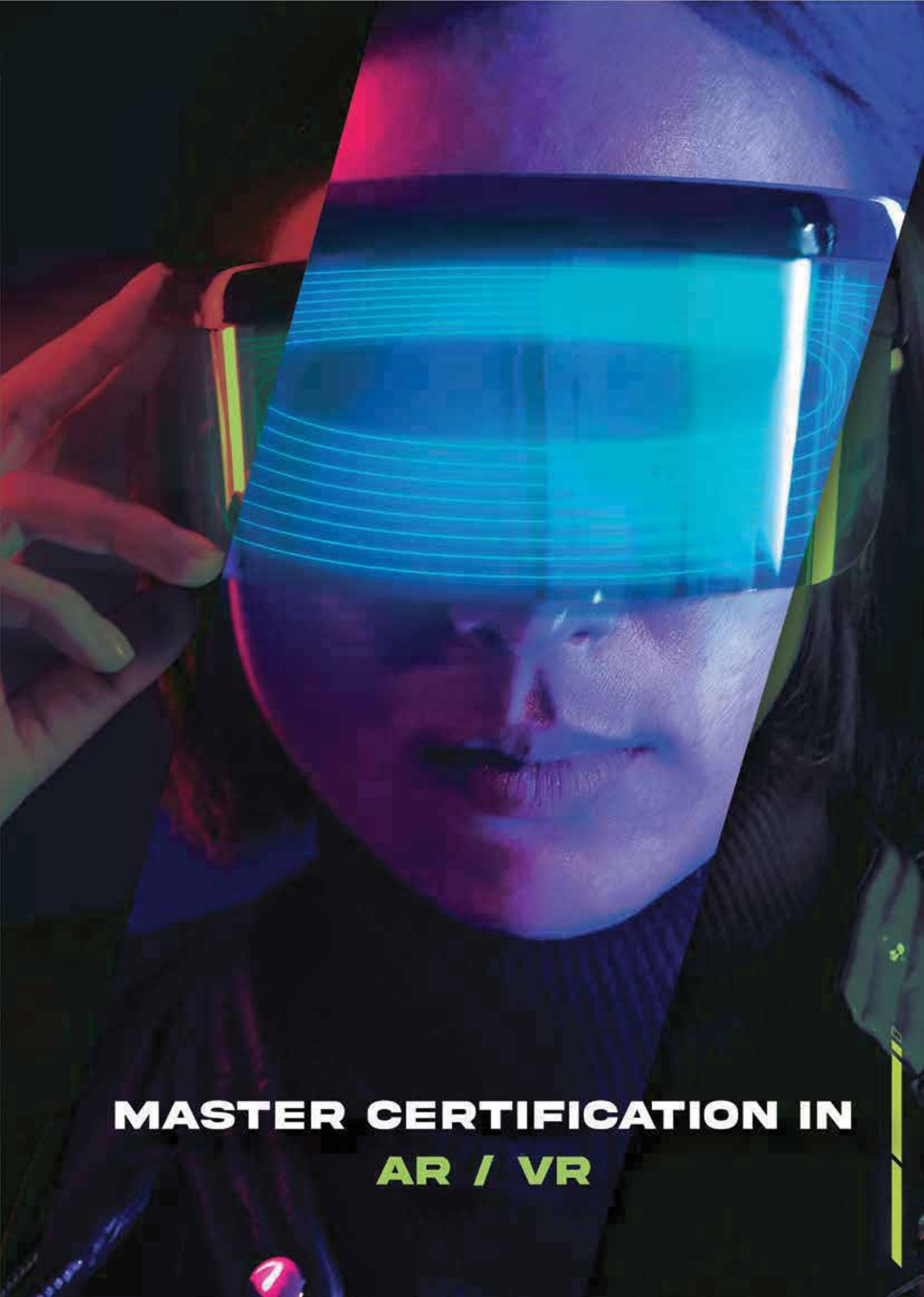
GAMIFICATION

The basic objective development of gamification is to engage the target audience, create an interactive learning environment, and deliver training in any subject matter. In non-game environments like classroom, Monolith incorporates gaming features to enhance the learning experience. And also, it has been observed that game-based learning promotes greater retention of knowledge.
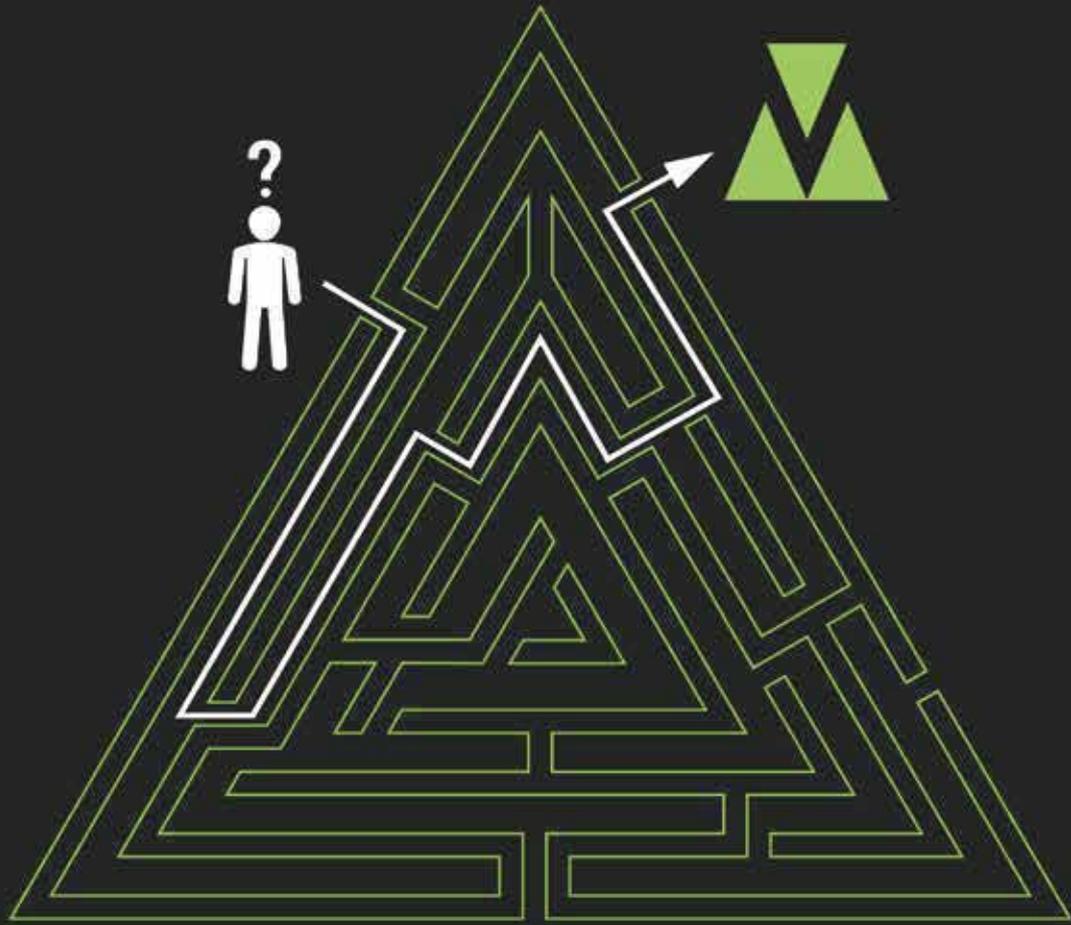
BUILDING GREATER PATHS FOR THE CURIOUS MINDS.

MASTER CERTIFICATION IN
AR / VR

COURSE OVERVIEW

The future undoubtedly is going to be infused with Immersive Technology. It is expected that the gross investment in AR/VR technology is going to see a much increasing trend. AR/VR artificially stimulates our senses and makes the world inside it more believable on multiple levels. Industries and business leaders seek marketing and navigation with the use of AR/VR because it amplifies the overall experience of a customer and expertly captivates their attention. The technology is mesmerizing, interactive and massive. The future for AR/VR artists is extremely enticing and if you'd like to move towards success in this field, then you have come to the right place. At Monolith, we have immensely skilled industry experts and an advanced immersive lab with state-of-the-art apparatus that can steer you in AR/VR Technology.

JOB OPPORTUNITIES

- AR Developer
- VR Developer
- VR Environment Artist
- Metaverse Designer
- Unreal Developer
- VR Architect
- Technical Artist
- VR Game Tester
- Avatar Designer
- UI/UX Designer

SCOPE

The scope for AR/VR is huge. More and more businesses are looking forward to somehow use the boom in the Immersive technology industry to their own development. The revenue keeps growing and the numbers according to the statistical analysis are far more impressive than any other field. Opportunities are pretty much growing as all the businesses across the global market are introducing themselves in the extended reality field. The hype about the Metaverse and the fusion of Artificial Intelligence with Virtual Reality is just the combo that can fasten up the pace of growth on a global level.

FUNDAMENTALS OF 3D

OBJECTIVE

To make students practice different types of modeling techniques and get experience in different hard surface models, character modeling using Lidar data to create model sculpting and re-topology techniques. Also, to give students experience on UV separation and texturing techniques.

PRE-REQUISITE: Basics of drawing

INDICATIVE CONTENT

- Understanding 2D and 3D
- Modeling
- Texturing
- Rigging
- Animation
- Advanced Organic Modeling Techniques
- Texturing for Hard Surface Modeling
- Advanced Lighting using HDRI
- Facial Rigging
- Quad Animation

PROGRAMMING AND BLUEPRINTS

OBJECTIVE

To provide the underpinning knowledge of basic concepts of programming and its applications. The module further trains the students to learn blueprints and blueprint scripting.

PRE-REQUISITE: Computer Fundamentals

INDICATIVE CONTENT

- Programming Fundamentals
- Basics of Object-Oriented Programming
- Blueprints
- Advanced Blueprints
- Variable Types
- Math Functions
- Blueprint Communication
- Gamepad Inputs
- Blueprint Classes
- Artificial Intelligence

3D CREATION

OBJECTIVE

Demonstrate the ability to execute creative concepts and ideas through a variety and combination of techniques and to analyse, explore 3D pipeline through a variety of design techniques.

PRE-REQUISITE: Drawing and Graphic Design

INDICATIVE CONTENT

- Prop Model
- Set Model
- Character Model
- Lidar Data Analysis
- UV Unwrapping
- Different Types of Maps
- Texturing a Spaceship
- Exporting Various Maps to Unreal Engine
- Exporting Animation to Unreal Engine

INTERIOR AND EXTERIOR ENVIRONMENT CREATION

OBJECTIVE

Develop students to create interior scenes – Office space, living room, factory and to create an external game/movie environment etc.

PRE-REQUISITE: Drawing & 3D Fundamentals

INDICATIVE CONTENT

- Introduction to Unreal Editor
- Importing Assets
- Migrating Assets
- Exporting Assets
- Creating a Living Room
- Exterior Environment
- Post-process volume to an Interior scene
- Post-process volume to an Exterior scene
- Creating an Exterior Environment

LIGHTING, SHADING & RENDERING

OBJECTIVE

Create a practical approach to in-game/real-time lighting within the context of a production pipeline. And learn to add lights to Interior and Exterior Environment and render settings.

PRE-REQUISITE: 3D Fundamentalsand Graphic Design

INDICATIVE CONTENT

- 1-point lighting
- 3-point lighting
- Lighting to an interior scene
- Product – Indoor and Outdoor
- Architecture – Interior and Exterior
- Post-Process effects to different scenes
- Types of Maps
- Basic Material in Unreal Engine
- Types of custom materials

PROGRAMMING AND BLUEPRINTS

OBJECTIVE

To develop Students to demonstrate the ability to execute animations, user interfaces, audio, character creation, movement, collision, spawn spots, and level modifications as a designer and developer.

INDICATIVE CONTENT

- Classes in C#
- Building and compiling C++ programs with unreal engine
- Looping and if else Structures
- Types of Blueprints
- Creating a Simple Blueprint
- Script a Light blueprint to sense and turn on/off
- Create a Teleportation portal
- Create a Working Lift blueprint

- Communicate between two blueprints
- Update health bar if a player is hit.
- Glass, Rubber, Metal and Brick material
- Realistic Rendering of a Prop

UI, SFX AND VFX

OBJECTIVE

Develop students to learn user interface, real time effects and creating variety of effects for games/applications. To add SFX to various environments and to create various VFX to different scenes.
PRE-REQUISITE: Graphic Design

INDICATIVE CONTENT

- UI Fundamentals
- UMG in Unreal Engine
- Adding Sound effects to a scene from Starter content
- Importing Audio
- Getting familiar with Sound Editor
- Different Sound Effects with the Imported Sounds
- Fire, Smoke, Sparks, Electric, Rain and Snow etc.
- Create Void gate, Teleportation effects, Portals etc.
- Dust effect
- Fracture effects

AR AND VR TECHNOLOGY

OBJECTIVE

Develop students to learn user interface, real time effects and creating variety of effects for games/applications. To add SFX to various environments and to create various VFX to different scenes.
PRE-REQUISITE: 3D Fundamentals

INDICATIVE CONTENT

- AR Development
- Computer Vision for Augmented Reality
- Outdoor Tracking
- Audio and other Sensors
- Types of VR Experience

AR DEVELOPMENT

OBJECTIVE

To develop students to learn techniques for incorporating 3D objects and animations into interactive applications to supplement and replicate the real world and make them to explore the design and creation of simulations for augmented and virtual reality.
PRE-REQUISITE: 3D Fundamentals

INDICATIVE CONTENT

- AR Use Cases by various apps.
- AR concepts- Pose tracking, Environmental detection
- Ray casting and physics for AR, Light estimation, Occlusion.
- Working with AR Tools - AR Core and AR Kit
- AR Core integration with Game Engines/OS
- Vuforia- setting up the environment for application development.
- Plane tracking AR App
- Hand tracking AR App
- Face tracking AR App
- Image tracking AR App
- AR Business Card and Build for Various Operating System
- AR Game and Build for Various Operating System

VR DEVELOPMENT

OBJECTIVE

To develop students to learn techniques for incorporating 3D objects and animations into interactive applications to supplement and replicate the real world and make them to explore the design and creation of simulations for augmented and virtual reality.
PRE-REQUISITE: 3D Fundamentals

INDICATIVE CONTENT

- 360° video for Google Cardboard VR
- Transformations on the 3 scene objects.
- Video and Audio Source
- Material for the Three Scene Objects.

- Color, Material Properties and Texture each Scene Object.
- Living Room and populate using Unreal Engine's starter content and navigate in VR
- Exterior scene using Unreal Engine's starter content and navigate in VR.
- Interior scene using references and navigate in VR.
- VR scenes with SFX and VFX
- UI (User interface) menu with images, canvas, sprites, and button.
- UI menu Interaction through VR Trigger Button.
- Immersive Experience (Living room/ Battlefield/ Operation theatre) with a use-case.
- VR product Visualization
- VR Automobile Visualization
- VR Architectural Visualization
- VR Golf Game
- VR Shooting Game
- VR Environment for Flying Helicopter/Moving Car Simulation.

PROJECT

AR

AR App with different Industrial Applications.

VR

Create a virtual environment for any use case. The application must include at least 4 scenes which can be changed dynamically, UI, animation, and interaction with game objects. (Ex: VR application for Underwater experience)
PRE-REQUISITE: 3D Fundamentals

(Ex: VR application for Underwater experience)

Create a multiplayer VR game (Ex: battlefield game). The game should keep track of score, Number of Chances/Lives, Levels (created using different scenes), involve interaction, animation, and immersive environment.
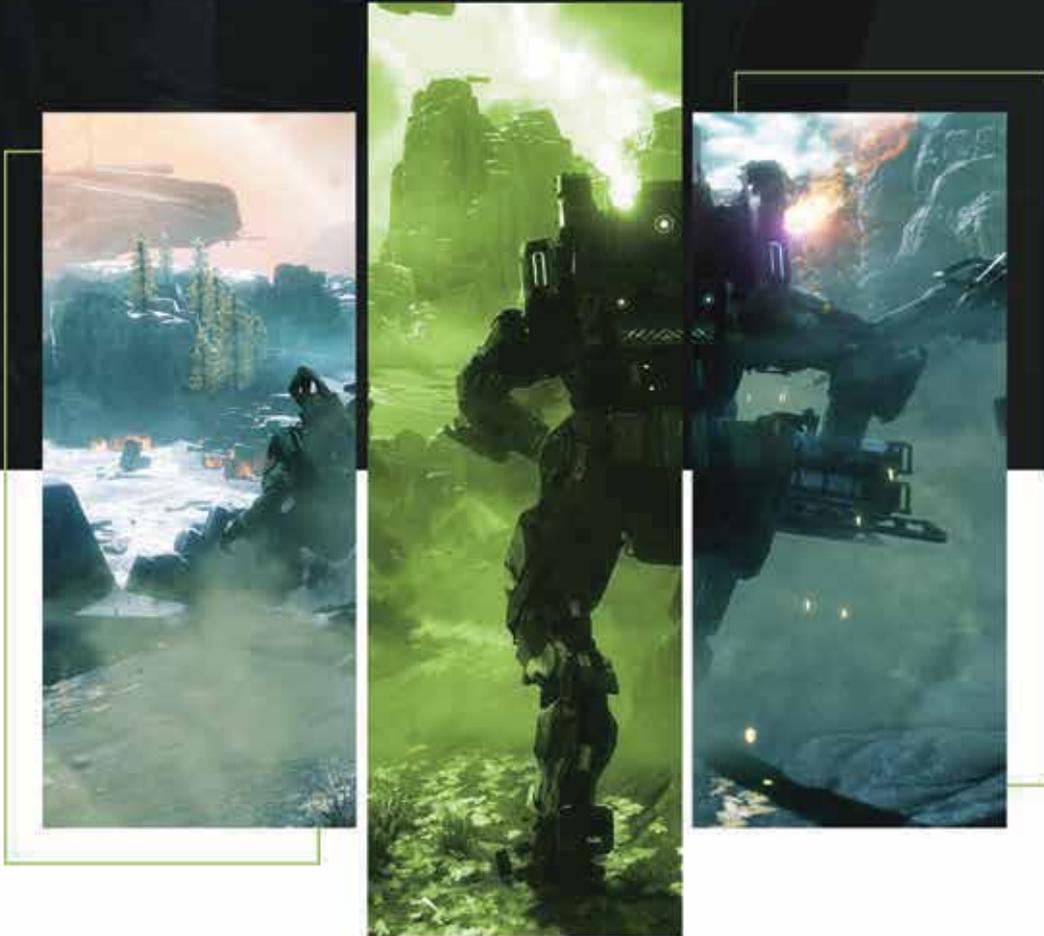
NEED FOR CURIOUS MINDS
IN THE CREATIVE TECHNOLOGY TREND.