



## M. Tech. AUGMENTED AND VIRTUAL REALITY

### DEPARTMENT OF EDUCATIONAL MEDIA AND TECHNOLOGY



**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH**

Institution Deemed to be University under Distinct Category,  
A Centrally Funded Technical Institute  
(Ministry of Education, Government of India)

Taramani, Chennai - 600 113.

[www.nitttrc.ac.in](http://www.nitttrc.ac.in)



## DEPARTMENT OF EDUCATIONAL MEDIA AND TECHNOLOGY

Educational media and technology play a vital role in modern education, enhancing learning experiences and fostering achievement. Tools like videos, animations, and simulations simplify complex concepts, while e-learning platforms and digital resources enable personalized, flexible learning for diverse needs. The Department of Educational Media and Technology drives innovation through comprehensive training, equipping educators with cutting-edge methodologies. Programs cover areas such as multimedia resource development, interactive learning platforms, online courses, MOOCs, and engaging videos. Advanced training focuses on gamification, adaptive learning, digital assessments, and social media integration. Looking ahead, the department aspires to excel in immersive technologies, particularly in creating impactful content for Augmented Reality (AR) and Virtual Reality (VR).

### M. Tech. AUGMENTED AND VIRTUAL REALITY

Augmented Reality (AR) and Virtual Reality (VR) are transformative, interdisciplinary technologies combining computer science, design, and psychology. This program equips students with comprehensive knowledge, fostering collaboration across disciplines to create effective, ethical, and innovative digital experiences for the future.

#### About the Program:

- Offers a cutting-edge curriculum designed to provide expertise in AR&VR.
- Focus on practical applications in industries such as gaming, education & healthcare.

#### Eligibility Criteria:

B.E./B.Tech. in any Engineering discipline / B.Arch/  
B.Des/M.Des/M.Sc. in Mathematics/Statistics/  
Computer Science/Computer Applications/  
Data Science/IT/AI and ML/Electronics/  
Electronic Media/Software Engineering/  
Biotechnology/Physics/Visual Communication  
or related field/MCA

#### Program Highlights:

Hands-on projects in AR/VR  
Exposure to state-of-the-art technology &  
Research

#### Career Opportunities:

- Automotive & Manufacturing – Industrial AR/VR Engineer
- EdTech & Training – AR/VR Content Creator
- Healthcare & Medical XR – Surgical Simulation Specialist
- IT & Software Development – Metaverse Developer
- Gaming & Entertainment – 3D Artist & Animator
- Retail & E-Commerce – XR UI/UX Designer
- Aerospace & Defense – Flight Simulator Engineer
- Research & Academia – Professorships, XR research labs
- Startups & Entrepreneurship – Own XR business, metaverse ventures

#### Hardware Facilities:

HTC Vive, Oculus Quest  
AR glasses and Microsoft HoloLens)  
High-end graphic workstations & GPUs,  
insta 360 Pro2 , Apple ipad pro

#### Software Tools:

Unity and Unreal Engine for AR/VR  
development

#### Specialized Labs:

XR Lab

Experiential Learning Technology  
Center (XLTC)

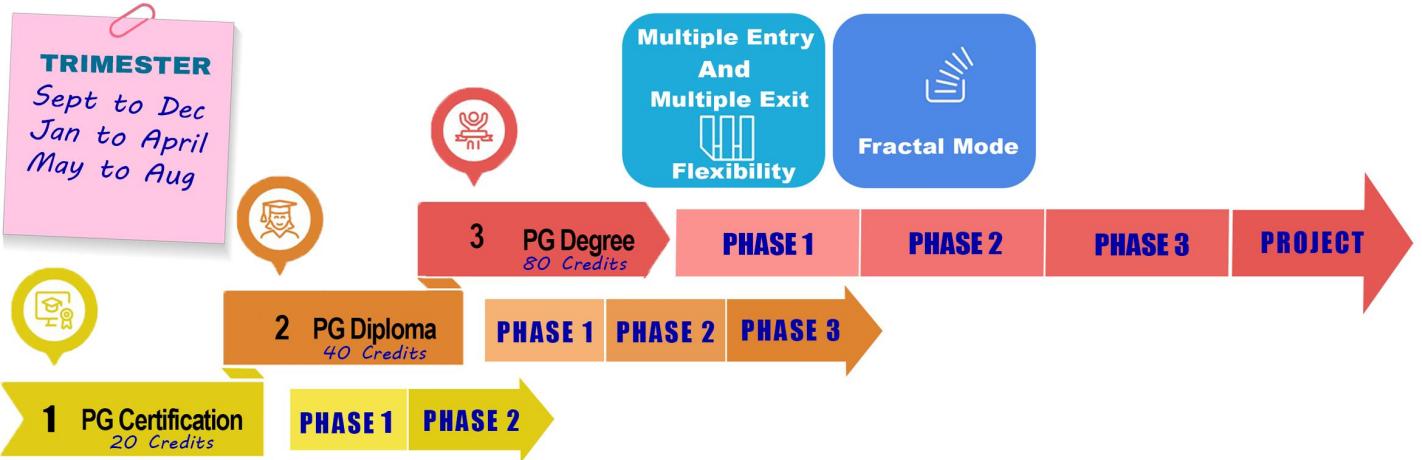


#### Explore Program fees and details:

<https://www.nitttrc.ac.in/admission/mtechavr.pl>



SCAN HERE



## CORE COURSES

### “Core Curriculum: Blend of Theory and Practice”

- » Augmented Reality and Virtual Reality
- » Computer Animation
- » Interaction and Experience Design for AR/VR
- » Human Computer Interaction in AR/VR
- » Programming for AR and VR
- » Content Creation for VR/AR
- » AR/VR Application Development
- » AR and VR applications in Industries

## ELECTIVE COURSES

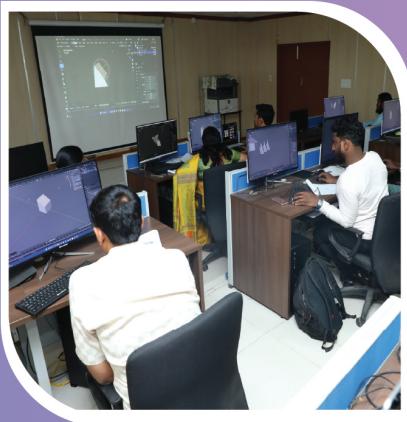
- » Sensation and Perception
- » Image Synthesis
- » Psychophysics
- » Introduction to Haptics
- » Immersive Sound & Audio Design
- » Mobile AR & VR
- » Spatial Computing
- » Operating Systems
- » Web Technologies
- » 3D Game Modelling and Rendering
- » 3D Shape Analysis
- » Neural Image Synthesis for AR/VR
- » Machine Learning
- » Cloud Computing Technologies
- » Image Processing
- » Deep Learning
- » Computer Vision
- » Computer Graphics and 3D Modelling
- » Python Programming
- » Entrepreneurship in AR/VR
- » C# Programming

## INDUSTRY ORIENTED COURSES

- » Immersive User Experience (UX) Design for AR/VR
- » Interactive Narrative and Digital Storytelling in AR/VR
- » Enterprise Applications of AR/VR



## FACILITIES OF DEPARTMENT OF EDUCATIONAL MEDIA AND TECHNOLOGY



### Experiential Learning Technology Centre - XLTC

#### THE DIRECTOR

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