



भारतीय प्रौद्योगिकी संस्थान दिल्ली
Indian Institute of Technology Delhi



Executive Programme in Virtual and Augmented Reality

6 Months | Starts 18th January, 2025 | Live Online Lectures

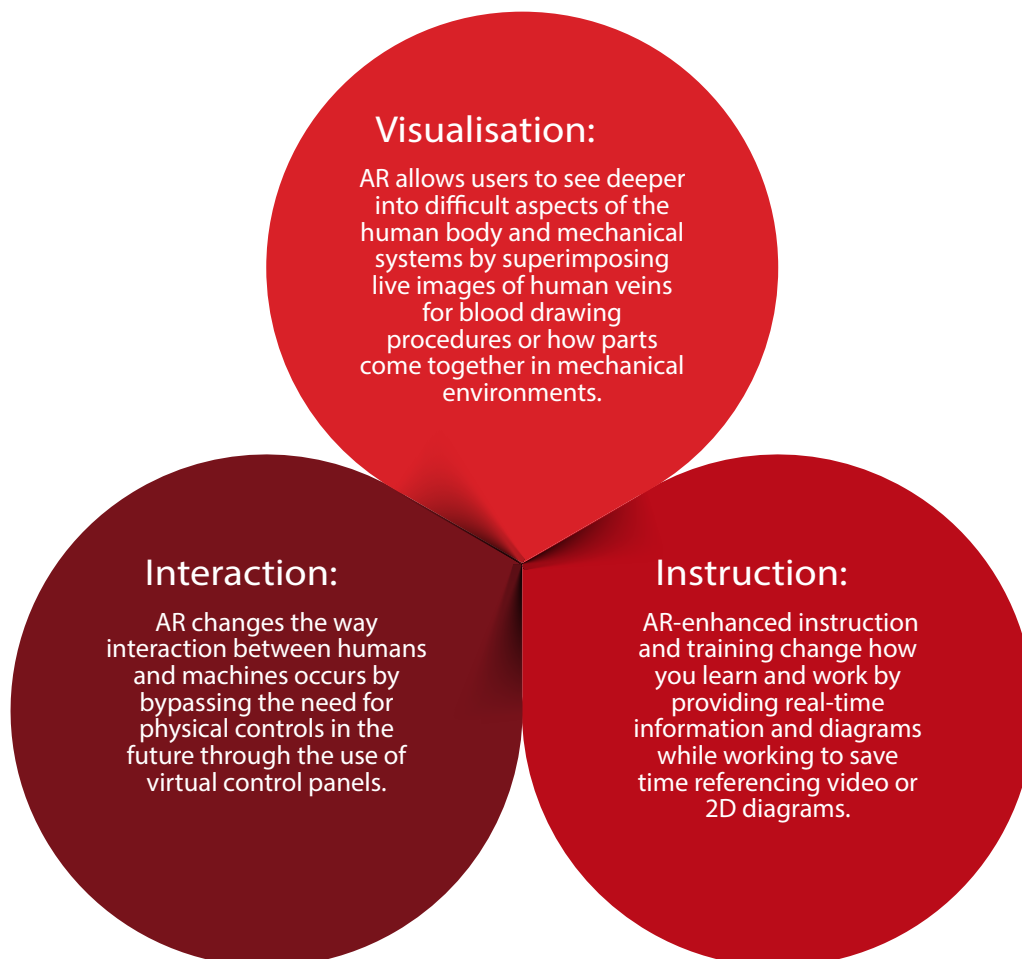
Augmented Reality Uncovered: The Future of Digital Interaction

Augmented Reality (AR) and Virtual Reality (VR) are transformative technologies that reshape the interaction between digital and physical worlds. Though often discussed together, AR and VR each offer distinct experiences and functionalities.

AR enhances the physical environment by overlaying digital elements—such as images, videos, and 3D models—onto the real world through devices like smartphones or AR glasses. In contrast, VR immerses users in a fully virtual environment, using headsets and motion tracking to create an entirely different world. As AR and VR become increasingly prevalent in sectors like gaming, marketing, education, and healthcare, it's crucial to explore each technology's unique features, applications, benefits, and limitations to fully grasp their potential impact.

How Augmented Reality is Revolutionising Different Industries

AR's primary functions include visualisation, instruction, and interaction because of the ways virtual information adds to the physical world. Let's look at AR's three main functions:

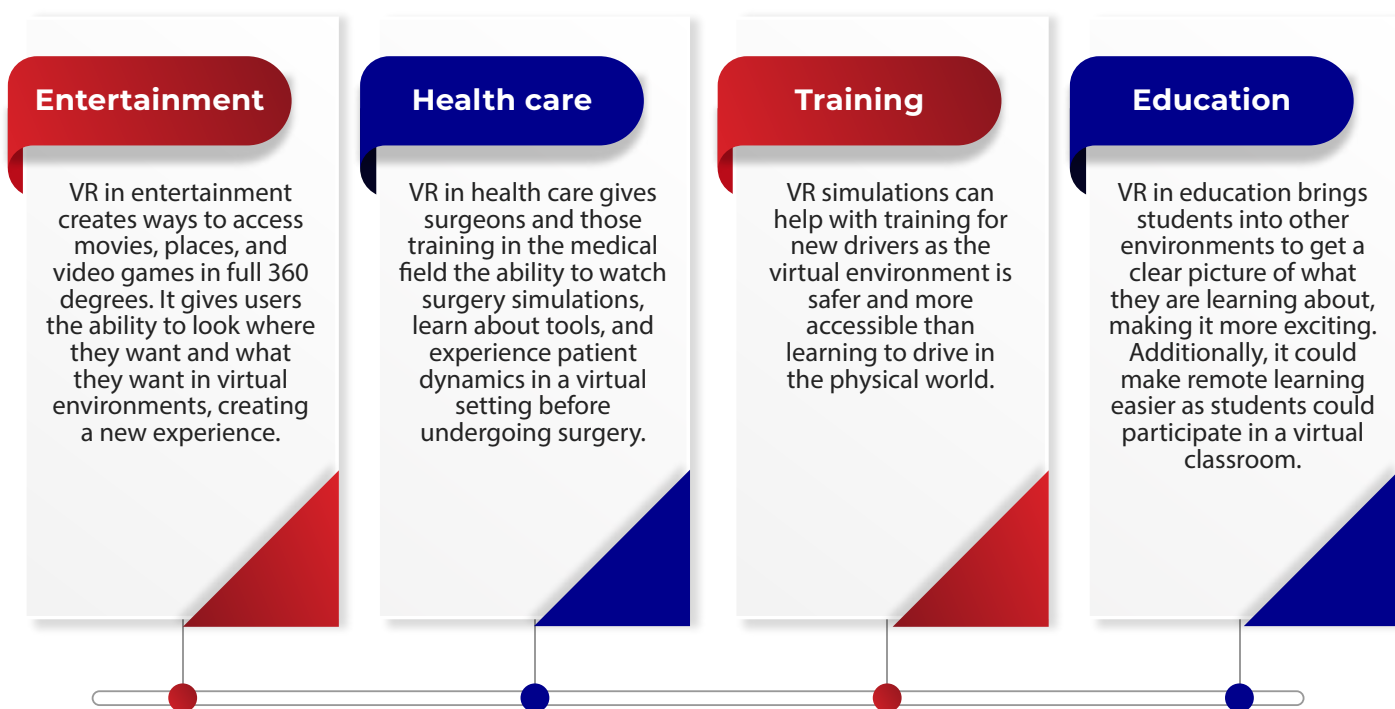


From Fantasy to Reality: The Evolution and Uses of Virtual Reality

Unlike AR, virtual reality creates a fully immersive experience using a headset and computer-generated images (CGI) to put the user in a virtual world. In VR, the user interacts with a fully virtual world using a headset and a controller. Virtual reality creates a sensory experience by stimulating and tricking the sensory organs into interacting with the virtual world as they would the physical world.

Discover the Versatile Applications of Virtual Reality Across Industries

Virtual reality has many uses similar to AR, but creating an entirely virtual experience lends itself to different types of applications. Industries that use VR include entertainment, health care, training, and education. Let's examine the uses of VR in each industry.



Source: coursera.org

Executive Programme in Virtual and Augmented Reality

Programme Overview

Get ready to be part of the inaugural cohort in **IIT Delhi's Executive Programme in Virtual and Augmented Reality!** This 6-month adventure is your launchpad into the thrilling world of AR and VR. Immerse yourself in an electrifying mix of cutting-edge theory and hands-on experience, mastering the latest technologies, design principles, and development techniques. Be among the first to explore, innovate, and lead in these groundbreaking fields. Your journey starts here—be a pioneer in shaping the future of immersive technology!

Programme Highlights



Complimentary design kits for leaners



60 hours of live online lectures by IIT Delhi faculty



Project showcasing and hands-on activities



Guest lectures by industry experts



E-certificate issued by CEP, IIT Delhi



Campus tour at IIT Delhi

Who Should Attend?

- Fresh graduates seeking a career in the AR/VR domain.
- Professionals in the IT industry seeking to gain AR/VR expertise and become specialists.
- Professionals seeking to upskill themselves and apply or use it in their fields like gaming, medical/healthcare applications, graphics, animation, simulations, visual effects, storytelling, etc.

Job Roles

Below are the job roles available in this field:

AR/VR Developer:

Develops immersive AR/VR applications and experiences using tools like Unity or Unreal Engine.

Game Developer:

Design and develop games that leverage AR/VR technology, focusing on gameplay mechanics and visual storytelling.

Instructional Designer:

Responsible for designing, developing, and implementing educational content and learning experiences that leverage AR and VR technologies. They work closely with educators, subject matter experts, developers, and designers to create engaging, effective, and innovative learning environments.



Learning Outcomes

After completing the programme, learners will be able to –



Explain the fundamental concepts of Augmented Reality (AR) and Virtual Reality (VR) technology and their applications



Design basics of engaging animation and immersive experiences



Develop animation and ideate pipeline for generating AR and VR experiences



Develop proficiency in Augmented and Virtual Reality



Understand and apply the principles of 3D graphics and animation

Programme Curriculum

Module 1: Introduction to Virtual and Augmented Reality

- Introduction to AR-VR
- Characteristics of VR
- Characteristics of AR
- Applications of VR and AR
- Future Trends and Considerations

Understand the fundamental concepts of Virtual Reality (VR) and Augmented Reality (AR), including their definitions, characteristics, and applications.

Module 2: Fundamentals of AR/VR Content Creation

- Immersive Storytelling
- Design Thinking Process
- 3D Modelling
- Interface Design Principles of AR and VR Content Creation
- Collaboration and Iteration

Understand the core concepts and principles of Augmented Reality (AR) and Virtual Reality (VR) content creation, including immersive storytelling, spatial computing, and interaction design.

Module 3: Fundamentals of Storytelling

- Foundational Principles of Storytelling
- Storytelling in Immersive Mediums
- Interactive and Emerging Narrative
- Opportunity and Challenges

Understand the foundational principles and theories of storytelling, including narrative structure, character development, plot progression, and thematic elements.

Explore the unique opportunities and challenges of storytelling in immersive mediums such as Augmented Reality (AR) and Virtual Reality (VR), considering factors such as spatial storytelling, user agency, and embodiment.

Programme Curriculum

Module 4: Development of Document for AR/VR Immersive Experience

- Fundamentals of Project Planning
- Three Level Process
- Project Planning
- Technical and Phase-wise Communication
- Planning for Experiences

Understand the importance of documentation in the development process of Augmented Reality (AR) and Virtual Reality (VR) immersive experiences, including its role in project planning, communication, and knowledge transfer.

Module 5: 3D Graphics and Animation

- Introduction to Setting Up the Lighting and Rendering
- Introduction to Animation
- Visual Effects

Understand the fundamental principles of 3D computer graphics, including geometry, lighting, shading, texturing, and rendering, and their applications in various industries such as gaming, animation, visual effects, and simulation.

Module 6: Basics of Unity or Unreal (must for learning the skillsets)

- Introduction to Game Engine
- Game Objects
- Asset Development
- Idea and Script Development
- Layout Planning
- Audio Design

Understand the fundamental concepts and principles of game development using Unity or Unreal Engine, including game engines, game objects, scenes, assets, and scripts.

Module 7: AR-VR Development

- Overview of AR/VR Development Tools
- Creating Basic AR/VR Experiences
- Optimisation Techniques

Programme Curriculum

Gain proficiency in using industry-standard AR/VR development tools and platforms

Module 8: Design Principles

- Fundamental Design Principles
- Spatial Design Considerations
- User Interface Design Inclusion
- Visual Storytelling Techniques

Learn how to apply design principles to create visually appealing and effective compositions across various mediums.

Module 9: Immersive Experience and Game Development with AR-VR

- Introduction to Immersive Technology
- Industry Applications, Future Trends and Innovations

Understand the principles and concepts of immersive experiences, including Augmented Reality (AR) and Virtual Reality (VR), and their applications in various industries.

Module 10: Prototyping

- Understanding Prototyping
- Prototyping Tools and Techniques
- Iterative Design Process
- Importance of AR/VR Product Development

Understand the concept of prototyping and its importance in the product development process.

Capstone Project

The capstone project is a culminating assignment that showcases students' mastery of AR/VR development principles and practices. Working individually or in teams, students will conceive, plan, and execute a comprehensive immersive experience from start to finish. This project allows students to demonstrate their creativity, technical expertise, and problem-solving abilities while addressing real-world challenges or opportunities in AR/VR applications.

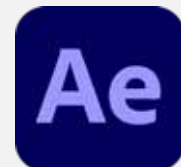
Assignments/Project :

- **Ideation and Concept Development:** In this assignment, students will explore techniques for generating creative ideas and refining them into viable concepts. They may be tasked with brainstorming sessions, mind-mapping exercises, or creative problem-solving activities to stimulate innovative thinking. The goal is to develop a clear understanding of the ideation process and how to translate ideas into actionable concepts
- **Storytelling:** This assignment focuses on the art of storytelling in the context of AR/VR experiences. Students will study narrative techniques, character development, plot structure, and pacing to craft compelling stories tailored for immersive environments. They may be asked to create storyboards, narrative outlines, or short story prototypes to demonstrate their storytelling skills.
- **Basics of AR/VR Content Creation:** In this assignment, students will receive hands-on experience in basic AR/VR content creation techniques. They may learn how to create 3D models, texture mapping, animation, and scene composition using industry-standard software tools. The assignment aims to familiarise students with the fundamental aspects of content creation for immersive experiences.
- **Unity or Unreal Software on Concept Development and Execution:** This assignment focuses on utilising Unity or Unreal Engine for concept development and execution in AR/VR projects. Students may be given specific design challenges or scenarios to tackle using the selected software. They will learn how to implement concepts, iterate on designs, and troubleshoot technical issues within the development environment.
- **Minor Exam Project:** The minor exam project serves as an assessment of students' understanding and proficiency in AR/VR development concepts and skills acquired throughout the course. It may involve a small-scale project where students demonstrate their ability to design, develop, and present an immersive experience based on given criteria or themes.

Tools







-OR-



Learners can avail the free versions and will bear the cost of tools, as required.

Career Support

 Personal Branding	<ul style="list-style-type: none">• Introduction to networking platforms• Profile creation on professional networking platforms like LinkedIn, Lunchclub, etc.• LinkedIn Profile Review• How to create personal brand presence on LinkedIn?• How to increase post engagement on LinkedIn?• Active networking
 Business Communication	<ul style="list-style-type: none">• Role and importance of effective communication as a leader• The art of providing constructive feedback for successful team• Importance of non-verbal communication• Key elements of executive body language
 Job Search Strategy	<ul style="list-style-type: none">• Resume Creation• Importance of creating ATS friendly executive resume• Executive resume sections and structure• Tailoring resumes for different roles and industries• Write a powerful resume that stands out from the competition• Resume Review - Peer to peer review and Q&A
 Interview Preparation	<p>Pre-interview Etiquettes</p> <ul style="list-style-type: none">• Learn about top-down approach for interviews• Pre-interview tips and tricks <p>In-interview Etiquettes</p> <ul style="list-style-type: none">• Create a self-elevator pitch• Understanding interviewer mindset• Interview grooming sessions and tips and tricks for interview <p>Post-interview Etiquettes</p> <ul style="list-style-type: none">• Reflecting on interview experience and incorporating the feedback• Relationship building with the recruiter• Learn how to follow up on your job application

Note: Career support facility is offered by TimesPro. IIT Delhi is not responsible for the same.

Programme Details



Eligibility Criteria

Bachelor's degree in any discipline (or Diploma holders with 3-year work experience)



Delivery

Live Online Sessions delivered Direct-to-Device (D2D))



Duration

6 Months

- 216 hours
- 110 hours self-paced
- 60 hours ILT/Live
- 40 hours Capstone Project
- 6 hours Campus Immersion



Class Schedule

Saturday and Sunday:
12:00 PM to 02:00 PM



Admission Criteria

Selection based on application review



Campus Events/Immersion

An offline 1-day campus immersion for interaction between faculty and learners in IIT Delhi campus (optional for learners to attend).



Assessment & Evaluation

- 60% - End of programme MCQ based exam
- 30% - Assignments and project
- 10% - Attendance



Certification*

- Candidates who score at least 60% marks overall and have a minimum attendance of 50%, will receive a 'Certificate of Successful Completion' from CEP, IIT Delhi.
- Candidates who score less than 60% marks overall and have a minimum attendance of 50%, will receive a 'Certificate of Participation' from CEP, IIT Delhi.
- The organising department for this programme is the Department of Design, IIT Delhi.



*Only e-Certificates will be issued by CEP, IIT Delhi for this programme.

Programme Coordinator



DR. CHARU MONGA

Assistant Professor

Department of Design,
Indian Institute of Technology Delhi

Dr. Charu Monga's academic journey spans a dynamic range of design and digital media fields, driven by a deep passion for Visual Communication, Graphic Design, Digital Futures, and New Media. Specialising in narrative techniques, Charu integrates storytelling with new media to future-proof educational practices. Her work explores the intricate relationships between design, technology, nature, and human expression, with a focus on emerging technologies, game design, social inclusion, and various forms of reality—virtual, augmented, and mixed—bridges academia and creative industries.

As an Assistant Professor at the Department of Design, IIT Delhi, Prof. Charu leverages her Ph.D. in Design from IIT Guwahati, where her research on vernacular heritage structures highlighted cultural resurgence. Previously, she led the AR Lab at IIT Guwahati, integrating digital media into animation and interactive film. She has her bachelor's and master's from the Delhi University and the Film and Television Institute of India, Pune, respectively.

Recognised with numerous awards, Prof. Charu collaborates closely with India's Ministry of Education and Skill Development, and her global publications include features in the UNDP's "For Tomorrow" initiative. Her career includes nine years in industry along with a prestigious Film Heritage Foundation fellowship in association with Martin Scorsese's Film Foundation & Cineteca di Bologna, L'Immagine Ritrovata, and a Microsoft Research grant for developing interventions in digital creative technologies. She is a visiting faculty at University of Oulu, Finland and Japan and worked as a game designer, animator, graphic designer and illustrator for various organisations. She has collaborated with notable institutions and organisations, such as the Film and Television Institute of India, Red Cross Society, and UNICEF. Her work is also displayed in prominent galleries like Romain Rolland and Lalit Kala Academy. She is committed to advancing design pedagogy and cross-cultural communication, with her research published in leading journals and presented at major conferences. Prof. Charu was also one of the founding members of IITD Abu Dhabi Campus in UAE as Associate Dean Students Affairs and Outreach Activities.

Programme Fee

Particulars	Amount (₹)
Programme Fee	1,59,000
GST @18%	28,620
Total Fees	1,87,620

Note:

- All fees should be submitted in the IITD CEP account only, and the details will be shared post-selection.
- The receipt will be issued by the IIT Delhi CEP account for your records.
- Easy EMI options available.
- Loan and EMI Options are services offered by TimesPro. IIT Delhi is not responsible for the same.

Withdrawal & Refund from Programme

- Candidates can withdraw within 15 days from the programme start date. A total of 80% of the total fee received will be refunded. However, the applicable tax amount paid will not be refunded on the paid amount.
- Candidates withdrawing after 15 days from the start of the programme session will not be eligible for any refund.
- If you wish to withdraw from the programme, you must email cepaccounts@admin.iitd.ac.in and icare@timespro.com, stating your intent to withdraw. The refund, if applicable, will be processed within 30 working days from the date of receiving the withdrawal request

Instalment Schedule

Instalment	Instalment Date	Amount (₹)**
Registration Fee*	To be paid at the time of registration	10,000
I	Within one week of offer roll-out	51,000
II	10 th February, 2025	49,000
III	12 th March, 2025	49,000

Note:

- *Registration fee of ₹10,000 will be charged for processing the selected applications only, post confirmation email from the institute. The registration fee is also part of the total programme fee.
- An offer letter from CEP, IIT Delhi will be released post the successful receipt of the Registration Fee.
- **GST@ 18% will be charged extra in addition to the fee.

Programme Timelines

Last Date to Apply	4 th January, 2025
Programme Start Date	18 th January, 2025
Programme End Date	July 2025

APPLY NOW 



भारतीय प्रौद्योगिकी संस्थान दिल्ली Indian Institute of Technology Delhi



The Indian Institute of Technology Delhi (IIT Delhi) is one of the 5 initial IITs established for training, research and development in science, engineering and technology in India. Established as the College of Engineering in 1961, the Institute was later declared an Institution of National Importance under the "Institutes of Technology (Amendment) Act, 1963" and was renamed as "Indian Institute of Technology Delhi". It was then accorded the status of a Deemed University with powers to decide its own academic policy, conduct its own examinations and award its own degrees. Since its inception, over 48,000 students have graduated from IIT Delhi in various disciplines including Engineering, Physical Sciences, Management and Humanities & Social Sciences.

For more details, please visit: www.iitd.ac.in

Continuing Education Programme (CEP)



Executive education is a vital need for companies to build a culture that promotes newer technologies and solutions and builds a workforce that stays abreast of the rapidly transforming needs in the technological, business and regulatory landscape. Committed to the cause of making quality education accessible to all, IIT Delhi has launched Online Certificate Programmes under eVIDYA@IITD (ई-विद्या @IITD), enabling Virtual and Interactive learning for Driving Youth Advancement @IITD for Indian as well as international participants.

These outreach programmes offered by the Indian Institute of Technology Delhi (IIT Delhi) are designed to cater to the training and development needs of various organisations, industries, society and individual participants at national and international levels with a vision to empower thousands of young learners by imparting high-quality Online Certificate Programmes in cutting-edge areas for their career advancement in different domains of engineering, technology, science, humanities and management.

For more details, please visit: <http://cepqip.iitd.ac.in>

2nd
in NIRF Ranking 2024
(Engineering)

2nd
in QS World University
Rankings 2025 in India

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Opus Park, 5th and 6th floor,
Opp. SEEPZ Main Gate, Plot No. F-21,
MIDC Central Rd, SEEPZ, Andheri East,
Mumbai, Maharashtra 400093

1800-120-2020
admissions@timespro.com
www.timespro.com

For any feedback, please write to:
Head CEP, IIT Delhi at
contactcep@admin.iitd.ac.in



Online Certificate Programmes are offered by the Indian Institute of Technology Delhi under the aegis of Continuing Education Programme (CEP) so that the Institute can realise its vision of serving as a valuable resource for industry and society and fulfil its mission to develop human potential to its fullest extent so that intellectually capable and imaginatively gifted leaders can emerge in a range of professions.