



2.2.1. B.Sc. Immersive Technology

Need and Significance

Immersive technologies create distinct experiences by merging the physical world with a digital or simulated reality. Augmented reality (AR) and virtual reality (VR) are two principal types of immersive technologies. This helps in replicating possible scenarios and in teaching specific techniques or skills to the students.

Immersive learning is an educational approach that immerses students in a virtual or physical environment that simulates real-world scenarios. It is designed to help learners better understand and retain information by actively engaging them in learning.

It stimulates interaction, decision-making, and action, leading to better engagement. Students can engage more of their attention in devising solutions to the problems presented to them through immersive learning.

Career Opportunities

Immersive technology is a rapidly growing field that includes Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR). It includes Projection Mapping, Holographic Projections, and Dome Projections for Planetariums and Flying Theatres, to name just a few. There are many job opportunities available for those who have learned the highly specialized skills required to work in this field.

- ✦ AR/VR Developer
- ✦ CG Artist
- ✦ Game Developer
- ✦ UX Designer
- ✦ Projection Content Creators and Technicians
- ✦ Projection Mapping Project Manager
- ✦ Projectionist
- ✦ Projection Designer
- ✦ XR Developer
- ✦ Healthcare



- ✦ Education
- ✦ Software Developer
- ✦ AR/VR Maintenance and Support Technician
- ✦ XR Designer
- ✦ Product Manager
- ✦ XR Gameplay Engineer

Curriculum

SEMESTER – I

S.No	Course	Subject Title	Hrs/Week	Credits
1	Language I	Tamil – I / other languages	5	3
2	Language II	English – I	5	3
3	Core – I	Computer Graphics & Multimedia Elements	5	5
4	Core Practical - I	Digital Illustration Lab	5	3
5	Generic Elective - I	Mathematical Foundation	4	4
6	Generic Elective Practical - I	Computer Graphics Laboratory	4	3
7	Value Education	Human Health & Yoga	2	2
Total			30	23

SEMESTER – II

S.No	Course	Subject Title	Hrs/Week	Credits
1	Language I	Tamil – II / other languages	5	3
2	Language II	English – II	5	3
3	Core – II	Art, Design and Visual Aesthetics	5	5
4	Core Practical - II	Digital Design Lab	5	3
5	Generic Elective - II	Discrete Mathematics	4	4



6	Generic Practical Elective - II	Discrete Mathematics Lab	4	3
7	Environmental Science	Environmental Studies	2	2
Total			30	23

SEMESTER – III

S.No	Course	Subject Title	Hrs/Week	Credits
1	Core – III	Augmented Reality	5	5
2	Core – IV	Virtual Reality	5	5
3	Core Practical - III	Augmented Reality Lab	6	3
4	Core Practical – IV	VR Applications in Manufacturing Lab	6	3
5	Discipline Specific Elective - I	(i) Design Fundamentals (ii) Fundamentals of Art (iii) Media Ethics	4	4
6	Non-Major Elective – I		2	2
7	Micro project	Micro Project on Augmented Reality or Virtual Reality	2	2
Total			30	24

SEMESTER – IV

S.No	Course	Subject Title	Hrs/Week	Credits
1	Core – V	Virtual Reality for Game Development	5	5
2	Core – VI	CMS Working with WordPress, Joomla & Drupal	5	5
3	Core Practical - V	Virtual Reality in Game Development Laboratory	6	3
4	Core Practical – VI	WordPress, Joomla & Drupal Lab	5	3
5	Discipline Specific Elective – II	(i) Basic Photography (ii) 3D Animation (iii) Visual Effects	4	4



6	Non-Major Elective – II		2	2
7	Mini Project	Create a virtual environment for any use case. The application must include at least 4 scenes which can be changed dynamically, a good UI, animation and interaction with game objects. (e.g VR application to visit a zoo)	3	3
Total			30	25

SEMESTER -V

S.No	Course	Subject Title	Hrs/ Week	Credits
1	Core – VII	UI Design Theory	5	5
2	Core – VIII	Python Programming	5	5
3	Core Practical – VII	UI Design Lab	6	3
4	Core Practical – VIII	Python Programming Lab	6	3
5	Discipline Specific Elective - III	(i) Cyber Security (ii) Scripting and Storyboarding Techniques (iii) Artificial Intelligence for Games	4	4
6	Skill Enhancement Course– I	(i) Understanding Digital Media (ii) Multimedia Content Creation (iii) Introduction to Photoshop	2	2
7	Internship (Summer Holidays – after II Sem)		-	2
	Extension Activity		2	2
Total			30	26



SEMESTER – VI

S.No	Course	Subject Title	Hrs/Week	Credits
1	Core - IX	Immersive technologies with Artificial Intelligence for Games	5	5
2	Discipline Specific Elective - IV	(i) Sound Design (ii) Machine Learning (iii) Data Structure for real time	4	4
3	Skill Enhancement Course– II	(i) Data Journalism – Reporting and Editing (ii) Emerging Technologies Fundamental of Animation	2	2
4	Online Course (Swayam Mooc)	(i) Human-Computer Interaction (ii) Electronic Design Automation (iii) Design and Analysis of Algorithms Computer Networks	-	3
5				
6	Project	Populate your immersive application with objects that have behavior or transformative properties.	19	5
7		Total	30	19