HIGHER NITEC IN IMMERSIVE APPLICATIONS & GAME (3 YEARS)

CERTIFICATION

Credits required for certification:

Foundation Modules	:	24
Core Modules	:	25
Specialisation Modules	:	20
Life Skills Modules	:	10
Cross Disciplinary Core Modules	:	9
Electives	:	8
Total	:	96

COURSE STRUCTURE

Module Title	Credits
FOUNDATION MODULES	
Networking Fundamentals	3
Fundamentals of Data	3
Operating System Essentials	3
Digital Media Technologies	3
Coding for AI	3
Introduction to UI/UX	3
Web Development Essentials	3
Cybersecurity Fundamentals	3
CORE MODULES	
Software Development Practices	3
Programming Essentials	3
Gamification Concept	3
Game Programming	3
Game Asset Creation	3
Game Development	3
Game Level Production	3
Industry Attachment 1	4
SPECIALISATION MODULES	
Built Environment Visualisation	3
Immersive Applications	3
Geospatial Applications	3
Humanoid Programming	3
Industry Attachment 2	8
LIFE SKILLS MODULES	
For details, click here	

Note: The offer of electives is subject to the training schedule of respective ITE Colleges. Students are advised to check with their Class Advisors on the availability of the elective modules they intend to pursue.

MODULE OBJECTIVES

Foundation Modules

Networking Fundamentals
On completion of the module, students should be able to set up, configure, set up and troubleshoot wired and wireless network system for small office environment. They should be able to provide network support and configure devices such as switches and wireless access points.

Fundamentals of Data
On completion of the module, students should be able to import data from external sources, perform basic data manipulation and present simple visualisation of the data.

Operating System Essentials
On completion of the module, students should be able to install and configure operating system (OS) and application software on end user computing devices. In addition, they should also be able to perform OS maintenance and troubleshooting.

Digital Media Technologies
On completion of the module, students should be able to apply their knowledge and skills in processing appropriate digital media formats for various platforms delivery.

Coding for AI
On completion of the modules, students should be able to experience the concepts of AI through no to low coding methods. Students will create basic program logic and AI model through fun and engaging project.

Introduction to UI/UX
On completion of the module, students should be able to apply User Interface (UI) and User Experience (UX) development process to produce low-fidelity and high-fidelity wireframes and prototypes for websites and mobile apps.

Web Development Essentials
On completion of the module, students should be able to develop web pages using HTML and CSS.

Cybersecurity Fundamentals
On completion of the module, students should be able to apply the knowledge and essentials skills in all security domains in the cyber world - information security, systems security, network security, mobile security, physical security, ethics and laws, related technologies, defence and mitigation techniques use in protecting.

Core Modules

Software Development Practices
On completion of the module, students should be able to apply their knowledge and skills in software development methods on recommended solutions.

Programming Essentials
On completion of the module, students should be able to apply fundamental programming concepts and computational thinking for basic programs.

Gamification Concept
On completion of the module, students should be able to conduct research, design contents and apply gamification approach to create game design document.

Game Programming
On completion of the module, students should be able to apply programming concepts to implement game programs, perform game debugging and code optimisation using C# programming.

Game Asset Creation
On completion of the module, students should be able to conduct art direction research and prepare art asset requirements. They will also be able to produce and perform checks on final 2D and 3D artworks.

Game Development
On completion of the module, students should be able to integrate game scripts, perform rapid prototyping and present mini prototypes.

Game Level Production
On completion of the module, students should be able to create, edit and beautify game levels in accordance with the game theme and genre set. Students should also facilitate game play sessions and refine the game levels from the feedback received

Industry Attachment 1
On completion of the module, students should be able to apply and integrate the skills and knowledge that they have acquired to the industry and would have gained relevant work experience.

Specialisation Modules

Build Environment Visualisation
On completion of the module, students should be able to use reality capture tools and technologies to replicate physical worlds into virtual environments as required in the areas of digital assets creation.

Immersive Applications
On completion of the module, students should be able to immersive application by integrating user interface and audio in game engine for various immersive platform and mobile devices.

Geospatial Applications
On completion of the module, students should be able to apply Geospatial concepts for decision making and integrate geospatial data to game engine for development of location-based applications.

Humanoid Programming
On completion of the module, students should be able to program a variety of humanoid robot behaviours and perform basic hardware tests.

Industry Attachment 2
On completion of the module, students should be able to apply and integrate the skills and knowledge that they have acquired to the industry and would have gained relevant work experience.

Life Skills Modules
For details, click here.