HIGHER NITEC IN IT APPLICATIONS DEVELOPMENT (3 YEARS)

CERTIFICATION

Credits required for certification:

Sector Foundation Modules	:	24
Cluster Core Modules	:	6
Specialisation Modules	:	27
Internship Programme Modules	:	12
Life Skills Modules	:	10
Cross Disciplinary Core Modules	:	9
Electives	:	8
Total	:	96

COURSE STRUCTURE

Module Title	Credits
SECTOR FOUNDATION MODULES	
Networking Fundamentals	3
Applied Data Fundamentals	3
Operating System Essentials	3
Digital Media Technologies	3
Programming 1	3
Generative AI Essentials	3
AI-Assisted Web Development	3
Cybersecurity Fundamentals	3
CLUSTER CORE MODULES	
Software Development Practices	3
Programming 2	3
SPECIALISATION MODULES	
User Experience Development	3
Low-Code Development	3
Server-side Development	3
Web Content Management	3
Robotic Process Automation	3
INTERNSHIP PROGRAMME MODULES	
Internship Programme 1	4
SPECIALISATION MODULES	
Enterprise Web Development	3
Mobile Apps Development	3
Enterprise Solutions Development	3
Mobile Solutions Development	3
INTERNSHIP PROGRAMME MODULES	
Internship Programme 2	8

Module Title	Credits
ELECTIVES (GENERAL) AND 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

Sector 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 network devices.

Applied Data Fundamentals
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.

Programming 1
On completion of the modules, students should be able to apply computational thinking for business applications. They will learn to break down complex problems into manageable tasks, apply pseudocode to design algorithms, and implement these solutions through programming.

Generative AI Essentials
On completion of the module, students will gain knowledge in Generative AI applications for design and content creation.

AI-Assisted Web Development
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 foundation knowledge and skills in basic cybersecurity controls, detect threats and vulnerabilities, implement security measures aligned with the key security information principles to protect system and device.

Cluster 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 2
On completion of the module, students should be able to apply fundamental programming concepts and computational thinking for basic programs.

Last updated on 28 Nov 2025

Specialisation Modules

User Experience Development
On completion of the module, students should be able to apply the UX design process to create effective and user-friendly interfaces. They should also be able to use digital tools to design, prototype, and refine their work based on user feedback.

Low-Code Development
On completion of the module, students should be able to apply the knowledge, techniques and skills in developing web applications using a low-code platform.

Server-side Development
On completion of the module, students should be able to develop interactive application with database integrations on cloud/repository.

Web Content Management
On completion of the module, students should be able to configure and publish websites, with online payment support and social media integration. They should also be able to perform website testing.

Robotic Process Automation
Upon completion of this module, students should be able to design and implement automation solutions to streamline workflows, improve efficiency, and reduce human errors in routine procedures.

Internship Programme Modules

Internship Programme 1
On completion of the module, students should be able to apply and integrate the skills and knowledge that they have acquired at ITE College and develop competencies in other areas not covered in the curriculum, at the workplace.

Specialisation Modules

Enterprise Web Development
On completion of the module, students should be able to develop Enterprise Web applications using techniques to manage operations of an organisation.

Mobile Apps Development
On completion of the module, students should be able to design, develop and enhance feature-rich mobile applications, while effectively managing their codebase through version control systems, supported by advanced GenAI tools to create innovative user experiences.

Enterprise Solutions Development
On completion of the module, students should be able to develop, test and deploy secure web services.

Mobile Solutions Development
On completion of the module, students should be able to enhance and optimise cross-platform mobile applications. They will also be able to integrate relevant mobile features, apply generative AI tools to refine UI and code; and improve app performance.

Internship Programme Modules

Internship Programme 2
On completion of the module, students should be able to apply and integrate the skills and knowledge that they have acquired at ITE College and develop competencies in other areas not covered in the curriculum, at the workplace.

Electives (General) and Life Skills Modules
For details, click here.