

## HIGHER NITEC IN AI APPLICATIONS (2 YEARS)

### CERTIFICATION

Credits required for certification:

Core Modules	: 47
Life Skills Modules	: 9
Cross Disciplinary Core Modules	: 6
Electives	: 4
<hr/> Total	<hr/> : 66

### COURSE STRUCTURE

Module Title	Credits
<b>CORE MODULES</b>	
Coding for AI	3
Programming Essentials	3
Software Development Practices	3
AI Ethics & Bias	3
Mobile Application Programming	3
Computer Vision Essentials	3
Natural Language Processing Essentials	3
Data for AI Essentials	3
AI Project Foundation	3
Computer Vision Applications	3
Service Robot Applications	3
Artificial Intelligence of Things (AIoT) Applications	3
AI Project Development	3
Industry Attachment	8
<b>ELECTIVES (GENERAL) AND LIFE SKILLS MODULES</b>	
For details, click <a href="#">here</a>	

*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

#### Core Modules

##### 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.

##### Programming Essentials

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

##### 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.

### AI Ethics & Bias

On completion of the module, students should be able to apply their knowledge and skills in AI ethics, bias, security, intellectual properties, basic data science and industry requirements on recommended AI solutions.

### Mobile Application Programming

On completion of the module, students should be able to configure software development environment, build user interface, integrate functions for interactivity and data processing, as well as publish application package onto mobile devices.

### Computer Vision Essentials

On completion of the module, students should be able to apply their knowledge and skills in computer vision (CV). They will be able to acquire and process digital images by applying computer vision techniques.

### Natural Language Processing Essentials

On completion of the module, students should be able to apply their knowledge and skills in natural language processing (NLP). They will be able to read, decipher and make sense of the human languages using NLP model.

### Data for AI Essentials

On completion of the module, students should be able to apply their skills and knowledge to process and manipulate data. They should also be able to apply machine learning techniques to make predictions and evaluate the accuracy of AI models.

### AI Project Foundation

On completion of the module, students should be able to plan and manage an AI project. They would provide AI solutions by leveraging on the knowledge and skills gained in the area(s) of data, natural language processing and computer vision.

### Computer Vision Applications

On completion of the module, students should be able to apply their knowledge and skills in CV to analyse CV applications requirement, prepare CV application hardware and software, as well as to perform AI project such as drones and autonomous robot car.

### Service Robot Applications

On completion of the module, students should be able to apply their knowledge and skills in NLP to analyse NLP applications requirement, prepare NLP application hardware and software, as well as to perform AI service robots' applications.

### Artificial Intelligence of Things (AIoT) Applications

On completion of the module, students should be able to apply their knowledge and skills in data to analyse data applications requirement, prepare data application hardware and software, as well as to perform AIoT applications.

### AI Project Development

On completion of the module, students should be able to address a business problem and provide AI solution to resolve the issue, by leveraging on the knowledge and skills gained throughout the course.

### Industry Attachment

On completion of the module, students should be able to integrate and apply the skills and knowledge acquired at ITE College, and further develop competencies at the workplace.

### Electives (General) and Life Skills Modules

For details, click [here](#).