

HIGHER NITEC IN TECHNOLOGY – AI APPLICATIONS

Course Code: HT2AI / Plan Code: HT2AI

COURSE OBJECTIVE

This course equips students with the skills and knowledge to assist AI / Machine Learning Engineer in identifying and translating business needs into AI requirements. He/She also assists in data preparation and analysis, as well as development of AI solutions to fulfil the organisation's business requirements. In addition, he/she has to carry out the tasks by following the required AI ethics.

COURSE STRUCTURE

Core/Specialisation Modules

S/N	Module Details	Module Code	Module Objectives
MSC: AI Basics and Lifecycle			
C1	AI Ethics & Bias 25 (T) 35 (P) Credits 3 Prerequisite: Nil	AI43001FP	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.
		Equivalent Code AI4001FP	
C2	Programming Essentials 20 (T) 40 (P) Credits 3 Prerequisite: Nil	IT43002FP	On completion of the module, students should be able to apply fundamental programming concepts and computational thinking for basic programs.
		Equivalent Code AI4001FP	
MSC: Programming for AI			
C3	Software Development Practices 20 (T) 40 (P) Credits 3 Prerequisite: Nil	IT43001FP	On completion of the module, students should be able to apply their knowledge and skills in software development methods on recommended solutions.
		Equivalent Code AI4002FP	
C4	Mobile Application Programming 20 (T) 40 (P) Credits 3 Prerequisite: Nil	AI43002FP	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.
		Equivalent Code AI4002FP	
MSC: Computer Vision			
C5	Computer Vision Essentials 20 (T) 40 (P) Credits 3 Prerequisite: Nil	AI43003FP	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.
		Equivalent Code AI4003FP	
C6	Computer Vision Applications 20 (T) 40 (P) Credits 3 Prerequisite: Nil	AI53001FP	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.
		Equivalent Code AI4003FP	
MSC: Natural Language Processing			
C7	Natural Language Processing Essentials 20 (T) 40 (P) Credits 3 Prerequisite: Nil	AI43004FP	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.
		Equivalent Code AI4004FP	

C8	Service Robot Applications 20 (T) 40 (P) Credits 3 Prerequisite: Nil	AI53002FP	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.
		Equivalent Code AI4004FP	
MSC: Data for AI			
C9	Data for AI Essentials 20 (T) 40 (P) Credits 3 Prerequisite: Nil	AI43005FP	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.
		Equivalent Code AI4005FP	
C10	Artificial Intelligence of Things (AIoT) Applications 20 (T) 40 (P) Credits 3 Prerequisite: Nil	AI53003FP	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.
		Equivalent Code AI4005FP	
C11	AI Project Development 20 (T) 40 (P) Credits 3 Prerequisite: All the modules C1 to C10	AI53004FP	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.
		Equivalent Code AI4006FP	

Abbreviations: T - Theory, P - Practical, MSC - Modular Skills Certificate

CREDITS FOR CERTIFICATION

Total of 33 credits from successful completion of 11 Core/Specialisation modules.

VENUE

ITE College West

Note: The training schedule of lessons is subject to change.

- 2) Depending on the demand, not all the modules in the CET *Higher Nitec* in Technology courses will be offered in each intake. Where the modules are offered and there is insufficient enrolment, the classes will be cancelled and a full refund will be given to the affected students.