

HIGHER NITEC IN TECHNOLOGY – AI APPLICATIONS

Course Code: HTAIS

COURSE OBJECTIVE

This course equips students with 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

S/N	Module Details	Module Code	Module Objectives
C1	AI Basics & Lifecycle 45 hrs (T) 75 hrs (P) Credits: 6 Prerequisite: Nil	AI4001FP	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. Students should also be able to apply fundamental programming concepts and computational thinking for basic programs.
C2	Programming for AI 40 hrs (T) 80 hrs (P) Credits: 6 Prerequisite: Nil	AI4002FP	On completion of the module, students should be able to apply their knowledge and skills in software development methods on recommended solutions. Students should also 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.
C3	Computer Vision 40 hrs (T) 80 hrs (P) Credits: 6 Prerequisite: Nil	AI4003FP	On completion of the module, students should be able to apply their knowledge and skills in computer vision (CV). They should be able to acquire and process digital images by applying computer vision techniques. Students should also be able 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.
C4	Natural Language Processing 40 hrs (T) 80 hrs (P) Credits: 6 Prerequisite: Nil	AI4004FP	On completion of the module, students should be able to apply their knowledge and skills in natural language processing (NLP). They should be able to read, decipher and make sense of the human languages using NLP model. Students should also be able to analyse NLP applications requirement, prepare NLP application hardware and software, as well as to perform AI service robots' applications.
C5	Data for AI 40 hrs (T) 80 hrs (P) Credits: 6 Prerequisite: Nil	AI4005FP	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. Students should be able to analyse data applications requirement, prepare data application hardware and software, as well as to perform Artificial Intelligence of Things (AIoT) applications.

S/N	Module Details	Module Code	Module Objectives
C6	AI Application Development 20 hrs (T) 40 hrs (P) Credits: 3 Prerequisite: All modules C1 to C5	AI4006FP	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.

Abbreviations: T - Theory, P - Practical

CREDITS FOR CERTIFICATION

Total of **33** credits from successful completion of 6 modules.

VENUE

ITE College West

Note:

- 1) 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.