



NEXTGEN CAMPUS

TOWARDS THE NEXT GENERATION OF IT

STUDENT HANDBOOK

Certificate in Artificial Intelligence

Your guide to the course — general information, how your weeks and months work, how the course ends, and every module in detail

4
MONTHS

420
LEARNING HOURS

8
MODULES

Fully online
DELIVERY

INSIDE THIS HANDBOOK

- | | |
|--|---|
| 1 Welcome and course at a glance | 2 What you will learn and how |
| 3 Weekly timetable | 4 Course journey: weeks, months and course end |
| 5 Assessment, capstone and Project Book | 6 Student guidelines and support |
| 7 Module details — all 8 modules | |

NextGen Campus (Pvt) Ltd • TVEC Registered Training Institute P01/1159 • Head Office, Nugegoda

+94 11 251 5215 • +94 77 810 0810 • info@nextgencampus.lk • www.nextgencampus.lk

Edition: October 2026 • Version 2026_NGC_FNL_V1.9

PART A General Information

1 Welcome to NextGen Campus

Welcome to the Certificate in Artificial Intelligence. This handbook is your guide to the course: how it is organised, how you will learn and be assessed, what is expected of you, and what every module covers. Please read it carefully and keep it with you throughout the course.

NextGen Campus has trained IT professionals since 2013. Our programmes are directly job-targeted: every module combines instructor-led teaching with hands-on labs, real industry tools and practical use of AI, so that you finish ready for work.

2 Course at a Glance

Course	Certificate in Artificial Intelligence
Duration	Four months (16 teaching weeks) · 4 months
Delivery	Fully online
Class days and times	Saturday 1.30 – 5.30 PM — online lecture Sunday 9.00 AM – 6.00 PM — online guided lab
Total learning hours	420 hours — 192 h lectures · 188 h practical (labs and capstone) · 40 h Student Project Book
Medium	English
Intakes	January–February and June–July each year
Course fee	Rs. 18,000.00
On completion	NextGen Campus Certificate and Academic Transcript
Training institute	NextGen Campus (Pvt) Ltd — TVEC Registered Training Institute P01/1159
Course status	Proposed for TVEC course registration

3 About the Course

The Certificate in Artificial Intelligence is a four-month, 420-hour, fully online non-NVQ course that trains learners to build practical AI solutions, progressing them from AI-Literate IT Assistant to Junior AI Solutions Developer level.

Purpose The course gives learners the skills to prepare data, train and evaluate machine learning models, apply deep learning to images and text, and build secure generative AI applications that solve real business problems.

Job-level progression Weeks 1–2: AI-Literate IT Assistant. Weeks 3–6: Junior Data Analyst. Weeks 7–10: Junior Machine Learning Engineer. Weeks 11–14: Generative AI Developer. Weeks 15–16: Junior AI Solutions Developer (exit level).

Career path Graduates can work as a Junior AI Developer, Junior Data Analyst, Machine Learning Assistant, AI Solutions Assistant or Prompt and Automation Specialist. They can progress to Microsoft AI-102 or DP-100, to the Certificate in AI-Driven Cloud Computing and Security, or to further study in data science and AI.

Fully online delivery Every part of the course is online: live lectures every Saturday (1.30 – 5.30 PM); full-day guided real labs every Sunday (9.00 AM – 6.00 PM), delivered through the NextGen LMS and monitored by the lecturer; weekday LMS laboratories; the Student Project Book, kept as a daily activity log with a weekly project plan submitted on the LMS; and 40 hours of extra online capstone classes in the final month, in which each learner builds an AI app or AI web-based system.

4 What You Will Be Able to Do

By the end of the course you will be able to:

- Explain what AI, machine learning, deep learning and generative AI are, and where each is used in business.
- Write Python programs to automate tasks and process data.
- Clean, analyse and visualise data with pandas, matplotlib and SQL.
- Train, evaluate and improve supervised and unsupervised machine learning models.
- Build and train neural networks for image and text tasks.
- Use large language models effectively through prompt engineering and APIs.
- Build generative AI applications with retrieval-augmented generation and simple agents, and deploy them as web apps.
- Identify and mitigate AI risks, including bias, prompt injection and data leakage, and apply Sri Lanka's Personal Data Protection Act.
- Design, build, document and present a complete AI solution for a real business scenario.

5 Who the Course Is For and What You Need

Entry requirements Learners need G.C.E. O/L with passes in Mathematics and English, plus basic computer literacy. No prior programming is required; Python is taught from the beginning. Applicants are interviewed online to confirm readiness.

Who it is for school leavers after O/L or A/L, graduates from any discipline, IT professionals adding AI skills, and working adults in Sri Lanka or overseas who want to apply AI in their jobs.

Entry requirements Learner requirements. Because the whole course is online, each learner needs a laptop or computer with at least 8 GB RAM, a webcam and microphone, and a reliable internet connection. Heavy computation runs in Google Colab, so no special hardware is required.

6 How You Will Learn

Learning activity	Hours	What it involves
Lectures	192 h	Live online lectures with your trainer (12 h a week)
LMS module labs	148 h	Hands-on labs for every module on the NextGen LMS — about 9.25 h a week, done in your own time and monitored by your trainer
Capstone project	40 h	Final project with extra online classes, monitored by your trainer
Student Project Book	40 h	Your professional record of lab work, reflections and the Management Module
Total	420 h	

About the LMS module labs

Every module has a set of hands-on labs on the NextGen LMS. Complete them each week, between your classes — they are where most of your practical skills are built.

Your trainer monitors lab completion on the LMS and uses it to give you feedback before each module assessment. Completing all LMS labs is required for the award.

Use a laptop or computer with reliable internet. If you do not have one, ask about using the campus lab.

7 Your Weekly Timetable

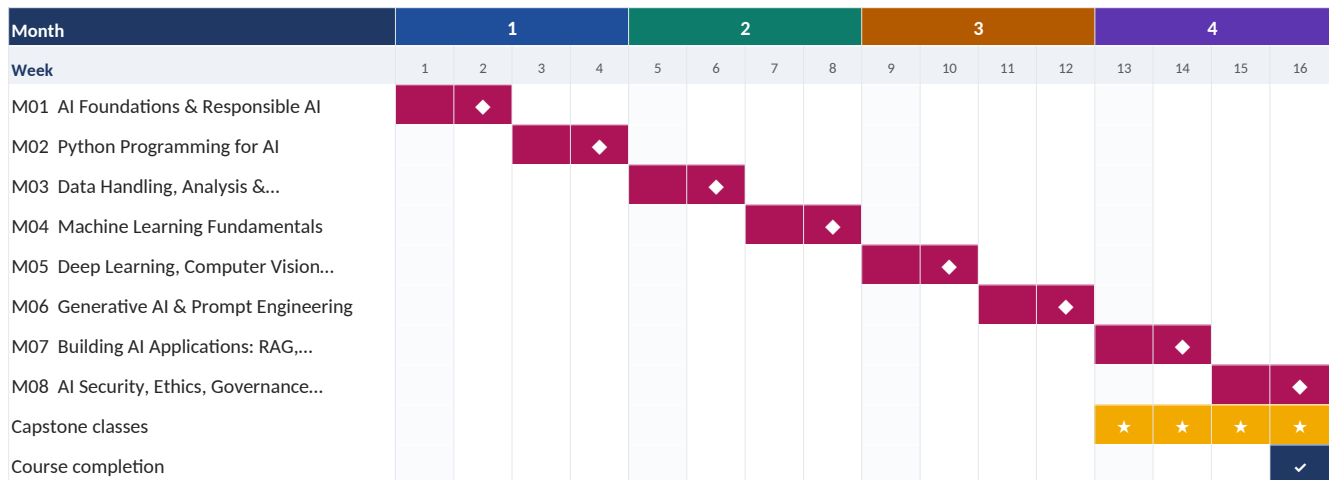
Days	Time	Where	Session
Saturday	1.30 – 5.30 PM	Online	Online live lecture
Sunday	9.00 AM – 6.00 PM	Online	Online guided LMS lab (live, monitored)

Rotating campus lab dates for your batch are published on the LMS at the start of each month.

Room A and Room B are at the NextGen Campus Head Office, Nugegoda. Regular classes do not run on poya days or public holidays.

8 Your Course Journey

The course runs for 16 weeks over 4 months. The chart shows when each module is taught, when you sit each module assessment (◆), and when the capstone classes run.



Key ■ module taught ◆ module assessment ★ capstone classes ✓ course completion

Month by month

Month	Weeks	What you study	Milestones
Month 1	Weeks 1–4	M01 AI Foundations & Responsible AI M02 Python Programming for AI	◆ Module assessment: M01, M02
Month 2	Weeks 5–8	M03 Data Handling, Analysis & Visualisation M04 Machine Learning Fundamentals	◆ Module assessment: M03, M04
Month 3	Weeks 9–12	M05 Deep Learning, Computer Vision & NLP M06 Generative AI & Prompt Engineering	◆ Module assessment: M05, M06
Month 4	Weeks 13–16	M07 Building AI Applications: RAG, Agents & Deployment M08 AI Security, Ethics, Governance & Career Readiness	◆ Module assessment: M07, M08 ★ Capstone classes (week 13) ★ Capstone classes (week 14) ★ Capstone classes (week 15) ★ Capstone classes (week 16) ✓ Project Book submitted; course completion

CAMPUS
TOWARDS THE NEXT GENERATION OF IT

A typical week

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
LMS labs ≈ 2 h	LMS labs ≈ 2 h	LMS labs ≈ 2 h	LMS labs ≈ 2 h	LMS labs ≈ 2 h	Online lecture 1.30 – 5.30 PM online	Guided online lab 9.00 AM – 6.00 PM online
Student Project Book about 2.5 h a week: update it after each class and lab with your evidence and reflections.						

LMS lab hours are a guide — about 9.25 h a week in total; you can arrange them across the week to suit you.

How the course ends

1 Week 16	2 Week 16	3 End of course	4 After the course	5 Award
Final module M08 AI Security, Ethics, Governance & Career Readiness and the final module assessment	Final capstone class Capstone presentation and technical defence before the panel	Project Book Submit your completed Student Project Book, including the Management Module	Results Marks are confirmed and your final grade is published: Distinction, Merit or Pass	Certificate NextGen Campus Certificate and Academic Transcript issued

If you need a re-sit A learner who fails a module MCQ may re-sit it once within one month. A learner who fails the capstone panel defence may re-present once within three months.

9 Assessment and Grading

Component	How you are assessed	Weight	When
Continuous assessment	MCQ assessment at the end of each core module	40%	End of each module
Practical examination	Capstone project with panel presentation and technical defence	40%	Week 16 (final capstone class)
Student Project Book	Project book submission, including the Management Module	20%	End of course
Total		100%	

Distinction	Merit	Pass	Fail
70% and above	60% – 69%	50% – 59%	Below 50%

Attendance Minimum 85% attendance at live online sessions (logged by the online platform) and the online capstone classes in the final month.

Online assessment integrity MCQs are taken on the LMS under live online supervision with cameras on. The capstone panel defence is held live online and recorded, with identity verified by camera and NIC.

Academic integrity Learners may use AI tools where a task allows it but must declare how they used them, and must be able to explain any code they submit.

Formative practical checks The weekly practical checks and question types are formative. They are recorded as LMS laboratory completion and give learners feedback before each module MCQ; there is no final written examination.

MCQ assessments Each end-of-module MCQ assessment is completed under supervision on the LMS and covers the module learning outcomes.

Re-sits A learner who fails a module MCQ may re-sit it once within one month. A learner who fails the capstone panel defence may re-present once within three months.

Award requirements — to receive your certificate

You must maintain a minimum attendance of 85%, complete all core-module MCQ assessments and LMS laboratories, submit the Student Project Book and pass the capstone practical examination, achieving an overall mark of at least 50%, to qualify for the certificate.

10 Capstone Project

In the final month (weeks 13–16) learners attend extra online capstone classes — 40 hours in total, about 10 hours a week — in which each learner builds a complete AI application: an AI app, an AI web-based system, a chatbot, an agent or an intelligent automation, chosen from the capstone catalogue for a realistic Sri Lankan business scenario. Learners design, build, test, secure and deploy the solution, then present and defend it to a live online panel in week 16.

Monitoring and supervision

Each learner submits a weekly project plan on the LMS; the trainer reviews it and gives feedback before the next week's classes

Daily activity entries in the Student Project Book, LMS progress data and GitHub commit history show each learner's progress

The trainer holds one-to-one online reviews with every learner each week, using screen sharing to inspect the working application

The panel defence in week 16 is held live online and recorded; identity is verified by camera and NIC at the start

Capstone project catalogue

Each learner chooses one project area and agrees a specific brief with the trainer in the first capstone week (week 13). Every project must use AI meaningfully, be deployed as a working app or web application, and include evaluation, security testing and a PDPA assessment.

Week	When	Focus	Hours
Capstone week 1	Week 13	Project selection from the catalogue; problem statement, users and success measures; solution design (architecture, interface, data sources, evaluation plan); proposal approved	10
Capstone week 2	Week 14	Guided build: AI core and app or web front end; version control on GitHub	10
Capstone week 3	Week 15	Integration and online deployment; evaluation, security (prompt-injection) testing and PDPA assessment	10
Capstone week 4	Week 16	Documentation and user guide; final polish; live online demonstration, panel presentation and technical defence	10
Total	40		

What you will deliver

- Approved proposal with problem statement, users and success measures
- Solution design: architecture, interface, data sources and evaluation plan
- Working, deployed AI app, web application or automation, with code on GitHub
- Evaluation results, security test results and PDPA assessment
- Technical documentation, user guide and project README
- Live online panel presentation, demonstration and technical defence

11 Student Project Book

The Student Project Book is each learner's professional record, kept throughout the course (about 2.5 hours a week). Learners record their daily activities — labs completed, code written, problems solved and decisions made — and submit a project plan every week on the LMS, which the trainer reviews. The Project Book also contains the Management Module and becomes the full record of the capstone build.

The Project Book contains module-by-module laboratory records and LMS evidence, Management Module activities and reflections, capstone planning and final documentation, and a professional technical portfolio. It is reviewed by the trainer at the end of each module.

Bring your Project Book up to date every week. It is assessed at the end of the course and counts for 20% of your final mark.

12 Your Certificate

When you meet the award requirements you receive the NextGen Campus Certificate — Certificate in Artificial Intelligence — together with an Academic Transcript showing every module and your final grade (Distinction, Merit or Pass).

Industry certifications The modules are aligned to these industry certifications: AI-901 aligned; PCEP aligned; Kaggle Learn pathway; Kaggle Learn - Hugging Face; OWASP LLM Top 10 - NIST AI RMF. Certification exam fees are not included in the course fee unless NextGen Campus states otherwise.

13 Student Guidelines

- Attend at least 85% of your scheduled classes and all capstone sessions. Inform your course coordinator in advance if you cannot attend.
- Be on time for every class, online or on campus. For online classes, join with your camera available and your full name displayed.
- Complete your LMS module labs every week and keep your Project Book up to date — do not leave them to the end of a module.
- Do your own work. Copying, sharing answers or submitting someone else's work is not allowed in any assessment.
- Use AI tools responsibly: use them to learn and to check your work, check every AI output, never paste confidential or personal data, and say when you used AI in your Project Book.
- Look after campus equipment and follow lab safety instructions, including ESD precautions when handling hardware.
- Keep your LMS login private and check the LMS and your email regularly for announcements, timetable changes and assessment dates.

14 Help and Contact

Head Office	NextGen Campus (Pvt) Ltd, Nugegoda, Sri Lanka
Phone	+94 11 251 5215 · +94 77 810 0810
Email	info@nextgencampus.lk
Website	www.nextgencampus.lk
LMS support	Use the help desk on the NextGen LMS for login, lab environment and technical questions. A weekly online Q&A session is held for LMS labs.
Your course coordinator	Introduced at orientation — contact them about attendance, batches, re-sits and any personal circumstances.

PART B Module Details

The course has 8 modules, studied in the order below. Each module lists its aim, what you will learn, what you will be able to do, and the hands-on labs you will complete.

Code	Module	Lecture h	Lab h	Industry alignment
M01	AI Foundations & Responsible AI	24	18	AI-901 aligned
M02	Python Programming for AI	24	19	PCEP aligned
M03	Data Handling, Analysis & Visualisation	24	19	Kaggle Learn pathway
M04	Machine Learning Fundamentals	24	19	Kaggle Learn pathway
M05	Deep Learning, Computer Vision & NLP	24	19	Kaggle Learn - Hugging Face
M06	Generative AI & Prompt Engineering	24	18	AI-901 aligned
M07	Building AI Applications: RAG, Agents & Deployment	24	18	AI-901 aligned
M08	AI Security, Ethics, Governance & Career Readiness	24	18	OWASP LLM Top 10 - NIST AI RMF
Total for modules		192	148	

Lab hours are LMS module labs. Capstone and Project Book hours are in addition to the module hours.

M01 AI Foundations & Responsible AI 24 h lecture · 18 h labs

Phase 1 — AI & Data Foundations · Aligned to AI-901 aligned

Aim Builds a clear, hype-free understanding of AI and how business uses it, and establishes responsible, effective use of AI assistants from the first week.

What you will learn

- AI definitions and types of learning
- AI use cases by industry
- Limits of AI and hallucination
- Responsible AI principles
- Prompt structure and patterns
- PDPA and data you must not share

You will be able to

- Explain AI, ML, deep learning and generative AI
- Identify realistic AI use cases in Sri Lankan industries
- Apply the six responsible-AI principles
- Write structured, reliable prompts and protect personal data

Hands-on LMS labs — 18 hours

- Set up Colab, GitHub and the LMS
- Compare AI assistants on business tasks
- Build a tested prompt library

Using AI in this module

- AI assistants used critically on real business tasks

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

M02 Python Programming for AI 24 h lecture · 19 h labs

Phase 1 — AI & Data Foundations · Aligned to PCEP aligned

Aim Teaches Python from the beginning — the core language of AI — through practical automation and data tasks.

What you will learn

- Python syntax and data types
- Lists, dictionaries and control flow
- Functions and debugging
- Files, CSV and JSON

You will be able to

- Write Python using variables, data structures, conditions, loops and functions
- Read and write files and call web APIs
- Handle errors and use libraries

- Web APIs with requests
- NumPy introduction
- Automate a repetitive business task

Hands-on LMS labs — 19 hours

- Kaggle Learn Python exercises
- Automate a monthly report merge
- Call a currency-rate API

Using AI in this module

- AI-assisted code explanation and debugging, with learners explaining every line

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

M03 Data Handling, Analysis & Visualisation

24 h lecture · 19 h labs

Phase 1 — AI & Data Foundations · Aligned to Kaggle Learn pathway

Aim Develops data-analyst skills — cleaning, analysing and visualising real datasets with pandas, matplotlib and SQL.

What you will learn

- DataFrames and cleaning
- Grouping, merging and aggregation
- matplotlib and seaborn
- SQL SELECT, JOIN, GROUP BY
- Exploratory data analysis
- Storytelling with data

You will be able to

- Load, clean and transform data with pandas
- Group, aggregate and join datasets
- Choose and build effective charts
- Query data with SQL and present findings

Hands-on LMS labs — 19 hours

- Clean a messy retail dataset
- EDA of a telecom churn dataset
- SQL exercises in SQLite

Using AI in this module

- AI-assisted analysis checked against the data

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

M04 Machine Learning Fundamentals

24 h lecture · 19 h labs

Phase 2 — Machine Learning & Deep Learning · Aligned to Kaggle Learn pathway

Aim Builds the standard machine-learning workflow — training, evaluating and improving regression, classification and clustering models with scikit-learn.

What you will learn

- Features, labels and the ML workflow
- Linear and logistic regression
- Decision trees and random forests
- Evaluation metrics and overfitting
- Cross-validation and tuning
- k-means and PCA

You will be able to

- Apply the ML workflow and train-test split
- Train regression and classification models
- Evaluate with accuracy, precision, recall and F1
- Tune models and segment data with k-means

Hands-on LMS labs — 19 hours

- Churn classification model
- Model tuning exercise
- Customer segmentation

Using AI in this module

- Model explanation and bias checks

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

M05 Deep Learning, Computer Vision & NLP 24 h lecture · 19 h labs

Phase 2 — Machine Learning & Deep Learning · Aligned to Kaggle Learn - Hugging Face

Aim Introduces neural networks and applies deep learning to images and text using transfer learning and pre-trained transformer models.

What you will learn

- Neurons, layers and training
- Overfitting, dropout and early stopping
- CNNs and transfer learning
- Embeddings and transformers
- Hugging Face pipelines

You will be able to

- Explain how neural networks learn
- Build and train networks with Keras on a GPU
- Build image classifiers with transfer learning
- Classify text and sentiment with transformers

Hands-on LMS labs — 19 hours

- Digit classifier in Keras
- Product-image classifier
- Review sentiment analysis

Using AI in this module

- Pre-trained models from the Hugging Face Hub

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

M06 Generative AI & Prompt Engineering 24 h lecture · 18 h labs

Phase 3 — Generative AI Engineering · Aligned to AI-901 aligned

Aim Develops skills to control large language models precisely and build applications with LLM APIs — chat, extraction, summarisation and multimodal tasks.

What you will learn

- How LLMs generate text
- System prompts and few-shot prompting
- Structured JSON output
- LLM APIs and conversation history
- Summarisation and classification pipelines
- Cost and API key security

You will be able to

- Explain tokens, context windows and LLM parameters
- Apply advanced prompting and structured output
- Build a chat application with an LLM API
- Manage API cost, limits and key security

Hands-on LMS labs — 18 hours

- Invoice data extraction with a test set
- Customer-support chatbot
- Batch document summariser

Using AI in this module

- Institute-provisioned LLM API keys with spending limits

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

M07 Building AI Applications: RAG, Agents & Deployment 24 h lecture · 18 h labs

Phase 3 — Generative AI Engineering · Aligned to AI-901 aligned

Aim Builds grounded AI assistants with retrieval-augmented generation, gives applications safe tool use, and deploys them as web apps.

What you will learn

- Embeddings and vector databases
- Chunking and RAG pipelines
- Agents and function calling
- Human approval for sensitive actions

You will be able to

- Build a RAG assistant that cites its sources
- Build an agent that calls tools safely
- Build and deploy a Streamlit app
- Manage code and secrets with Git and GitHub

- Streamlit deployment
- Git and GitHub workflow

Hands-on LMS labs — 18 hours

- HR policy RAG assistant
- Sales-database agent
- Deploy a Streamlit app

Using AI in this module

- LangChain, ChromaDB and Streamlit

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

M08 AI Security, Ethics, Governance & Career Readiness 24 h lecture · 18 h labs

Phase 4 — Responsible AI & Career Readiness · Aligned to OWASP LLM Top 10 - NIST AI RMF

Aim Secures and governs AI applications and prepares learners for employment with a professional portfolio and interview practice.

What you will learn

- OWASP Top 10 for LLM Applications
- Guardrails and output filtering
- PDPA No. 9 of 2022
- NIST AI Risk Management Framework
- Portfolio, CV and interviews

You will be able to

- Test and mitigate prompt injection and data leakage
- Apply PDPA obligations to an AI solution
- Describe AI governance with the NIST AI RMF
- Present a professional AI portfolio

Hands-on LMS labs — 18 hours

- Red-team and harden an AI app
- Risk and data-protection assessment
- Portfolio README and mock interview

Using AI in this module

- The dedicated responsible-AI module

Assessment: end-of-module MCQ assessment and LMS laboratory completion.

