Module Synopsis

Specialist Diploma in Data & Artificial Intelligence (Data Intelligence) (NSDDI)

PDC 1:	Post-Diploma Certificate in Fundamentals of Data Science	(120 hours)
1. MSA9001	**Introduction to Statistics for Data Science**	**(60 hours)**

This module provides students with an introduction to elementary probability theory and statistical concepts and principles that lay the foundation to understand and learn the statistical procedures and methods in the subsequent modules.

The topics covered include descriptive statistics, rules of probability, probability distributions of discrete and continuous random variables, sampling distributions, statistical estimation, hypothesis testing and linear regression.

2. IT8701	**Introduction to Programming for Data Science**	**(60 hours)**

This module provides students with the fundamental skills to code applications to retrieve, manipulate, process and visualise data using the Python programming language. Students learn key concepts such as what structured and unstructured data are, and how they can create and manipulate relational and NoSQL databases to explore data and to create visualisations that can help them gain useful insights from it.

PDC 2:	Post-Diploma Certificate in Data Intelligence	(150 hours)
1. MSA9002	**From Data to Decision: AI-Assisted Analytics**	**(75 hours)**

This module equips learners to apply AI-assisted analytics to support business decision-making. Learners will frame business problems, identify meaningful KPIs, select appropriate analytical techniques, and evaluate AI-assisted outputs using relevant validation metrics. The module also emphasises dashboard design, visualisation, and data storytelling to communicate insights effectively. Through an applied project, learners will develop evidence-based recommendations and present actionable insights to business stakeholders.

2. MSA9013	**From Insights to Actions: Agentic Intelligence**	**(75 hours)**

This module equips learners with the skills to design, develop and govern agentic analytics workflows. Learners will translate business requirements into agent-enabled solutions, formulate agent briefs, orchestrate analytical workflows, and evaluate AI-generated outputs against business, governance and operational requirements. Through an applied project, learners will develop, validate and present an agentic analytics solution to address an authentic business challenge and communicate recommendations to stakeholders.