

Course Structure and Synopsis of Proposed Modules for Work-Study Diploma in AI & Data Intelligence (Data Engineering Specialisation)

S/N	Module	Hours
1	<p>Programming for Data & AI</p> <p>On completion of the module, trainees should be able to develop program codes by creating program logic, writing program codes and debugging program.</p>	100
2	<p>AI Governance</p> <p>On completion of the module, trainees should be able to manage compliance to data and AI governance processes, as well as mitigate non-compliance incidents.</p>	100
3	<p>Exploratory Data Analysis I</p> <p>Upon completion of the module, trainees should be able to perform data processing, analysis and visualisation using data analytics tools.</p>	100
4	<p>Data Preparation I</p> <p>Upon completion of the module, trainees should be able to inspect data quality and perform feature extraction, as well as prepare train-test-validate subsets for model building.</p>	100
5	<p>Exploratory Data Analysis II</p> <p>On completion of the module, trainees should be able to manage dataset by collecting, processing and validating data to discover patterns and insights.</p>	100
6	<p>Data Preparation II</p> <p>On completion of the module, trainees should be able to manage database systems by designing database models and optimising data migration.</p>	100
7	<p>Data Operations</p> <p>On completion of the module, trainees should be able to manage end-to-end data pipelines by designing data consumption process, as well as building and monitoring data pipeline.</p>	100
8	<p>Data Solution Design & Development</p> <p>On completion of the module, trainees should be able to address a problem statement through data solution development. They should also be able to design data solution, develop prototypes and optimise solution performance.</p>	100
9	<p>Company Project</p> <p>On completion of the module, trainees should have applied their acquired competencies in an authentic project that would value-add to the company.</p>	100
10	<p>On-the-Job Training</p> <p>On completion of the module, trainees should be able to apply the skills and knowledge acquired at ITE College and workplace to take on the full job scope, including supervisory function where appropriate, at the company.</p>	3100