

**COURSE STRUCTURE and SYNOPSIS of CORE MODULES for WORK-STUDY DIPLOMA IN MICROELECTRONICS (EQUIPMENT TRACK)**

<b>S/N</b>	<b>Module</b>	<b>Hours</b>
1	<p><b>Semiconductor Manufacturing Protocol</b> On completion of the module, trainees should be able to identify workplace hazard and apply proper usage of the personal protective equipment (PPE). They should also be able to execute good manufacturing practices.</p>	100
2	<p><b>Semiconductor Technology</b> On completion of the module, trainees should be able to perform semiconductor manufacturing process and apply metrology methodology for semiconductor manufacturing.</p>	100
3	<p><b>Data Analytics for Quality Improvement</b> On completion of the module, trainees should be able to apply data analytic skills for semiconductor manufacturing.</p>	100
4	<p><b>Computer Programming &amp; IoT Integration</b> On completion of the module, trainees should be able to write application program to integrate IoT devices into system using programming concept and language.</p>	100
5	<p><b>Project Management &amp; Technical Writing</b> On completion of the module, trainees should be able to plan, execute and monitor manufacturing process to meet project scope, schedule and cost requirements; as well as, write and present technical report, apply communication and supervision skills to build essential relationships at the workplace.</p>	100
6	<p><b>Company Project</b> On completion of this module, trainees should be able to plan, supervise and execute microelectronics equipment-related projects for manufacturing process improvement.</p>	100
7	<p><b>Equipment Maintenance</b> On completion of the module, trainees should be able to implement equipment maintenance operations to optimise performance.</p>	100
8	<p><b>Industrial Automation</b> On completion of the module, trainees should be able to set up and maintain automation and sensor system.</p>	100

9	<b>Robotic Controls</b> On completion of the module, trainees should be able to apply the concepts of logic and sequential control in industrial automation.	100
10	<b>On-the-Job Training</b> 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.	3100