

List of Competencies for On-the-Job Training (OJT)**Work-Study Diploma in Electronics & Computer Engineering (Applied Electronics & AI)**

Note: LOC is subject to changes due to curriculum review/ development

S/N	List of Competencies (Standard)	Company to indicate '✓' for OJT competencies it can provide
	Common	
	Manage equipment maintenance and product operations	
1.	Monitor equipment operations and performance	
2.	Test electronic circuit for product operation	
3.	Manage equipment and product failures	
	Manage IoT network and connectivity	
4.	Deploy network infrastructure	
5.	Deploy IoT infrastructure	
6.	Monitor IoT data transmission	
	Perform data analysis and visualisation	
7.	Perform data processing	
8.	Perform data visualisation	
9.	Perform data analysis	
	A) Specialisation – Applied Electronics & AI	
	Manage system integration	
10.	Design integrated system	
11.	Implement integrated system	
12.	Maintain system performance	
	Manage IoT solutions	
13.	Deploy IoT solutions	
14.	Implement remote monitoring	
15.	Maintain IoT security and solutions	
	Manage automation process	
16.	Design automation process	
17.	Validate automation process	
18.	Optimise automation process	
	Deploy AI/ML solutions	
19.	Automate data processing	

S/N	List of Competencies (Standard)	Company to indicate '✓' for OJT competencies it can provide
20.	Evaluate AI/ML models	
21.	Deliver AI/ML solutions	
	Deploy autonomous system	
22.	Set up autonomous system	
23.	Program autonomous system	
24.	Integrate autonomous system	
	Sub – total of Competencies (Standard)	
List of Competencies (Company-specific)		
1		
2		
3		
4		
5		
6		
	Sub-total of Competencies (Company-specific)	

Note:

- a) Company must be able to provide OJT for at least **75%** of the List of Competencies (Standard).
- b) If company is unable to meet the 75%, please propose alternate **course-related** competencies which are unique to company operations. Alternate competencies are capped at 25%.
[i.e. 50% of the list of competencies (standard) + 25% alternate competencies (Company-specific)].
- c) All alternate competencies (Company-specific) must be reviewed and endorsed by ITE.
- d) Trainees must receive OJT and be assessed for **All** competencies selected in this List.

Total no. of competencies selected by company for OJT

Total no. of competencies listed (standard & company specific)

Percentage of selected competencies

Completed By:

Name

Company

MODULE SYNOPSIS – WSDip in Electronics & Computer Engineering (Applied Electronics & AI)

Course Objective

The course equips trainees with the skills, knowledge and professional attributes to design, deploy and manage AI-enabled and IoT-based systems with digital connectivity, to optimise operational efficiency and reliability in a digitalised work environment. This specialisation equips trainees with the skills, knowledge and professional attributes to integrate, deploy and manage electronic systems and connectivity, as well as apply AI solutions and automation, to achieve continuous process improvement in a digitalised work environment.

Modules Synopsis

Electronics & Electrical Principles

On completion of the module, trainees should be able to manage operations and performance for equipment and products. They should also be able to manage equipment and product failures by implementing Electrostatic Discharge (ESD) Control measures and evaluating performance metrics.

IoT Devices & Networking

On completion of the module, trainees should be able to manage IoT network and connectivity by programming and deploying IoT devices, configuring IoT network connectivity and monitoring IoT data transmission for quality IoT data communication.

Data Analysis & Visualisation

On completion of the module, trainees should be able to extract and transform data into useful information, as well as create visual elements, to aid in business decision-making. They should also be able to manage projects through collaboration and teamwork.

Applied Electronics

On completion of the module, trainees should be able to install and troubleshoot various detection sensors, including video imaging, Lidar, ultrasonic as well as inertial measurement unit.

IoT Connectivity & Integration

On completion of the module, trainees should be able to deploy and manage IoT solutions, as well as implement remote monitoring, and maintaining IoT security.

Automation & Programming

On completion of the module, trainees should be able to manage automation process by designing, validating and optimising automation process.

AI & Machine Learning

On completion of the module, trainees should be able to deploy and deliver AI/Machine Learning (ML) solutions by automating data processing and evaluating AI/ML models.

Autonomous System Applications

On completion of the module, trainees should be able to set up, program and integrate autonomous robots for applications.

MODULE SYNOPSIS – WSDip in Electronics & Computer Engineering (Applied Electronics & AI)

Company Project

On completion of the module, trainees should have applied their acquired competencies in an authentic project that would value-add to the company.

On-the-Job Training

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.

TRAINING PATTERN SCHEDULE

WSDip in **ELECTRONICS & COMPUTER ENGINEERING (APPLIED ELECTRONICS & AI)**

Day Release - Trainees attend 1 to 2 days of lessons per week at ITE, with the remaining work-week spent at the workplace for On-the-Job Training.

April'26 Intake	April – June 2026	ITE Vacation (June) 4 weeks	July – September 2026	ITE Vacation (Sept) 2 weeks	October – December 2026	ITE Vacation (Dec) 4 weeks	January – March 2027	ITE Vacation (March) 2 weeks
1 st Year Off-JT @ ITE	1 day/week (Day TBC)		1 day/week (Day TBC)		2 days/week (Days TBC)		2 days/week (Days TBC)	
April'26 Intake	April – June 2027	ITE Vacation (June) 4 weeks	July – September 2027	ITE Vacation (Sept) 2 weeks	October – December 2027	ITE Vacation (Dec) 4 weeks	October – December 2028	ITE Vacation (March) 2 weeks
2 nd Year Off-JT @ ITE	2 days/week (Days TBC)		2 days/week (Days TBC)		1 day/week (Day TBC)		1 day/week (Day TBC)	
April'26 Intake	April – June 2028	ITE Vacation (June) 4 weeks	July – September 2028	ITE Vacation (Sept) 2 weeks	WSDip Programme 2026 Start: 1 April 2026 End: 30 September 2028 Duration: 2.5 years  Final results release may be later than programme end date			
3 rd Year Off-JT @ ITE	2 days/week (Days TBC)		2 days/week (Days TBC)					