

**List of Competencies for On-the-Job Training (OJT)
Work-Study Diploma in Advanced Manufacturing**

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
1	Produce designed parts and assemblies using CAD software	
2	Evaluate product designs for ease of manufacturing/assembly	
3	Produce additive manufacturing prototype	
4	Determine manufacturing processes	
5	Produce injection moulded component	
6	Produce sheet metal component	
7	Produce machine-specific codes using CAM	
8	Produce CNC machined components	
9	Optimise manufacturing processes	
10	Conduct quality inspections	
11	Implement quality assurance practices	
12	Implement quality improvement	
13	Operate automation and IoT system	
14	Operate articulated robot	
15	Operate autonomous mobile robot	
16	Manage digital manufacturing system	
17	Conduct manufacturing data analytics	
18	Optimise system performance	
19	Conduct life cycle analysis	
20	Implement lean methodologies	
21	Execute sustainability initiatives	
22	Manage production plans and schedules	
23	Manage project plans and schedules	
24	Present production status and project outcomes	
	Sub-total of Competencies (Standard)	
List of Competencies (Company-specific)		
1		
2		

S/N	List of Competencies (Standard)	Company to indicate '✓' for OJT competencies it can provide
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 (<i>standard & company specific</i>)	
Percentage of selected competencies	

Completed By:

Name

Company

MODULE SYNOPSIS – WSDip in Advanced Manufacturing

Course Objective

This course equips trainees with the skills, knowledge and professional attributes to support manufacturing operations. It focuses on designing and producing components using CAD and advanced technologies, while integrating quality assurance, lean principles, and sustainability to optimise process efficiency.

Modules Synopsis

Computer Aided Design & Additive Manufacturing

On completion of the module, trainees should be able to produce parts and assemblies using CAD, evaluate product designs for ease of manufacturing/assembly and produce additive manufacturing prototypes.

Manufacturing Technologies

On completion of the module, trainees should be able to determine manufacturing processes, produce injection moulded component and produce sheet metal component.

Advanced Machining

On completion of the module, trainees should be able to produce machine-specific codes using CAM, produce CNC machined components and optimise manufacturing processes.

Quality Assurance & Management

On completion of the module, trainees should be able to conduct quality inspections, implement quality assurance practices and implement quality improvement.

Automation & Robotic Systems

On completion of the module, trainees should be able to operate automation and IoT system, articulated robot and autonomous mobile robot.

Smart Manufacturing

On completion of the module, trainees should be able to manage digital manufacturing system, conduct manufacturing data analytics and optimise system performance.

Lean & Sustainable Manufacturing

On completion of the module, trainees should be able to conduct life cycle analysis, implement lean methodologies and execute sustainability initiatives.


Production & Project Management

MODULE SYNOPSIS – WSDip in Advanced Manufacturing

On completion of the module, trainees should be able to manage production plans and schedules, manage project plans and schedules and present production status and project outcomes.

WSDip in Advanced Manufacturing

Hybrid Release - Trainees attend daily lessons at ITE for a continuous period at the start, and after will attend lessons for one day per a week and spend the remainder of the work-week at the workplace for OJT.

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
1st Year Off-JT @ ITE	1 day/week for 9 weeks followed by 1 week block		1 day/week for 8 weeks followed by 1 week block		1 day/week for 9 weeks followed by 1 week block		1 day/week for 8 weeks followed by 1 week block	
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	January – March 2028	ITE Vacation (March) 2 weeks
2nd Year Off-JT @ ITE	1 day/week for 9 weeks followed by 1 week block		1 day/week for 8 weeks followed by 1 week block		1 day/week for 9 weeks followed by 1 week block		1 day/week for 8 weeks followed by 1 week block	
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			
3rd Year Off-JT @ ITE	1 day/week		1 day/week					