

**List of Competencies for On-the-Job Training (OJT)
Work-Study Diploma in Chemical Process Technology**

Applicants applying for this course must be free from colour appreciation deficiency. A score of 100% from the Colour Blindness Test is mandatory for course admission.

S/N	List of Competencies (Standard)	Company to indicate '✓' for OJT competencies it can provide
1	Manage compliance with WSH system	
2	Manage compliance with EMS guidelines	
3	Handle hazardous materials	
4	Perform separation process units and utilities operations	
5	Perform basic frontline maintenance	
6	Perform maintenance activities for process equipment and work areas	
7	Perform material transfer in process unit operation	
8	Perform heat transfer in process unit operation	
9	Perform equipment/instrument operations using physics concepts	
10	Perform equipment/instrument operations using chemistry concepts	
11	Implement materials management procedure	
12	Perform preparation and maintenance of production equipment	
13	Produce biopharmaceutical products	
14	Perform quality assurance processes	
15	Perform sampling for quality control	
16	Perform start-up operations	
17	Perform monitoring and control operations	
18	Perform shutdown operations	
19	Perform analyses of process unit using fluid mechanics principles	
20	Perform analyses of process unit using thermodynamics principles	
	Sub-total of Competencies (Standard)	
List of Competencies (Company-specific)		
1		
2		

3	
4	
5	
	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 Chemical Process Technology

Course Objective

The course equips trainees with the skills, knowledge and professional attributes to execute and maintain safe and reliable plant/laboratory operations which includes performing unit and utility operations, basic maintenance work, process control system operations and biopharmaceutical operations, in accordance to Standard Operating Procedures (SOP). Trainees are also equipped to manage quality assurance and quality control processes to meet customers' requirement.

Modules Synopsis

Occupational Safety, Health & Environmental Management

On completion of this module, trainees should be able to maintain a safe and reliable workplace by managing compliance with Workplace Safety and Health (WSH) system and Environmental Management System/Environment, Health and Safety (EMS/EHS) guidelines as well as handle hazardous materials.

Separation Unit Operations & Maintenance

On completion of the module, trainees should be able to perform process units and utilities operations, perform basic frontline maintenance as well as perform maintenance activities for process equipment and work areas.

Material Energy Balance & Heat Transfer

On completion of the module, trainees should be able to perform material and energy transfer in process unit operations.

Applied Physics & Chemistry in Process Plant

On completion of the module, trainees should be able to perform quality testing using physics and chemistry concepts.

Biopharmaceutical Operations

On completion of the module, trainees should be able to implement materials management procedure, perform preparation and maintenance of production equipment and produce biopharmaceutical products.

Quality Assurance & Quality Control Management

On completion of the module, trainees should be able to perform quality assurance for manufacturing/production processes and perform sampling for quality control.

Reaction Unit Operations & Process Control Systems

MODULE SYNOPSIS – WSDip in Chemical Process Technology

On completion of the module, trainees should be able to perform start-up operations, perform monitoring and control operations and perform shutdown operations as well as operate a process control system.

Applied Fluid Mechanics & Thermodynamics

On completion of the module, trainees should be able to perform analyses of process unit operations using fluid mechanics and thermodynamics principles.

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.

TRAINING PATTERN SCHEDULE

WSDip in Chemical Process Technology (Class 1)

Block Release - Trainees attend daily lessons at ITE for a continuous period and then resume the next block of OJT at the workplace.

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	OJT		OJT		10 weeks block		OJT	
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	OJT		OJT		10 weeks block		OJT	
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	OJT		10 weeks block					

TRAINING PATTERN SCHEDULE

WSDip in Chemical Process Technology (Class 2)

Block Release - Trainees attend daily lessons at ITE for a continuous period and then resume the next block of OJT at the workplace.

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	OJT		OJT		OJT		10 weeks 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	OJT		OJT		OJT		10 weeks block	
April'26 Intake	April – June 2028	ITE Vacation (June) 4 weeks	July – September 2028	ITE Vacation (Sept) 2 weeks	<p align="center">WSDip Programme 2026 Start: 1 April 2026 End: 30 September 2028 Duration: 2.5 years</p> <p align="center">⚠ Final results release may be later than programme end date</p>			
3rd Year Off-JT @ ITE	OJT		10 weeks block					