

List of Competencies for On-the-Job Training (OJT)
Work-Study Diploma in Land Transport Engineering (Vehicle)

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	Conduct toolbox meeting	☐
2	Conduct workplace safety and health (WSH) checks	☐
3	Conduct diagnostic consultations	☐
4	Write technical report	☐
5	Liaise with OEM on technical matters	☐
6	Analyse material failure	☐
7	Perform non-destructive testing	☐
8	Produce 3D components	☐
9	Troubleshoot electrical circuits	☐
10	Inspect electrical circuits	☐
11	Inspect electrical components serviceability	☐
12	Install sensors and actuators	☐
13	Inspect sensors and actuators serviceability	☐
14	Troubleshoot sensor and actuator circuits	☐
15	Install motor and control system	☐
16	Troubleshoot motor control system	☐
17	Inspect motor serviceability	☐
18	Plan workshops operations	☐
19	Prepare maintenance schedule	☐
20	Prepare operational budget	☐
21	Establish maintenance and data requirements	☐
22	Perform data analysis	☐
23	Propose work improvements	☐
24	Install engine management system components	☐
25	Perform maintenance works on engine management system components	☐
26	Diagnose faults in engine management system	☐
27	Install vehicle chassis and driveline system components	☐
28	Perform maintenance works on vehicle chassis and driveline system components	☐

S/N	List of Competencies (Standard)	Company to indicate '✓' for OJT competencies it can provide
29	Diagnose faults in vehicle chassis and driveline systems	☐
30	Perform safe shutdown of high voltage system	☐
31	Diagnose high voltage vehicle system faults (include replacement of faulty components)	☐
32	Install accessory equipment on off-road vehicles	☐
33	Perform maintenance works on off-road vehicles	☐
34	Troubleshoot off-road vehicle faults	☐
	Sub-total of Competencies (Standard)	0
List of Competencies (Company-specific)		
1		
2		
3		
4		
5		
6		
7		
8		
9		
	Sub-total of Competencies (Company-specific)	0

Note:

- Company must be able to provide OJT for at least **75%** of the List of Competencies (Standard).
- 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)].
- All alternate competencies (Company-specific) must be reviewed and endorsed by ITE.
- Trainees must receive OJT and be assessed for **All** competencies selected in this List.

Total no. of competencies selected by company for OJT

0

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

34

Percentage of selected competencies

0%

Completed By:

Name

Company

MODULE SYNOPSIS – WSDip in Land Transport Engineering (Vehicle Specialization)

Course Objective

This course prepares trainees for a professional career in the Land Transport Industry. You will be equipped with skills, knowledge and professional attributes to inspect, troubleshoot, maintain and repair vehicle systems and associated sub-systems and components using appropriate methods and procedures. You will also learn to ensure safe and efficient operations of the equipment and systems.

Modules Synopsis

Workplace Safety & Health
On completion of the module, trainees should be able to implement relevant workplace safety and health regulations and carry out risk assessment and inspection.
Technical Communication
On completion of the module, trainees should be able to effectively communicate and document technical specifications and requirements with stakeholders (both internal and external) in both verbal and written forms.
Engineering Materials
On completion of the module, trainees should be able to perform various non- destructive testing (NDT) methods to detect defects and carry out analysis on the NDT results.
DC & AC Circuits
On completion of the module, trainees should be able to analyse, connect and troubleshoot DC and AC circuits.
Sensors & Actuators
On completion of the module, trainees should be able to install and inspect sensors and actuators, as well as perform circuit troubleshooting.
Electrical Machines
On completion of the module, trainees should be able to install and maintain electrical motors and drive systems.
Workshop Operations
On completion of the module, trainees should be able to plan corrective, preventive and predictive maintenance activities that ensure equipment and systems are fully functional and in optimal operating condition.
Data Analytics for Predictive Maintenance
On completion of the module, trainees should be able to perform data cleaning, transformation and analysis for predictive maintenance.

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Engine Management System

On completion of the module, trainees should be able to install, maintain & diagnose engine management system faults.

Chassis & Driveline

On completion of the module, trainees should be able to install, maintain & diagnose transmission, driveline, power steering, suspension, brake and safety system faults.

High Voltage Vehicles

On completion of the module, trainees should be able to diagnose and rectify hybrid and full electric vehicle system faults.

Off-Road Vehicles

On completion of the module, trainees should be able to maintain electro- hydraulics control systems of off-road vehicles.

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.