21.2.0 TRADE PROJECT

21.2.01 INTRODUCTION

This module unit is intended to equip the trainee with the knowledge, skills and attitudes to enable him/her carry out practical project in Motor Vehicle engineering.

21.2.02 GENERAL OBJECTIVES

By the end of the module unit, the trainee should be able to:

a) understand the importance of trade project
b) understand the methodology of carrying out a practical project
c) produce a project working drawing
d) understand the assembly drawing of the project
e) understand the operation procedures of producing projects parts
f) assemble the parts of the project
g) understand the testing procedures
h) present the completed project

21.2.03 SUBJECT SUMMARY AND TIME ALLOCATION

TRADE PROJECT

Code	Sub Module Unit	Content	Time Hours
21.2.1	Introduction to Trade Project	• Meaning of trade project • Types of project • Importance of trade project	4
21.2.2	Methodology	• Identification of the problem • Data collection • Analysis • Interpretation of data • Evaluation • Optimum solution	6

21.2.3	Production of Working Drawing	• Assembly drawing • Details of drawings • Parts lists • Sectional drawing • Bill of materials	10
21.2.4	Production of Project Parts	• Machining • Fabrication • Finishing	8
21.2.5	Assembly of Parts	• Sub-assembly • Complete assembly • Alignment • Functionability • Dimensions	12
21.2.6	Testing Procedures	• Workmanship • Finishing • Functionability	6
21.2.7	Presentation of Completed Project	Labelling the project Name tag Index number Date of presentation	4
Total Time			**50**

21.2.1 INTRODUCTION TO TRADE PROJECT

21.2.1T0 Specific Objectives
By the end of the sub module unit, the trainee should be able to:
explain the meaning of trade project
identify types of project
give importance of trade project

21.2.1C *Competence*
The trainee should have the ability to identify various types of projects

Content

21.2.1 T1 Meaning of trade project
21.2.1 T2 Types of project
21.2.1 T3 Importance of trade project
Solution to a problem
Problem solving skill
Display of technical skills

21.2.2 METHODOLOGY

21.2.2 T0 *Specific Objective*
By the end of the sub module unit, the trainee should be able to explain the methodology of carrying out practical project

21.2.2C *Competence*
The trainee should have the ability to:
apply the right methodology for carrying out a project

Content

21.2.2 T1 Methodology of carrying out the project
Needs assessment
Data collection
Analysis of the data
Interpretation of data
Synthesis of the data
Optimum solution

21.2.3 **PRODUCTION OF WORKING DRAWING**

21.2.3 T0 *Specific Objective*
By the end of the sub module unit, the trainee should be able to prepare project working detail drawings

21.2.3C *Competence*
The trainee should have the ability to

prepare project working drawings

Content

21.2.3 T1 Detail (working) drawing
blue prints
standard drawing conventions and welding symbols

21.2.4 PRODUCTION OF PROJECT PARTS

21.2.4T0 Specific Objective
By the end of the sub module unit, the trainee should be able to produce individual parts of the project

21.2.4C *Competence*
The trainee should have the ability to produce projects parts

Content

21.2.4T1 Production of individual parts
machining
fabrication
finishing

21.2.5 ASSEMBLY OF PARTS

21.2.5T0 *Specific Objective*
By the end of the sub module unit, the trainee should be able to produce an assembly drawing of the project

21.2.5C *Competence*
The trainee should have the ability to make working drawing

Content

21.2.5T1 Assembly drawing
part list
bill of materials

21.2.6 TESTING PROCEDURES

21.2.6 T0 *Specific Objectives*
By the end of the sub module unit, the trainee should be able to:

a) produce the sub-assembly and complete assembly of the project
b) test the project for alignment dimensions and functionability

21.2.6C *Competence*
The trainee should have the ability to test a finished product

	Content	
21.2.6 T1	Sub-assembly and assembly order of fitting parts sequence of fitting parts order of assembly	
21.2.6 T2	alignment dimensions and functionability	
21.2.7	**PRESENTATION OF COMPLETED PROJECT**	
21.2.7T0	*Specific Objective* By the end of the sub module unit, the trainee should be able to put identification marks on the project consisting of index number, candidate's name, and date of presentation	
21.2.7C	*Competence* The trainee should have the ability to: i) Make working drawing ii) Produce individual parts of a project iii) Produce sub-assembly and complete assembly of a project iv) Test the alignment, and functi.onability of a project	
	Content	
21.2.7T1	Labelling the project Name tag Index number Date of presentation	
	Suggested Learning/Teaching	
		- Resources - Well equipped - Automotive engineering workshop and adequate supply of materials