



ELECTRIC VEHICLE (EV) FUNDAMENTALS TRAINING



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Course Title: Electric Vehicle (EV) Fundamentals Training

Course Validity: 1 Day

Validity: Not Applicable

HRD Corp Scheme: Claimable

INTRODUCTION

This training introduces participants to the basic concepts and technologies behind Electric Vehicles (EVs). It covers EV components, energy flow, charging fundamentals and safety awareness. The course is designed to provide clear foundational understanding for individuals new to EV technology or preparing for further EV technical training.

OBJECTIVE(S):

- Understand the basic principles of Electric Vehicle operation
- Learn key EV components and system architecture
- Understand battery basics and electric motor fundamentals
- Gain awareness of EV charging types and energy flow
- Recognise basic EV safety considerations and hazards
- Build foundational knowledge for advanced EV training

TARGET GROUP(S):

- New learners in EV technology
- General staff and executives
- Sustainability & ESG teams
- Government agencies & fleet users
- Organisations transitioning to EV usage

ENTRY REQUIREMENT(S):

- Able to read, write, and communicate in Malay/English

TOPIC(S):

1. Introduction to Electric Vehicle Concepts
2. EV System Architecture and Energy Flow
3. EV Battery Basics and Energy Storage Concepts
4. Electric Motors and Power Electronics Fundamentals
5. EV Charging Types, Connectors and Basic Requirements
6. Simple Overview of EV Performance and Efficiency
7. Basic EV Safety Awareness and Hazard Identification
8. Future Trends and Developments in Electric Mobility

LIST OF REFERENCE BOOK(S):

- Solar Energy Basic Guides
- Introductory PV System Manuals
- SEDA Malaysia Solar Resources Guides
- General Renewable Energy References

LIST OF TEACHING AID(S):

- LCD projector
- Computer
- Whiteboard with accessories

METHODOLOGY(S):

- Lecture
- Simple demonstrations
- Case examples
- Group discussions

TRAINING SCHEDULE

Day 1

Time	Activity / Topic
8:30 am – 9:00 am	Registration and Introduction
9:00 am – 9:30 am	Topic 1: Introduction to EV Concepts
9:30 am – 10:00 am	Topic 2: EV System Architecture & Energy Flow
10:00 am – 10:30 am	Topic 3: EV Battery Basics
10:30 am – 10:45 am	Morning Tea Break
10:45 am – 11:15 am	Topic 4: Electric Motors & Power Electronics
11:15 am – 12:00 pm	Topic 5: EV Charging Types & Requirements
12:00 pm – 1:00 pm	Lunch Break
1:00 pm – 1:45 pm	Topic 6: EV Performance & Efficiency
1:45 pm – 2:30 pm	Topic 7: Basic EV Safety Awareness
2:30 pm – 2:45 pm	Afternoon Tea Break
2:45 pm – 3:30 pm	Topic 8: Future Trends in Electric Mobility
3:30 pm – 4:30 pm	Group Discussion & Closing Q&A