



LIFE CYCLE ASSESSMENT (LCA) TRAINING



MTBM Group Sdn. Bhd. (1600656-M)

Level 8, MCT Tower, Sky Park, One City, Jalan USJ 25/1, 47650 Subang Jaya, Selangor

Course Title: Life Cycle Assessment (LCA) Training

Course Validity: 2 Days

Validity: 3 Years

HRD Corp Scheme: Claimable

INTRODUCTION

This training provides participants with a comprehensive understanding of the Life Cycle Assessment (LCA) methodology based on ISO 14040 and ISO 14044. The course covers all stages of LCA including goal and scope definition, inventory analysis, impact assessment and interpretation. Participants will also learn how to identify system boundaries, collect data, evaluate environmental impacts and apply LCA for product development, improvement and Environmental Product Declaration (EPD) preparation.

OBJECTIVE(S):

- Understand the fundamentals and purpose of LCA.
- Learn ISO 14040 and ISO 14044 structure, principles and requirements.
- Identify and define system boundaries, functional units and data categories.
- Perform Life Cycle Inventory (LCI) and Life Cycle Impact Assessment (LCIA).
- Interpret LCA results for decision-making and sustainability improvement.
- Apply LCA knowledge to product carbon footprint and EPD development.

TARGET GROUP(S):

- Sustainability, ESG and Environmental Teams
- ISO 14001 and ISO 14064 Practitioners
- Product Development and R&D Personnel
- Engineers and Technical Executives
- Quality, Environmental and Compliance Managers
- Individuals involved in carbon footprint or EPD projects

ENTRY REQUIREMENT(S):

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

TOPIC(S):

1. Introduction to LCA and Environmental Management
2. Overview of ISO 14040 and ISO 14044 Standards
3. Goal and Scope Definition
4. Life Cycle Inventory (LCI)
5. Life Cycle Impact Assessment (LCIA)
6. Interpretation of Results and Improvement Analysis
7. LCA Applications for Product Carbon Footprint and EPD
8. Case Studies and Practical Exercises

LIST OF REFERENCE BOOK(S):

- ISO 14040: Environmental Management – Life Cycle Assessment Framework
- IPCC Guidelines for Emission Factors
- Product Category Rules (PCR) for EPD

LIST OF TEACHING AID(S):

- LCD projector
- Computer
- Whiteboard with accessories
- Flip chart with accessories
- LCA diagrams, templates and sample datasets

METHODOLOGY(S):

- Lecture
- Group discussions
- Case studies
- Practical LCA calculation exercises
- Scenario-based analysis

TRAINING SCHEDULE

Day 1

Time	Activity / Topic
8:30 am – 9:00 am	Registration and Introduction
9:00 am – 10:15 am	Topic 1: Introduction to Life Cycle Assessment
10:15 am – 10:30 am	Morning Tea Break
10:30 am – 12:30 pm	Topic 2: ISO 14040 & ISO 14044 Requirements
12:30 pm – 1:30 pm	Lunch Break
1:30 pm – 3:30 pm	Topic 3: Goal & Scope Definition, Functional Unit and Boundaries
3:30 pm – 3:45 pm	Afternoon Tea Break
3:45 pm – 5:00 pm	Topic 4: Life Cycle Inventory for Data Requirements and Modelling

TRAINING SCHEDULE

Day 2

Time	Activity / Topic
8:30 am – 9:00 am	Recap of Day 1
9:00 am – 10:15 am	Topic 5: Life Cycle Impact Assessment for Impact Categories and Methods
10:15 am – 10:30 am	Morning Tea Break
10:30 am – 12:30 pm	Topic 6: Interpretation of Results and Sensitivity Analysis
12:30 pm – 1:30 pm	Lunch Break
1:30 pm – 3:30 pm	Topic 7: LCA Applications for Product Carbon Footprint and EPD Preparation
3:30 pm – 3:45 pm	Afternoon Tea Break
3:45 pm – 5:00 pm	Practical Exercise: Developing a Simple LCA Model and Wrap-Up