



*Training Course:
Life Cycle Assessment and Circular Economy*

*28 July - 1 August 2025
Barcelona (Spain)
Grupotel Gran Via 678*

Training Course: Life Cycle Assessment and Circular Economy

Training Course code: SC235352 From: 28 July - 1 August 2025 Venue: Barcelona (Spain) - Grupotel Gran Via 678
Training Course Fees: 6000 € Euro

Introduction

In today's world, where environmental sustainability is paramount, understanding the interconnectedness of environmental impacts and adopting strategies for mitigating them is crucial. Life Cycle Assessment LCA and Circular Economy principles provide valuable frameworks for assessing and addressing these challenges. This comprehensive training program aims to equip participants with the knowledge and tools necessary to integrate LCA methodologies and Circular Economy principles into their professional practices. Through a combination of theoretical learning, practical exercises, and software training, participants will gain the skills needed to analyze environmental impacts, design sustainable products and systems, and contribute to a more circular economy.

Objectives

- Gain an understanding of the environmental challenges related to pollution, waste, and biodiversity loss.
- Learn the principles and methodologies of Life Cycle Assessment LCA, including its criticisms and limitations.
- Familiarize oneself with international standards governing LCA practices, such as ISO 14040 and 14044.
- Acquire hands-on experience in conducting LCA using software tools like Ecochain Mobius and databases like Ecoinvent.
- Explore the core principles of the Circular Economy and understand its significance in achieving sustainability goals.
- Learn how to design products and systems for a circular economy, including the assessment of recyclability using tools like RecyClass.
- Understand the initiatives and strategies driving the transition to a New Plastic Economy and the role of LCA in supporting these efforts.
- Apply LCA methodologies and Circular Economy principles through practical exercises and design challenges.
- Evaluate the outcomes of exercises and discussions, and identify opportunities for improvement and further learning.

Target Audience

This training program is designed for professionals and stakeholders from various sectors, including but not limited to:

- Environmental engineers and consultants
- Sustainability managers
- Product designers and engineers
- Supply chain managers
- Policy makers and regulators
- Researchers and academics in environmental science and engineering

Outline

Day 1: Understanding Environmental Impacts

- Pollution, Waste, and Biodiversity Loss
 - Overview of environmental pollution, waste generation, and biodiversity loss.
 - Discussion on the interconnectedness of these issues and their global impact.

Day 2: Introduction to Life Cycle Assessment LCA

- Introduction to Life Cycle Assessment LCA
 - Definition and principles of LCA.
 - Criticism and limitations of LCA, including boundary setting, data quality, and interpretation issues.
- Overview of LCA Practices and Standards
 - Introduction to common practices and methodologies used in LCA studies.
 - Overview of international standards governing LCA, including ISO 14040 and 14044.

Day 3: Practical Application of LCA

- ISO 14040 and 14044 Standards
 - In-depth exploration of ISO 14040 and 14044 standards.
 - Understanding the structure and requirements of these standards for conducting robust LCAs.
- Conducting a Life Cycle Assessment using Ecochain Mobius software
 - Hands-on training on using Ecochain Mobius software for LCA.
 - Utilizing the Ecoinvent Life Cycle Inventory database for data input and analysis.

Day 4: Circular Economy Principles and Practices

- Introduction to the Circular Economy
 - Definition and core principles of the circular economy.
 - Discussion on the importance of transitioning from linear to circular business models.
- Designing for a Circular Economy
 - Overview of tools and frameworks for designing products and systems with circularity in mind.
 - Introduction to RecyClass tool for assessing recyclability and circularity of packaging.

Day 5: Integration of LCA and Circular Economy

- New Plastic Economy
 - Examination of EU plastics strategy and UN New Plastics Economy initiative.
 - Discussion on the role of LCA in assessing the environmental impact of plastic usage and exploring circular solutions.
- LCA and Circular Economy Design Exercise
 - Practical exercise where participants apply LCA principles to design products or systems for the circular economy.
 - Group discussions and feedback on proposed designs.
- Exercise Evaluation
 - Evaluation and review of participants' exercise outcomes.
 - Recap of key learnings from the training program.
 - Q&A session and final remarks.

Registration form on the Training Course: Life Cycle Assessment and Circular Economy

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