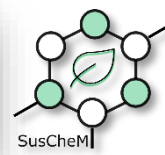




Life Cycle Assessment Course

Fundamentals & Applications



Index

 About this Course	Page 1
 Importance of Life Cycle Assessment	Page 2
 Key Takeaways	Page 3
 Course Outline	Page 4
 Course Fee	Page 7
 Completion Certificate	Page 8
 Participant's Experience	Page 9
 Meet your Instructors	Page 10
 Contacts	Page 13

About this Course

- ✚ “Life Cycle Assessment: Fundamentals and Applications” is an online course offered by the [Sustainability of Chemicals and Materials \(SusCheM\) group](#) of the [Aachen-Maastricht Institute for Biobased Materials \(AMIBM\)](#), Maastricht University.
- ✚ This course is designed with an introduction to the concepts and principles of LCA
- ✚ Expert guidance on selecting the appropriate scope for the study, defining system boundaries, identifying data sources, and interpreting the results.
- ✚ A step-by-step guide on how to perform selected case studies in a dedicated section
- ✚ This course is designed for students, industry professionals, and others who want to familiarize themselves with the LCA and overall impact assessment.



4 Weeks



2 hour/week



Online

Importance of Life Cycle Assessment



- + Provides a comprehensive and systematic approach to evaluate the environmental impacts of products, processes and services **throughout their life cycle**, from raw material extraction to end-of-life disposal or recycling.
- + Enables the **comparison** of different alternatives, ensuring a fair and transparent assessment.
- + Supports the identification and implementation of **improvement opportunities** along the life cycle stages.
- + Contributes to the integration of environmental aspects into **decision-making and strategic planning**, and to the **alignment of environmental goals**.

Key Takeaways

At the end of the course, participants will be able to;

-  Recall the fundamentals of **life cycle thinking**
-  Describe and understand **what LCA is and why it is** an important tool for sustainability
-  Explain four **standardized steps** of an LCA study
-  Explain what a **functional unit** is and give an example for a product or system
-  Explain what defining **system boundaries** means
-  Classify different types of **allocation** systems in LCA studies
-  Summarize how **environmental impacts** are calculated in an LCA study
-  **Interpret** the results of an LCA study
-  **Compare** the results of different LCA studies for similar products or systems

Course Outline

✚ This course consists of four online sessions conducted through Zoom. The participation link will be provided before the start of the course.

✚ The lectures will be recorded and shared with all participants. If you prefer not to have your face recorded, you can turn off your camera during the sessions

✚ **Session 1 – Sustainability assessment and introduction to LCA**

Date: November 11th 16:00 – 18:00 (CEST Time Zone – Amsterdam, Berlin, Rome, Stockholm, Vienna)

Time	Content	Instructor
16:00 – 16:15	Welcome and introduction of the course	Dr. Alonso Albalate
16:15 – 16:45	Sustainability Assessment	Prof. Yvonne van der Meer
16:45 – 16:55	Open Session: Q&A	
16:55 – 17:00	<i>Break</i>	
17:00 – 17:50	LCA framework (Part 1): Goal & Scope definition	Dr. Marivi Belioka
17:50 – 18:00	Open Session: Q&A	
18:00	<i>End of the session</i>	



Session 2 – Life cycle inventory and impact assessment

Date: November 18th 16:00 – 18:00 (CEST Time Zone – Amsterdam, Berlin, Rome, Stockholm, Vienna)

Time	Content	Instructor
16:00 – 16:40	LCA Framework (Part 2): Life cycle inventory	Dr. Shweta Singh
16:40 – 16:50	Open Session: Q&A	
16:50 – 17:00	Break	
17:00 – 17:40	LCA framework (Part 3): Impact Assessment	Dr. Pranav Nakhate
17.40 – 18:00	Open Session: Q&A	
18:00	End of the session	



Session 3 – Interpretation and methodological innovations

Date: November 25th 16:00 – 18:00 (CEST Time Zone – Amsterdam, Berlin, Rome, Stockholm, Vienna)

Time	Content	Instructor
16:00 – 16:40	LCA Framework (Part 4): Interpretation	Dr. Alonso Albalade
16:40 – 16:50	Open Session: Q&A	
16:50 – 17:00	Break	
17:00 – 17:40	Innovations within LCA methodology	Dr. Manoj Kumar Nallapaneni
17.40 – 18:00	Open Session: Q&A	
18:00	End of the session	



Session 4 – LCA applications: Case studies

Date: December 02nd 16:00 – 18:00 (CEST Time Zone – Amsterdam, Berlin, Rome, Stockholm, Vienna)

Time	Content
16.00	Presentations on how to develop an LCA case study
17.00	Break
17.05	Open session and Q&As
18.00	<i>End of the session</i>

Course Fee

Participant Category	Fee 2025
Industry Participant	€ 500
Non-Profits, PhDs, Academics	€ 350
Students (Limited spots)	€ 100

Completion Certificate

Participants who successfully completes the “*Life Cycle Assessment: fundamentals and applications*” online course will receive a certificate of completion which can be leveraged to advance their career and get further expert knowledge in Sustainability

Certificate of Completion

The Sustainability of Chemicals and Materials (SusCheM) Group of the Aachen-Maastricht Institute for Biobased Materials (AMIBM),
Maastricht University, certifies that

XXXXXXXX XXXXXX

has participated in the 8 hour-online course
“*Life Cycle Assessment: Fundamentals and Applications*”

May 2025



Prof. Dr. Yvonne van der Meer
Course Manager

Dr. Pranav Nakhate
Course Coordinator

Dr. Marivi Belioika
Course Coordinator



Participant's Experiences

"The course was excellently designed in such a way that even a beginner like me could grasp the concepts and even went through some interesting research articles for the same."

"An excellent opportunity to improve my LCA skills "

"I liked the scope of the content covered, which can be understood by beginners and is useful for practitioners".

"I enjoyed every section of the course. The course has given me a holistic introduction to LCA and a broader perspective on sustainability assessment."

"Clear lectures, good visualization and the nice discussion during the case studies "

"I liked the general overview of LCA. The structure of the content the slides were very useful "

Meet your instructors



Prof. Dr. Yvonne van der Meer

Professor & Scientific Co-Director, AMIBM, Maastricht University

Expertise: *Biobased Economy, Circular Economy, renewable materials, Prospective & Ex-ante technology assessment, Public-Private cooperation*

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Dr. Alonso Albalate Ramirez (Course coordinator)

Postdoctoral Researcher, AMIBM, Maastricht University

Expertise: *Life Cycle Assessment, Geographically Informed Environmental Assessment, End-of-Life Modeling, Sustainable Processes, Geographic Information Systems*

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Dr. Pranav Nakhate

Assistant Professor, AMIBM, Maastricht University

Expertise: Sustainability assessment, Hybrid wastewater treatment, Process intensification studies, Sustainability in Pharmaceuticals, Bioactive components.

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Dr. Manoj Kumar Nallapaneni

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Expertise: Energy conversion; PV performance; Degradation; Energy Informatics; Internet of Things; Blockchain.

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Dr. Shweta Singh

Postdoctoral researcher, AMIBM, Maastricht University

Expertise: *Decision-making, Optimization techniques, Renewable Energy Technologies, Polymer composites.*

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Dr. Marivi Belioka

Postdoctoral researcher, AMIBM, Maastricht University

Expertise: *Plastic waste management, microplastics, life cycle assessment, environmental economics, and multi-criteria decision-making.*

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Let's build your LCA competency



Last date to register for the course is **4th November 2026**

For more details, please visit <http://lcatraining.nl>

or send an e-mail to:

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Illustration by: Cris Garcia Saravia Ortiz de Montellano

Register Now