
Course Environmental Sustainability

Webinar “Introduction to LCA modelling: theoretical background and practical exercises using openLCA software”

1st, 3rd and 4th June 2021

Invited lecturers: Prof. Francesco Romagnoli and Dr. Maksims Feofilovs, Riga Technical University, Institute of Energy Systems and Environment (Latvia).

Aim and objectives of the seminar

The webinar aims to introduce the main aspects of the LCA approach exploring its modelling application. In particular, the webinar will provide the basic concepts of the LCA according to the ISO STANDARDS 14044 and the introduction to **openLCA** software modelling (<https://www.openlca.org/>).

The main learning outcomes are:

1. Understanding of the main life cycle thinking concepts and key aspects on the environmental impacts;
2. Getting acquainted with Life Cycle Assessment towards the main methodological steps according to the ISO STANDARDS 14044;
3. Use of openLCA software with the support of given exercises;
4. Practical assignment for students modelling with **openLCA** software.

More in specific the seminar will be organized as follows:

First-day seminar: 1st June – 14:00 – 18:00 (CEST)

LCA: an overview of the theoretical background (F. Romagnoli)

- Life Cycle Thinking general aspects
- What is LCA?
- ISO STANDARDS 14044-2006
- Goal and Scope and key examples
- Life Cycle Inventory (LCI) analysis and key examples
- Life Cycle Impact Assessment (LCIA) and key examples
- LCA Interpretation
- Simple didactical case studies
- Take home message

Second-day seminar: 3rd June – 09:30 – 12:30 (CEST)

LCA modelling with openLCA software (M. Feofilovs)

- Installation of the software and resolution of the main installation problems
- Introduction to the openLCA software
- Practice with exercise in openLCA
- Explanation of the practical assignment for the third day

Third-day seminar: 4th June – 09:30 – 11:30 (CEST)

Presentation of the practical assignment and discussion of the solution (F. Romagnoli and M. Feofilovs)

- Presentation of the openLCA model of the practical assignment (M. Feofilovs)
- Discussion on the main issues and problem encountered by students (F. Romagnoli and M. Feofilovs)

For further information please contact prof. Elena Collina (elena.collina@unimib.it)