

DESTEC



UNIVERSITÀ DI PISA

Dipartimento di Ingegneria dell'Energia, dei Sistemi, del Territorio e delle Costruzioni

Corso di Dottorato di Ricerca in Ingegneria dell'Energia, dei Sistemi,
del Territorio e delle Costruzioni

Largo Lucio Lazzarino - 56122 Pisa (Italy) - Tel. +39 050 2217100

Invitation to the Seminar:

Life Cycle Assessment – Fundamentals

"The theoretical basis for performing LCA: the phases of the study",

Wednesday, 15 April 2026, 11:00–13:00

"From Theory to Practice: A Guide to Life Cycle Assessment (LCA)" ,

Wednesday, 22 April 2026, 11:00–13:00

held by

Isabella Pecorini, PhD

Assistant Professor in Sanitary and Environmental Engineering at the Department of Energy, Systems, Territory and Construction Engineering, University of Pisa. She is an environmental engineer and holds a PhD obtained in 2010 with a doctoral thesis entitled "Landfill Gas Emissions Monitoring Systems for the Optimization of Energy Recovery."

Her main research interests focus on the valorisation of the organic fraction of municipal solid waste within a bioeconomy framework and on the reduction of environmental impacts associated with landfill gas emissions. She is currently the project manager of several research projects on microbial oxidation systems for greenhouse gas mitigation and on biohydrogen production from biowaste. She is a member of the International Waste Working Group (Waste Biorefinery and Landfill Gas Emission and Mitigation Task).

She teaches Life Cycle Assessment and Environmental Certifications in the Master's Degree Programme in Civil and Environmental Infrastructure Engineering, and the shared/mutual course Life Cycle Assessment and Environmental Certifications in the five-year Single-Cycle Master's Degree in Building Engineering–Architecture, at the University of Pisa.

**Wednesday, 15 April 2026, 11:00–13:00 and Wednesday, 22 April 2026, 11:00–13:00
at DESTEC – aula Tesi via gabba 22, Pisa**

This two-day course provides a comprehensive introduction to Life Cycle Assessment (LCA), combining solid theoretical foundations with practical applications. Participants will explore the main phases of an LCA study, methodological assumptions, and international standards. The course also focuses on hands-on implementation, data management, and the effective use of LCA results to support decision-making.

Agenda

DAY 1 The theoretical basis for performing LCA: the phases of the study

- Principles and objectives of Life Cycle Assessment (LCA)
- Main phases of an LCA study: goal and scope, inventory, impact assessment, and interpretation
- Methodological assumptions, limitations, and standards (ISO 14040–14044)

DAY 2 From Theory to Practice: A Guide to Life Cycle Assessment (LCA)

- Practical implementation of LCA methods and tools
- Data management, modeling choices, and case studies
- Interpretation and use of LCA results in decision-making