



National
Technical
University
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COUNCIL

KOS2026

24-27 JUNE
KOS ISLAND, GREECE

kos2026.uest.gr

**1st Summer School:
LCA for Circular
Waste Management
(LCA4WASTE)**

22-23 JUNE

An aerial photograph of ancient stone ruins on a rocky island. The ruins include several rectangular buildings with walls and some standing columns. The island is surrounded by clear blue water, and a few people can be seen walking on the ruins. The background shows more of the island and the sea under a bright sky.

1st Summer School: LCA for Circular Waste Management (LCA4WASTE)

This **Summer School** offers **PhD students** a focused and hands-on introduction to **Life Cycle Assessment (LCA)** applied to circular waste management. Participants will gain advanced methodological knowledge, explore real case studies, and perform guided LCA calculations with experts in the field.

The course combines lectures, interactive discussions, and practical exercises, providing a unique opportunity to deepen research skills, connect with international experts, and strengthen competencies relevant for academic and professional careers in sustainability and circular economy.

- **Duration:** 2 days (09:00–17:00)
- **Target group:** Professionals, researchers, and PhD students in environmental, chemical, and sustainability-related disciplines interested in gaining a foundational understanding of Life Cycle Assessment (LCA) for circular waste management.
- **Format:** Lectures, discussions, and short interactive sessions

Students are required to complete online Module 1 of the LIFE-C course (**available at <https://multi-asm.eu/mooc/my/>**) prior to the Summer School and prepare Assignment 1, which consists of selecting a scientific article on LCA in Waste Management and preparing a presentation to be delivered and discussed during the Summer School.

- For details about the LIFE-C project, **please, visit <https://life-c.eu/>**

June 22: Circular Economy & Life Cycle Assessment

9.15-9.30	Maria Loizidou, National Technical University of Athens Welcome by Prof. Maria Loizidou
09:30-11:00	Konstantinos Moustakas, National Technical University of Athens Sustainable Solid Waste Management & Circular Economy
11:15-11:30	Coffee Break
11:30-12:45	Lidia Lombardi, Niccolò Cusano University (IT) Life Cycle Assessment in Waste Management <i>Overview of the summer school, objectives, participant introductions. The lecture introduces the role of Life Cycle Assessment (LCA) in waste management, covering its application in understanding, improving, and comparing waste management systems, as well as in technology and policy development. After the introduction, practical examples are presented to illustrate real-world uses of LCA.</i>
12:45-13:45	Lunch Break
13:45-15:15	Presentations and discussion of the assignments by the participants Moderators: Lidia Lombardi, Mariam Abdulkareem (Lappeenranta-Lathi Technical University) <i>Participants will present selected scientific case studies on LCA in Waste Management. The session will include illustration of study objectives, methodological choices, and main findings, followed by moderated discussion to compare approaches, identify challenges, and share best practices. This interactive session aims to stimulate critical thinking and peer learning among participants.</i>
15:15-15:30	Break
15:30-17:00	Presentations and discussion of the assignments by the participants Moderators: Lidia Lombardi Mariam Abdulkareem <i>Participants will present selected scientific case studies on LCA in Waste Management. The session will include illustration of study objectives, methodological choices, and main findings, followed by moderated discussion to compare approaches, identify challenges, and share best practices. This interactive session aims to stimulate critical thinking and peer learning among participants.</i>

June 23: Applying LCA for Sustainable Waste Management and Resource Recovery

9.00-10.00	Ana Arias (Imperial College London) Risk & Decision Sciences (CERIDES) of the European University Cyprus <i>LCA for resource recovery (draft title)</i>
10:00-10:30	Presentation of study cases for the LCA calculation Lidia Lombardi Mariam Abdulkareem Szymon Sobock (Silesian University of Technology, PL) Ana Arias (Imperial College London) <i>The teachers will provide structured datasets, system descriptions, and input parameters for the LCA exercises.</i>
10:30-11:15	Hands-on LCA Exercise Session Tutors: Lidia Lombardi Mariam Abdulkareem Szymon Sobock (online) Ana Arias <i>Participants will use these data to perform calculations and interpret environmental impact results under guided supervision.</i>
11:15-11:30	Coffee Break
11:30-12:45	Hands-on LCA Exercise Session Tutors: Lidia Lombardi Mariam Abdulkareem Szymon Sobock Ana Arias <i>Participants will use these data to perform calculations and interpret environmental impact results under guided supervision.</i>
12:45-13:45	Lunch Break

June 23: Applying LCA for Sustainable Waste Management and Resource Recovery

13:45-15:00	<p>LCA Results Presentation and Discussion</p> <p>Moderators: Lidia Lombardi Mariam Abdulkareem Szymon Sobock Ana Arias</p> <p><i>Participants will present their LCA calculations and analyses, illustrating system boundaries, inventory data, impact assessment results, and interpretation. The session will include peer-to-peer discussion and expert feedback to strengthen critical evaluation skills and methodological understanding.</i></p>
15:00-15:15	<p>Break</p>
15:15-16:30	<p>LCA Results Presentation and Discussion</p> <p>Moderators: Lidia Lombardi Mariam Abdulkareem Szymon Sobock Ana Arias</p> <p><i>Participants will present their LCA calculations and analyses, illustrating system boundaries, inventory data, impact assessment results, and interpretation. The session will include peer-to-peer discussion and expert feedback to strengthen critical evaluation skills and methodological understanding.</i></p>
16:30-17:00	<p>Wrap-up & Closing Session</p> <p>Lidia Lombardi Mariam Abdulkareem Ana Arias</p> <p><i>Wrap-up session by the teachers, summarizing the key concepts and learning outcomes of the day. Final remarks and collection of participants' feedback through an evaluation questionnaire to assess satisfaction and gather suggestions for future editions.</i></p>

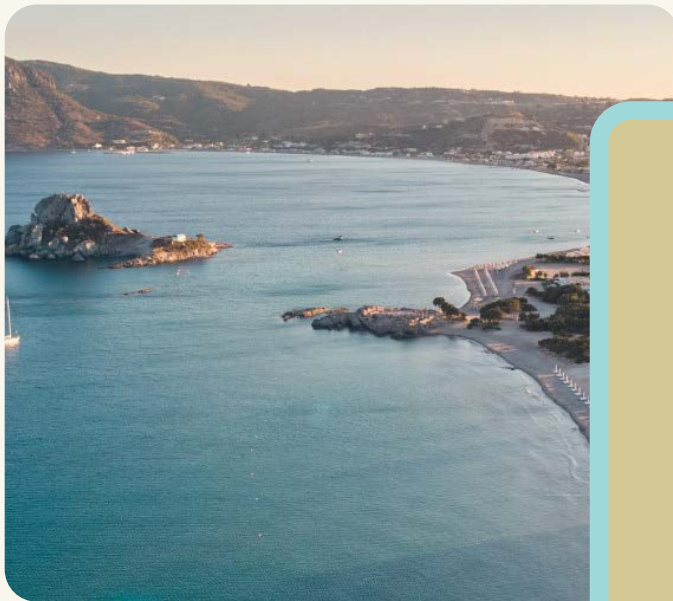
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Contact

National Technical University of Athens
School of Chemical Engineering
Unit of Environmental Science & Technology

9, Heroon Polytechniou Street
157 73 Zographou Campus, Athens, Greece
Website: www.uest.gr

Prof. Maria Loizidou
email: mloiz@chemeng.ntua.gr

Dr. Konstantinos Moustakas
email: konmoust@central.ntua.gr



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