



Application of Life Cycle Assessment to Circular Economy

eng. Grazia Policastro

Credits: 3 CFU

Number of hours: 18 frontal hours

Date: 17, 20, 24, 27, November 2025; 01, 04 December 2025

Objectives: The course aims to equip PhD students with fundamental skills to conduct Life Cycle Assessment (LCA) studies in the circular economy sector and research fields. By the end of the course, participants will proficiently conduct LCA studies using one of the most widely used software for this purpose. They will have gained the requisite knowledge to assess environmental sustainability and optimize circular economy processes effectively.

Course programme: The course will cover the following topics: fundamental principles of Life Cycle Assessment (LCA) and the circular economy, tutorials on utilizing SimaPro software, practical exercises for creating case studies that apply LCA to circular economy processes, exploring LCA applications in research sectors, and developing research projects focused on LCA and the circular economy

Teaching materials: Lecture notes and/or indication of websites provided by the teacher.

Assessment methods: Final interview

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Lectures Program

N	Date	Schedule	Duration	Topic / Teacher
1	17/11/24	14:30 - 16:30	2 hours	The life cycle assessment (LCA) procedure
2	20/01/24	14:30 - 18:30	4 hours	SimaPro software tutorial
3	24/01/24	14:30 - 18:30	4 hours	Application of LCA to Circular Economy (CE)
4	27/01/24	14:30 - 16:30	2 hours	LCA and research activities
5	01/01/24	14:30 - 18:30	4 hours	Research projects on the application of LCA to CE
6	04/01/24	14:30 - 16:30	2 hours	Case studies presentation
