



Full Syllabus



Course Title

Industrial Ecology and Its Business Context

Lecturer

Dr. Meiron Zollmann

Semester

B, 2023-2024

Course requirements

Frontal / hybrid instruction in zoom, discussions, assignment (class presentation and written report) and final exam. The course will include 11 sessions of 2 academic hours each. Participation via zoom is only with pre-approval of the lecturer.

Final grade components

Attendance according to the university rules (80%) is compulsory.

Grade components: written report (60%), class presentation in couples (20%) and class quiz (20%)

Course schedule

Class no.	Subject
1	Introduction, class structure and requirements; intro to industrial ecology
2	History of industrial ecology and analogies between biological and industrial ecology
3	A brief history of business and the environment, Eco-efficiency, Life Cycle thinking and Introduction to Life Cycle Assessment (LCA)
4	LCA history and future, ISO14040 standard for conducting LCA, and LCA methodology: Goal and scope definition and Inventory and impact analysis
5	LCA allocation problems and LCA communication
6	Normalization of LCA results, LCA software and LCA alternatives
7	Materials Flow Analysis (MFA)
8	Design for the environment and Cradle to cradle
9	Industrial symbiosis
10	Use phase and sustainable consumption
11	Product End of life management and circular economy

*order of topics subject to change

Course book

Industrial Ecology and Sustainable Engineering, T.E Graedel and B.R. Allenby