AL2608 Life Cycle Assessment 7.5 credits

Livscykelanalys

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

The course syllabus is valid from autumn 2021

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Environmental Engineering

Specific prerequisites

At least 180 credits or completed Degree of Bachelor. Completed course AL1301 or an equivalent basic course in environment and sustainable development

Courses from Upper Secondary School corresponding to the courses Eng B/6 according to the Swedish upper secondary school system

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The general aim of the course is to develop the student's ability to assess environmental impact of complex systems in technology and urban planning based on a life-cycle perspective by giving theoretical and practical skills in Life Cycle Assessment (LCA).

After passing the course, the students should be able to:

1. Give an account of the aim applications of the LCA method.
2. Explain the analytical phases and central concepts of the LCA method.
3. Apply the analytical phases and central concepts of the LCA method on complex systems in technology and urban planning.
4. Identify uncertainties in LCA method and data and evaluate how these influence the results.
5. Report in writing the completed LCA study according to ISO's standard for LCA.
6. Use LCA software.
7. Give an account of the results orally of the completed LCA the study.
8. Work in a collaborative project setting
9. Report in writing and give an account of a critical review orally of an LCA report.

Course contents

The course covers:

- LCA methodology
- LCA tools and - databases
- Specialisation of life cycle impact in a specific field that the students choose independently
- Lecture from industry with examples of use of LCA for decision making

Examination

- PRO1 - Project work, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Home exam, 2.5 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH’s coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.