



## Life Cycle Assessment

### Livscykelanalys

7.5 credits

7.5 högskolepoäng

---

**Ladok Code:** TK751C

**Version:** 2.0

**Established by:** Board of the department 2009-10-02

**Valid from:** Autumn 2009

**Education Cycle:** Second cycle

**Main Field of Study (Progressive Specialisation):** Environmental and Processing Technology (A1N)

**Disciplinary Domain:** Technology

**Prerequisites:** These prerequisites do not apply to students within the programme Science without Borders.

Meets acceptance requirements for: masters programme in the field of energy and materials for sustainable development, or equivalent.

**Subject Area:** Chemical Engineering

**Grading Scale:** ECTS-credits

---

## Content

- principles and structure of life cycle assessment
- definition of objectives and scope
- functional unit
- data sources
- the process tree
- system boundaries
- allocation
- inventory analysis
- methods for assessment of environmental impact
- classification
- characterisation
- weighting and weighting methods
- interpretation
- life cycle assessment as a basis for product development and green marketing

## Learning Outcomes

After completing the course, students must be able:

- to plan implementation of a life cycle assessment
- to produce a process tree for the product system studied
- to implement an inventory, using as a basis the inbound and outbound flows of the process tree studied
- to interpret the results of a life cycle assessment on the basis of the defined objective
- to be aware of how life cycle assessments can be used to support activities such as green marketing and product development.

## Forms of Teaching

Teaching will consist of lectures and calculation exercises. Students must also - independently or in pairs - carry out a major life cycle assessment which includes all important subelements.

The language of instruction is English.

### **Forms of Examination**

The course will be examined through the following examination elements:

*Examination and project*

Learning outcomes:

Credits: 7.5

Grading scale: ECTS-credits

The course will be examined by means of a written examination and a project, which together will give 7.5 credits.  
ECTS grading scale.

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

### **Literature and Other Teaching Materials**

#### **Literature**

The Hitch Hiker Guide to LCA, Henrikke Baumann, Anne-Marie Tillman, Studentlitteratur, 2004, ISBN 91-44-02364-2

### **Student Influence and Evaluation**

The head of department and teacher responsible for the course are responsible for ensuring that students are invited systematically and regularly to put forward their views on the course, and that these are documented. The results of these assessments, which will take place either verbally or in writing, form the basis for the structure of the course.

### **Miscellaneous**

Study language: English