

**SYLLABUS**

# **Ecodesign 7.5 credits**

## **K0023N**

**Miljödriven produktutveckling**

**Course syllabus admitted: Spring 2024 Sp 3 - Present**

DECISION DATE  
**2023-02-15**

# Ecodesign 7.5 credits K0023N

## Miljödriven produktutveckling

### First cycle, K0023N

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Industriell ekonomi	Industrial Engineering and Management

## Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and completed courses of at least 60 credits, with at least the grade Pass. This must include 15 credits in the subject area Industrial Engineering and Management, for example: Industrial management with a sustainability perspective (G0010N) 7,5 credits, Sustainable development (L0010N) 7,5 credits, or equivalent knowledge.

## Selection

The selection is based on 1-165 credits.

## Course Aim

The aim of the course is for the student to develop knowledge of environmental and sustainability analyzes in product development, to be able to generate improvement ideas based on the analysis results and to learn the pros and cons of different types of analyses. After passing the course, the student must be able to:

### Knowledge and understanding

- understand and be able to describe relevant international environmental product legislation.
- understand and be able to describe international standards around environmentally related. product development.
- apply life cycle assessment (LCA) to analyze and compare product-related environmental performance.
- apply design for increased product life and recycling as examples of how companies can contribute to a circular economy.
- propose materials and justify why the choice is likely to lead to increased environmental and sustainability performance.
- compare the approaches, methods and tools included in the course to identify their advantages and disadvantages.

### Skills and abilities

- use analysis results to critically explain the environmental and sustainability performance of a product and its function throughout its life cycle.
- communicate analysis results including choice of scope and assumptions made both in writing and orally.

### Evaluation ability and approach

- propose well-motivated methods for environmental and sustainability analyzes in product development in different types of companies.
- identify own need for additional knowledge within environmentally driven product development.

## Contents

The course focuses on the development of knowledge about environmental and sustainability analyzes in product development. A significant part of the course consists of the practical application of life cycle analysis (LCA) with the aim of analyzing and comparing the environmental impact of products throughout their life cycle. This part of the course also includes teaching in legislation and standards that govern the need and structure of LCA. The course also includes design for increased product life and recycling, training in proposing materials and justifying why the choice leads to reduced environmental impact, as well as training in using and communicating analysis results to explain how a product affects the environment throughout its life cycle. The course is continuously examined orally and in writing.

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Teaching takes place in the form of lectures, group work and seminars. Group work is presented orally and in writing. Compulsory attendance applies in certain moments. The course is given in Swedish.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.

Written exam, 3,5 cr, grade scale U, 3, 4, 5

Group assignments, 4,0 cr, grade scale U eller G

## Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

## Remarks

Students must register for the courses themselves, or contact ETKS educational administration [eduetks@ltu.se](mailto:eduetks@ltu.se), not later than three days after the quarter commences. Failure to do so can result in the place being lost. This rule also applies to students with a guaranteed place.

## Course offered by

Department of Social Sciences, Technology and Arts

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Group assignments	U G#	4	Mandatory	S24	
0002	Written exam	G U 3 4 5	3.5	Mandatory	S24	

## Syllabus established

by Director of Undergraduate Studies Daniel Örtqvist, Department of Business Administration, Technology and

Social Sciences 2023-02-15