



ML2300 Sustainable Production

9.0 credits

Hållbar produktion

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

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

Establishment

Course syllabus for ML2300 valid from Autumn 2019

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Language of instruction

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

Intended learning outcomes

On completion of the course, the students should be able to:

- describe how the different subject areas production management, production logistics and industrial operational reliability relate to sustainable production development
- account for motives, driving forces and obstacles for sustainable production
- explain and analyse the sustainable production system where environmental aspects and other sustainability aspects have connections to the system components and relations
- evaluate, analyse and compare alternatives for development of production, considering economic, environmental and social sustainability, based on established methods and tools
- relate a sustainable production to sustainability aspects regarding product supply chains and transport
- discuss the role of production for an increased life-cycle perspective and circular material and energy flows

Course contents

- Dynamics in value creation and sustainability
- Theory and practice of sustainable production
- Planning, operation and evaluation of sustainable production system
- Environmentally conscious process design
- Relation between the product, the production and the supply chains for sustainable production
- Selected subjects in sustainable production: Production Management for sustainable Production/ The role of logistics in sustainable production/ Industrial operational reliability and robustness for sustainable production/The relation between production and circular economy: Material flow and energy flow

Specific prerequisites

Completed course ML1503 Industrial systems, 6 credits or the equivalent.

Completed course Bachelor thesis, 15 credits or the equivalent.

Examination

- INL1 - Assignment, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written exam, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 3.0 credits, grading scale: P, 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.

Other requirements for final grade

Attendance at specified compulsory course dates (or completed compensation assignment to these) are requirements for final grading.

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.