



# ML116U Lean Production 7.5 credits

## Lean Produktion

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

## Establishment

The official course syllabus is valid from the autumn semester 2022 in accordance with the decision from the head of school: M-2022-0172. Decision date: 09/02/2022

## Grading scale

P, F

## Education cycle

First cycle

## Main field of study

Technology

## Language of instruction

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

## Intended learning outcomes

After completed contract education, the participant should be able to:

- Describe models for Lean Production related to the preconditions and sustainability of the production system.
- Analyse and evaluate where your own activities/division is itself based on a lean production system.
- Explain methods and tools that are applied in the lean production suggest they that are appropriate for the own activities/division improvement work and apply these.
- Based on reasoning around lean principles formulate a vision and concretise it in an action plan for the activities.

## Course contents

The aim of the course is to give an overall picture of the concept Lean production. Lean production consists of a set principles and technologies which are included in the systems of the activities and processes. These can be derived to a special business philosophy and strategy that includes the activities of the whole organisation. The course places basis for continued broader and deeper studies of how the activities are carried out of companies with a Lean business strategy.

The course should introduce and base the basic principles of a Lean production. The Lean implies a refinement of industrial systems beyond the logic and principles of the mass production. The participant should receive knowledge that is to help to understand the logic in this business philosophy and strategy. Furthermore to in own activities be able to identify possibilities to eliminate activities that not are value raising decrease the lead times of activities, be able to react faster on new customer needs and to be able to use available resources more efficiently. The participant should have basic knowledge on completion of the course on:

- Strategies and principles of Lean production
- Design of value flows
- Drawing and pressing production system
- Stable processes and standardised working method
- Quality philosophy and quality methodology
- Motivation and team organisation
- The management system
- Transformation to a Lean company culture

The course is interactive, and large parts are based on flipped classroom pedagogy. The course consists of lectures, exercises and games, assignments and projects and other own study work. The teacher directed learning is distributed over 5 occasions à 2 days with about 4 weeks of disclosures. Between the occasions, compulsory literature studies and assignments are carried out. As education support is used in the course the course portal Canvas.

## Examination

- PRO1 - Project, 1.5 credits, grading scale: P, F
- SEM1 - Seminars, 3.0 credits, grading scale: P, F

- ÖVN1 - Assignments, 3.0 credits, grading scale: P, F

## Other requirements for final grade

Grading criteria for SEM1 - attendance requirements on 80%.

## 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.