



## Course syllabus

Faculty of Technology

Department of Mechanical Engineering

1MT016 Produktionsteknik, 7,5 högskolepoäng

1MT016 Production Technology, 7.5 credits

**Main field of study**

Mechanical Engineering

**Subject Group**

Mechanical Engineering

**Level of classification**

First Level

**Progression**

G1F

**Date of Ratification**

Approved 2012-11-12

Revised 2019-03-13 by Faculty of Technology. Revision of content, objectives and literature.

The course syllabus is valid from spring semester 2020

**Prerequisites**

General entry requirements and Physics B, Mathematics D. Quality Management, 7,5 credits or equivalent.

## Objectives

After completing the course, the student should be able to:

- Describe Lean tools and management systems, and understand the principles and philosophy that are the foundation of Lean Production,
- Describe different principles of production systems including modern concepts.
- Describe how flow theory and simulation can be used to analyze and optimize production.

## Content

The course covers the following topics:

- Lean Production and Lean Tools, and examples of how they can be used in any company and organization,
- Production systems and universal principles of production,

- Flow theory, modelling, simulation and analysis of flow in production systems
- Introduction to modern concepts such as Industry 4.0, robotization and automation.

### Type of Instruction

The teaching consists of lectures, laboratory sessions and exercises. Some elements are mandatory. The scope of the required parts is announced in the schedule.

### Examination

The course is assessed with the grades U, 3, 4 or 5.

Assessment of students' performance usually takes place during special examination periods and is in writing. For a pass grade, approved laboratory sessions are required.

### Course Evaluation

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

### Required Reading and Additional Study Material

#### **Required reading**

Pascal Dennis, Lean Production Simplified, ISBN 9781498708876, Publisher: Productivity Press, approx. 176 pages.

Course materials distributed through MyMoodle (articles and reports).