



# MG1024 Production 6.0 credits

## Produktion

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

## Establishment

Course syllabus for MG1024 valid from Autumn 2015

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Mechanical Engineering, Technology

## Specific prerequisites

MJ1103 Introduction to Mechanical Engineering, or the equivalent

## Language of instruction

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

## Intended learning outcomes

After passing the course, the student will be able to:

- In your own words describe the meaning of production, and its components
- Describe the role of production engineering in society and companies
- Describe how a production system can be designed
- Analyze different production flows using a simulation software tool
- Describe the meaning of automation
- Explain the advantages and disadvantages of automation
- Describe the structure of supply chains
- In your own words describe the meaning of lean production

## Course contents

This course provides an introduction to the area of production. We use bird's-eye perspective and give you a description of a producing company's strategic goal and then moving to the operational activities of the production. You can then easily explain what guides the daily decisions or the longer term production trends. A successful company has a well-defined goal for their business. The goal, in turn, is likely a result of the company is a formulated business idea or business strategy. The strategy is a way to create consistency in an organization so that all movements in the same direction with a common goal. The strategies are often formulated for various functions in the organization. A goods-producing firm has formulated a: Market Strategy, Product Strategy, Finance Strategy and Production Strategy.

## Disposition

The course structure consists of the course literature. The lectures illustrate how different companies deal with the activities in the text book. Exercises provide you the opportunity to work with the various elements of the course. A study visit during the course gives you an experience of a producing unit. Laboratory work, where you come in contact with a simulation tool providing practical experience.

## Course literature

Olhager, Jan; Produktionsekonomi: principer och metoder för utformning, styrning och utveckling av industriell produktion, Studentlitteratur, 2013

Simuleringskompendium, publiceras på Canvas

Automationskompendium, publiceras på Canvas

Föreläsningpresentationer, publiceras på Canvas

## Equipment

None

## Examination

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

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

## Other requirements for final grade

Approved homework assignments (INL1; 3 cr)

Passed written examination (TEN1; 3 cr)

## 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.