



MG1024 Production 6.0 credits

Produktion

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

Establishment

On 11/04/2019, the Dean of the ITM school has decided to establish this official course syllabus to apply from autumn term 2019 (registration number M-2019-0918).

Grading scale

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

Education cycle

First cycle

Main field of study

Mechanical Engineering, Technology

Specific prerequisites

MF1001 Mechanical Engineering, introductory course/MJ1103 Introduction to Mechanical Engineering/MF1061 Introduction to Design and Product Realisatio

and

MG1016/MG1026 Manufacturing Technology

or the corresponding

Language of instruction

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

Intended learning outcomes

After completing the course with a passing grade the student should be able to:

- account for different production paradigms through the ages
- describe the production development process and its main activities
- explain the principles of Lean manufacturing and its use
- develop a production plan for a specific component and a given market/customer demand
- build a model of a production line and use a discrete event simulation software to analyse the production flow
- describe the use of industrial robots and other automation equipment in manufacturing
- analyse the function and performance of an industrial robot in a simulation program
- account for concepts, systematic methods and standards for sustainability in production systems

Course contents

- production through the ages - from craftsmanship to Industry 4.0
- principles of production system design and analysis
- process planning
- design of/layout for production plants
- aggregate and master schedule planning
- automation and industrial robots
- flow analysis of production lines
- sustainability in production systems

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

The exercises are compulsory and must be presented for a teacher.

The industrial study visits is compulsory, and has to be documented in a report.

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.