



## Course syllabus

Faculty of Technology

Department of Mechanical Engineering

1MT002 Tillverkningssteknik, 7,5 högskolepoäng

1MT002 Manufacturing Techniques, 7.5 credits

### **Main field of study**

Mechanical Engineering

### **Subject Group**

Mechanical Engineering

### **Level of classification**

First Level

### **Progression**

G1F

### **Date of Ratification**

Approved 2013-01-28

Revised 2023-09-25 by Faculty of Technology. Field-specific entry requirements have been removed

The course syllabus is valid from spring semester 2024

### **Prerequisites**

Introduction to Machine engineering, 7,5 hp or equivalent.

## Objectives

After completing the course the student shall be able to:

- explain the product manufacturing by plastic processing, plastic workability of materials, and process impacts on product properties
- explain the product manufacturing by machining, by casting, and other available engineering methods
- describe the principles of machines and tools
- perform, analyze and interpret engineering measurements
- conduct theoretical and practical manufacturing based on numerical control of manufacturing machine.

## Content

The course includes the following elements:

- forming of solid substances, rolling, tensioning, forging and pressing

- forming and cutting of plates
- methods of cutt machining
- grinding and polishing methods
- non-mechanical processing methods, machines and tools
- industrial measuring systems like gauge blocks, sine rulers etc.
- numerically controlled machines, their systems principles, programming, and their area of applications.

## Type of Instruction

The course consists of lectures, laboratories, and exercises. Some parts of the course requires compulsory attendance. Information about the compulsory parts will be given at the beginning of the course.

## Examination

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

Assessment of student performance takes place during special exam periods and is usually written. In order to receive a passing grade the student must pass the laboratory work.

Resit examination is offered in accordance with Linnaeus University's Local regulations for courses and examination at the first- and second-cycle levels. In the event that a student with a disability is entitled to special study support, the examiner will decide on adapted or alternative examination arrangements.

## Course Evaluation

A course evaluation should be conducted during the course or in connection with its conclusion. The results and analysis of the completed course evaluation should be promptly communicated to students who have completed the course. Students participating in the next course instance should be informed of the results of the previous course evaluation and any improvements that have been made, no later than at the start of the course.

## Required Reading and Additional Study Material

### Required reading

Hågeryd, Lennart, m. fl. Modern Produktionsteknik del I, Liber, 2018, ISBN 978-91-47-11343-9. 495 pages

Jarfors, A. E. W. m. fl. Tillverkningsteknologi, Studentlitteratur, 2010, ISBN 978-91-44-07039-1. 637 pages

### Reference Literature

Eriksson Nils-Olof, m.fl. Verkstadshandboken, Liber, 2014, ISBN 978-91-47-11541-9