



## Course syllabus

Faculty Board of Science and Engineering  
School of Engineering

2MT024 Verktygskonstruktion, 7,5 högskolepoäng  
Tool Design, 7.5 credits

### **Subject Group**

Mechanical Engineering

### **Level of classification**

First Level

### **Progression**

G2F

### **Date of Ratification**

Approved by the Board of the School of Engineering 2010-05-17

The course syllabus is valid from autumn semester 2010

### **Prerequisites**

General entry requirements. Basic Mathematics 1, Vector Geometry, Calculus 1, Physics-Mechanics, Mechanical Engineering – basic course, Advanced CAD in 3D, Machine Design M1, Machine Design M2, Solid Mechanics or equivalent.

## Expected learning outcomes

The purpose of this course is to give the students knowledge to dimension and design tool for manufacturing/production such as blanking die, pressing tool, jigs and fixtures. The student will also be able to use data tables, company catalogues, and standards. As design tool, 2D- and 3D CAD-program will be used.

## Content

- knowledge about blanking/punching and blanking dies.
- knowledge about pressing and pressing tools.
- knowledge about jigs and fixtures for welding.
- General knowledge about different types of tools.
- Projects with application of knowledge mentioned above.
- CAD-based tool design.

## Type of Instruction

The teaching will be carried on in lectures, and project. Information about the lectures and meeting which require compulsory attendance will be informed in the beginning of the course.

## Examination

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

The examination will be based on the result from the written and/or oral examinations, presentations and physical products.

### Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department.

### Other

Distributed material (copies)

The course requires literature from different sources, therefore some interesting books are listed under the headline "Reference literature"

Kursen kräver material från olika källor där några intressanta böcker redovisas under rubriken "referenslitteratur"

### Required Reading and Additional Study Material

#### **Reference literature**

Alvarez, W, Roll Form Tool Design: Fundamentals (2006)

Jones, E. J. H, Production Engineering - Jig and Tool Design (2009)

Spitler, D., Nee, J. G, and Smith, D. A, Fundamentals of Tool Design (2003)

ETC