

Course syllabus

Ritteknik/datorstödd ritning Manual and Computer Aided Drafting

MMKA25, 6 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED M

Date of Decision: 2023-04-11

General Information

Main field: Technology.

Compulsory for: M1, MD1

Language of instruction: The course will be given in Swedish

Aim

The course aims to provide students with basic knowledge in sketching, technical drafting and in how to produce technical drawings by hand and by computer. It also offers students the opportunity for further independent development of knowledge in the field.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to choose and evaluate basic perspective methods.
- be able to apply basic technical drafting rules based on the latest standard rules.
- be able to apply basic technical drafting rules and commands in CAD software.

Competences and skills

For a passing grade the student must

- be able to create perspective sketches of simple products and objects.

- be able to interpret complicated technical detail drawings and assembly drawings.
- be able to examine simple technical detail drawings.
- be able to create simple 3D models and technical drawings in a CAD program.

Contents

The following three phases define the course contents: sketching, technical drafting and CAD. The theory in the course is based on the latest standard.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: The course contains the following three phases: sketching, technical drafting and CAD. To qualify for a final passing grade, students must have completed all three phases. The final grade is the sum of the weighted grades obtained for each phase.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0117. **Name:** Sketching.

Credits: 1,5. **Grading scale:** UG. **Assessment:** One individual exam. **Contents:** Perspective - direct and indirect methods, the Doblin method, sketching of machine elements.

Code: 0217. **Name:** Technical Drafting.

Credits: 2. **Grading scale:** UG. **Assessment:** Either 4 shorter examinations or one for the whole phase.

Contents: Standards, detail and assembly drawings, special symbols, tolerance and surface finish symbols, welding symbols, etc.

Code: 0317. **Name:** CAD Project.

Credits: 2,5. **Grading scale:** UG. **Assessment:** Individual project in CAD **Contents:** Individual project in CAD

Admission

The number of participants is limited to: No

Reading list

- Karl Taavola: Ritteknik 2000 faktabok. ATHENA lär, 2021, ISBN: 978-91-88816-18-4. Technical Drafting 2000 Textbook.
- Karl Taavola: Ritteknik 2000 Övningsbok. ATHENA lär, 2009, ISBN: 978-91-88816-22-1. Technical Drafting 2000 Exercise Book.
- Exercises in Sketching Techniques. Division of Machine Design.
- Joseph D'Amelio: Perspective drawing handbook. ISBN: 978-0-486-43208-3.

Contact and other information

Teacher: Per Kristav, per.kristav@design.lth.se

Teacher: Damien Motte, damien.motte@design.lth.se

Director of studies: Elin Olander, elin.olander@design.lth.se

Course homepage: <http://www.product.lth.se/education/courses/>