Course syllabus

Manual and Computer Aided Drafting
Ritteknik/datorstödd ritning

MMKA25, 6.0 credits, G1 (First Cycle)

Valid for: 2026/27
Faculty: Faculty of Engineering LTH
Decided by: PLED M
Date of Decision: 2026-03-26
Effective: 2026-05-18

General Information

Main field: Technology **Depth of study relative to the degree requirements:** First cycle, in-depth level of the course cannot be classified
Mandatory for: M1, MD1
Language of instruction: The course will be given in Swedish

Aim

The course aims to provide students with basic knowledge in theory of perspective drawing, technical drafting as well as modelling of products and their parts with help of computer-aided design (CAD). It also prepares the students for further independent knowledge development in the field in the coming years of their education.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- be able to understand the difference between different basic perspective methods.
- be able to apply basic technical drawing rules based on given standard rules.
- be able to apply basic commands and technical drawing rules and in CAD software.

Competences and skills
For a passing grade the student must

- be able to create perspective sketches of simple products and objects with the purpose of supporting an ongoing conversation with other stakeholders about the product.
- be able to interpret technical detail drawings and assembly drawings.
- be able to examine simple technical detail drawings.
- be able to create 3D models and technical drawings in a CAD program.

Judgement and approach
For a passing grade the student must

- be able to evaluate one's own capability to create 3D models and technical drawings in relation to the complexity of the chosen product in the CAD project.

Contents

The following three phases define the course contents: theory of perspective drawings, technical drawing and computer-aided Design (CAD). The theory in the course is based on given standard rules.

Examination details

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

The course contains the following three phases: theory of perspective drawing, technical drawings and computer-aided Design (CAD). Students must have completed all three phases to qualify for a final passing grade. The course includes an individual project. The grading scale for the project is U-3-4-5. The grade for the project is equal to the course's final grade.

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.

Modules
Code: 0125. **Name:** Perspective Drawing.
Credits: 1.0. **Grading scale:** UG - (U, G). **Assessment:** One individual mandatory assignment. **The module includes:** Perspective - direct and indirect methods, the Doblin method, sketching of machine elements.
Code: 0225. **Name:** Technical Drafting.
Credits: 2.0. **Grading scale:** UG - (U, G). **Assessment:** One mandatory assignment contains two parts: a theoretical and a practical. **The module includes:** Standards, detail and assembly drawings, special symbols, tolerance and surface finish symbols, welding symbols, etc.
Code: 0325. **Name:** CAD Project.
Credits: 3.0. **Grading scale:** TH - (U, 3, 4, 5). **Assessment:** Individual project in CAD **The module includes:** 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. Earlier printings of the course literature Technical Drafting 2000 Textbook is OK to use in the course. However only, from the 4 edition and forward.
- Karl Taavola: Ritteknik 2000 Övningsbok. ATHENA lär, 2009, ISBN: 978-91-88816-22-1. Earlier printings of the course literature 'Technical Drafting 2000 Exercise Book' are OK to use in the course. However, only from the 4 edition and forward.
- Exercises in Theory of perspective drawings. Division of Innovation.
- Joseph D'Amelio: Perspective drawing handbook. ISBN: 978-0-486-43208-3.

Contact

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Further information

Some teaching elements and course literature/exercise materials will be in English; one course module will have English-speaking teachers. You will receive a course-specific Swedish-English dictionary to facilitate any language mixing that may occur during the course.