Linnæus University

Jnr: 2020/1057-3.1.2.2

Course syllabus

Faculty of Technology
Department of Mechanical Engineering

1MT312 Computer Aided Engineering, CAE, 7,5 högskolepoäng
Computer Aided Engineering, CAE, 7.5 credits

Main field of study
Mechanical Engineering

Subject Group
Mechanical Engineering

Level of classification
First Level

Progression
G1N

Date of Ratification
Approved by Faculty of Technology 2020-03-27
The course syllabus is valid from spring semester 2021

Prerequisites
Basic eligibility. (Area eligibility 8 except of Chemistry A).

Objectives

After completing the course, the students should be able to:

- have the ability to interpret a machine drawing.
- have the knowledge to create simple mechanical engineering drawings using 2DCAD systems.
- have knowledge of using 3DCAD systems for the creation of 3D models and 2Drawings.
- have knowledge of methods for FEM analysis of 3D models.
- have knowledge of product data management, PDM.
- have knowledge of methods for transferring drawing files / models between different 2D / 3DCAD programs.

Content

- Technical drawings' concepts such as formats, scales, views, line types, sections, dimensioning and tolerances.
- Commands for creating technical machine drawings in a 2D and 3D CAD system
- Methods for creating 3D models in a 3DCAD program.
- Functions for creating assembly models in a 3DCAD program.
- CAD, FEM, and PDM.

Type of Instruction
Teaching consists of lectures, CAD-labs and a project.

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

The course is examined by the following:

- Exam, 5hp (A-F)
- Laboratory, 1.5 credits (Passed / Failed)
- Project, 1 credits (Passed / Failed)

Re-examination is given in accordance with local rules for course and examination at the bachelor and master levels at Linnaeus University.

If the university has decided that a student has the right to special educational support due to a disability, the examiner has the right to give a customized test or that the student performs the test in an alternative way.

Course Evaluation
During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

Credit Overlap
The course cannot be included in a degree along with the following courses of which the content fully, or partly, corresponds to the content of this course: 1MT012, 7.5 credits

Other
Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material
Required reading
Taavola Karl Ritteknik 2000 faktabok, Athena lär, ISBN 9188816559.150 s.