Linnæus University

Jnr: 2014/4109-3.1.2

Course syllabus

Faculty of Technology
Department of Mechanical Engineering

2MT100 Kompletterande studier för kandidatexamen i Maskinteknik, 60 högskolepoäng

Complementary Studies for a Bachelor Degree in Mechanical Engineering, 60 credits

Main field of study
Mechanical Engineering

Subject Group
Mechanical Engineering

Level of classification
First Level

Progression
G2E

Date of Ratification
Approved by Faculty of Technology 2014-12-02
The course syllabus is valid from autumn semester 2015

Prerequisites
120 credits, of which at least 75 credits are in mechanical engineering or equivalent. At least 22,5 credits must be in mathematics.

Objectives

The objectives are described in the syllabus of each course included in this course.

Content

The course consists of the following courses:

Autumn semester:
2MT027 Machine Design II, G2F, 7,5 credits
2SE015 Life Cycle Cost Analysis, G2F, 7,5 credits
2MT013 Product Development, G2F, 7,5 credits
2MT014 Machine Design 3, G2F, 7,5 credits

Spring semester:
2MT322 Machine Design I, G2F, 7,5 credits, selection
1MT301 Industrial Design, G1N, 7,5 credits, selection
2MT30E Degree Project, G2E, 22,5 credits

Short description
Machine Design II, the course provides knowledge and skills about dimensioning and design of various types of transmissions and related parts.
Life Cycle Cost Analysis, the course comprices of introduction to "time value of money",

Life Cycle COst (LCC) components and models, and LFF as a decision making tool. The course includes also a project for application of LCC in the industry.
Product Development, the course presents theories and practices related to product development, and how it is formed in a process that makes the "backbone" of all development and design/construction work.
Machine Design 3, the course deals with dimensioning, design and selections of some machine elements. Design for manufacturing, mechanical wear, machine failures and risks in technical systems.
Machine Design I, selectable course, the course comprises the following elements:
Introduction into machine design, the choice and dimensioning of some fundamental machine elements,
the design and dimensioning with regard to force flow,
fatigue properties and the risk of machine damage and
the design of constructions with regard to impact loading.
Industriell Design I, selectable course, The course comprises, design process applications, sketching and presentation techniques, design exercises and/or design projects, orientation into the design field, exercises in analysis methods (function analysis, value
analysis, risk analysis).
Degree Project

Type of Instruction
See the syllabus for the courses included in the course.

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.
See the syllabus for the courses included in the course.

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).

Course Evaluation
A course evaluation will be carried out and compiled after the course is completed. The compilation will be presented to the current board as well as to the students and filed.

Credit Overlap
This course cannot be part of a degree in combination with another course in which the content fully or partly correspond to the content of this course: 2MT026/027, 2MT030/2SE015, 2MT013, 2MT014/2MT011, 2MT322/2MT022, 2MT10E

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
See the syllabus for each course.