



Course syllabus

Faculty Board of Science and Engineering
School of Engineering

2MT021 Maskinkonstruktion M4, 7,5 högskolepoäng
Machine Construction M4, 7.5 credits

Main field of study

Mechanical Engineering

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 spring semester 2011

Prerequisites

Basic Mathematics 1 7,5 hec, Vector Geometry 7,5 hec, Calculus 1 7,5 hec, Physics-Mechanics 7,5 hec, Mechanical Engineering – basic course 7,5 hec, Advanced CAD in 3D 7,5 hec, Machine Design M1 7,5 hec, Machine Design M2 7,5 hec, Solid Mechanics 7,5 hec or equivalent.

Expected learning outcomes

The purpose of this course is to give the students:

- Basic knowledge about principles of acoustics
- Basic knowledge about acoustics measurement techniques
- Knowledge about the acoustics impact on human beings
- Knowledge about design for noise reduction
- Basic knowledge about design for manufacturing and assembly
- Understanding for design with respect to manufacturing costs
- Feeling for design in practice

Content

- Basic acoustic concepts
- Design related steps for r noise reduction
- Design for manufacturing
- Design for assembly
- Project with practical elements
- Calculation- and dimensioning tasks.

Type of Instruction

The teaching will be carried on in lectures, exercises 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

When the course has finished, an evaluation is compiled. The results are reported to the students and then archived according to the rules of the school.

Credit Overlap

Overlaps to about 70% the course Machine design III.

Required Reading and Additional Study Material

Required Reading

Poli, C., Desin for manufacturing – A structured approach (2001). Butterworth Heinemann.

Compendium (parts of the book Sound and Vibrations by Bodén et al, Royal technical Institute). Will be sold by the teacher. (Will be found in Copy centre (repro))