



Course syllabus

Faculty of Technology

Department of Mechanical Engineering

1SE025 Industriell mät- och felanalys, 7,5 högskolepoäng

Industrial measurement and failure analysis, 7.5 credits

Main field of study

Total Quality Maintenance

Subject Group

Industrial Engineering and Management

Level of classification

First Level

Progression

G1N

Date of Ratification

Approved by Faculty of Technology 2014-10-03

The course syllabus is valid from autumn semester 2015

Prerequisites

Basic eligibility.

Objectives

After completing the course the student is expected to

- be able to account for the function, features and failure causes of different machine elements
- be able to account for and discuss the concept of tribology and wear processes, such as abrasion, fatigue and corrosion
- be able to describe and understand different manufacturing processes
- be familiar with basic measurement techniques.

Content

The course comprises the following elements:

- Machine elements
- Processing technology
- Tribology and lubricants
- Failure and failure cause analysis
- Measurement and control technology

Type of Instruction

The teaching consists of lectures, group work, laboratory work, assignments and a case study.

Examination

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 examination is based on submitted reports and oral or written presentation of compulsory assignments.

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

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course: 1SE006 Industrial measurement and failure analysis, 7,5 hec.

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.

Some elements in the course may entail costs defrayed by the course participant.

The course language is English if international students attend the course.

Required Reading and Additional Study Material

Required reading

Karlebo, *Karlebo Handbok*, Liber Utbildning, latest edition. 600/1276 pages.

Berk, Joseph, *Systems Failure Analysis*, ASM International, latest edition. ca 100/214.

Compendium. 100/100 sidor.

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