



MF2018 Tribology 6.0 credits

Tribologi

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for MF2018 valid from Autumn 2019

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

A Bachelor of Science degree in Mechanical Engineering or equivalent.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

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

- describe friction, abrasion and lubrication mechanisms
- explain selection of material and lubricant selection
- analyze tribo-mechanical contacts

Course contents

The curriculum includes:

- Static and dynamic loaded contacts
- Surface topography
- Friction phenomena in mechanical systems
- Wear mechanisms in machine elements
- Selection of lubricant and lubrication system
- Hydrodynamic-, boundary-, mixed- and elastohydrodynamic lubrication
- Surface damage mechanisms
- Material selection for tribological contacts

Course literature

Anton van Beek, "Advanced engineering design lifetime performance and reliability" TU Delft 2006

Andersson "Dimensionering av några tribokontakter", Institutionen för Maskinkonstruktion KTH

Examination

- INL1 - Hand in Tasks, 4.5 credits, grading scale: P, F
- TEN1 - Written examination, 1.5 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.