



MF2018 Tribology 6.0 credits

Tribologi

Course syllabus for MF2018 valid from Autumn 07

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

Grading scale: A, B, C, D, E, FX, F

Education cycle: Second cycle

Main field of study: Mechanical Engineering

Intended learning outcomes

After completing this course you will for different surfaces in contact be able to:

- calculate contact pressure, temperature and film thickness
- simulate wear
- measure friction and wear
- measure the surface topography
- identify the dominating surface damage mechanisms
- apply basic criteria for permissible contact pressure
- motivate a lubricant selection
- motivate a material and surface selection

Course main content

The curriculum includes:

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

Language of instruction

Language of instruction is specified in the course offering information in the course and programme directory.

Eligibility

The layout of the course requires that either the course product development M, product development T or design and product development B have been conducted.

Literature

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

Examination

- TEN1 - Examination, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercise, 4.5 credits, grading scale: A, B, C, D, E, FX, F

Requirements for final grade

To pass this course requires approved assignments (OVN1; 4,5hp) and approved written examination (TEN1;1,5hp).