

SYLLABUS

Tribology 7.5 credits

M7007T

Tribologi

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2021-02-17

Tribology 7.5 credits M7007T

Tribologi

Second cycle, M7007T

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Maskinelement	Mechanical Engineering

Main field of study

Mechanical Engineering

Entry requirements

Fundamental understanding in physics, chemistry, solid mechanics, material science and machine components

Selection

The selection is based on 30-285 credits

Course Aim

When you have finished the course you will: -understand the fundamental mechanisms of wear, friction and lubrication. -be able to make predictions of the risk of wear of two surfaces in contact. -be able to suggest suitable materials and lubricants for different applications. -have obtained a first experience of solving tribological problems.

Contents

Tribological losses due to wear, friction and bad lubrication cause enormous costs every year. This course will make engineers aware of these problems and learn how to avoid them in an early stage. The following content will be covered: • Wear processes • Friction • Lubricants • Lubrication • Machine component tribology • Surface roughness • Tribo testing • Coatings A project will also be carried out. This project has connections to the research carried out at the Division of Machine Elements and there is often a collaboration with industry.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Lectures and laborative work (project)

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Project work and assignments (8-10 assignm.) including including oral examination.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Overlap

The course M7007T is equal to MTM150

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0004	Project work	U G#	2	Mandatory	S21	
0005	Assignment report	U G#	1	Mandatory	S21	
0006	Oral exam	G U 3 4 5	4.5	Mandatory	S22	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Head Faculty Programme Director Niklas Lehto 2021-02-17

Syllabus established

The syllabus was established by the Department of Applied Physics and Mechanical Engineering 2007-02-28, and remains valid from autumn 2007.