

Course plan

Title:	<i>Introduction to tribology</i>
Points:	2 hp (ECTS)
Time:	4-6 December 2019
Objectives:	<p>To gain a basic understanding of tribology and its applications. After completion of the course the student will:</p> <ul style="list-style-type: none">- understand the mechanisms of lubrication- be familiar with the most important lubricant properties and their effect on component performance- be familiar with mechanisms of friction- be familiar with wear mechanisms- be familiar with performance of the typical tribological systems in the hydropower plants- be able to analyse and interpret tribological data from the lab tests
Contents:	<p>Nature of the tribological interfaces Friction mechanisms Wear mechanisms Lubricants and their properties Boundary and mixed lubrication Full film lubrication Sliding bearings</p>
Teaching:	Lectures and laboratory works
Prerequisites:	Basic knowledge of physics, fluid and solid mechanics
Examination:	Laboratory work report and home assignment
Grading:	Pass or Fail
Examiner:	Senior Lecturer Kim Berglund Luleå University of Technology, Division of Machine Elements 971 87 Luleå e-mail: kim.berglund@ltu.se Phone: +46 920 493051
Literature:	Anton van Beek “Advanced Engineering Design” (selected chapters) and handouts.