

<b>Study program / course: Mechanical engineering</b>			
<b>Type and level of study: Master academic studies</b>			
<b>Course: Tribology of mechanical systems</b>			
<b>Lecturers: Tanasijević M. Slobodan</b>			
<b>Status of course: Obligatory for module M<sub>2</sub>, II semester</b>			
<b>Number of ECTS:6</b>			
<b>Precondition:</b> Listen out the course: Machine elements, Mechanical Transmitters			
<b>The objective of course</b> The aim of this course is teaching students in knowledge tribological characteristics of mechanical systems and application this knowledge's. in design process.			
<b>The outcome of course</b> The basic task of this course is qualifying students for tribologically correct design. Tribologically correct design is an important indicator of qualify design and the technical level of a product.			
<b>Syllabus</b>			
<b>Theoretical study</b>  <b>The bases of tribology:</b> Geometric characteristics of active surfaces. The structure of surface case. Friction. The basic theories of friction. The basic theories of wear. Classification of wear mechanism. The curve of wear. <b>Characteristics of tribological processes of gear transmitters:</b> Friction in gear transmitters. Wear kinds of gear transmitters. Influence of some factor on wear (materials and chemical-thermal treatment, topography, technology machining). Lubrication of gear transmitters. <b>Characteristics of tribological processes of rolling bearings:</b> Friction in rolling bearings. Wear kinds. Influence of some factors on wear (material, constructional solutions). Lubrication. <b>Characteristics of tribological processes of sliding bearings:</b> Friction in sliding bearings. Wear kinds. Influence of some factors on wear. Lubrication. <b>Characteristics of tribological processes of chain transmitters:</b> Wear kinds. Influence of some factors on wear. Lubrication of chains.			
<b>Practical Studies:</b> Auditory particles to establish a connection between theoretical knowledge and practical application, instructions for processing and classification results receive at measurement, analysis and measurement basic tribological parameters. In frame of studios investigative work students will be quality for basic investigations in field of this course.			
<b>Recommended reading</b> 1. Tanasijević S.: The bases of tribology of machine elements, “Scientific book”, Belgrade, 1989. 2. Ivković B., Rac A.: Ttribology, JDT, Kragujevac, 1985. 3. Tanasijević S: Tribologically correct design, FME, Kragujevac, 2004			
The number of hours of active teaching:			Other classes:1
Theory: 2	Practical classes:1.6	Other forms of teaching: 0.4	
<b>Methods of teaching</b>			
<b>Evaluation of knowledge</b>			
<b>Pre-final exam obligations</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Activities during the classes:	<b>5</b>	Write examination:	<b>47</b>
Home works:	<b>12</b>		
Colloquiums(s) :	<b>36</b>		