

Information sheet for the course Mechanics of Solid Bodies III

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>					
Course unit code: <i>MT-P-30</i>			Course unit title: <i>Mechanics of Solid Bodies III</i>		
Type of course unit: <i>compulsory</i>					
Planned types, learning activities and teaching methods: <i>Lecture: 2 hours weekly/26 hours per semester of study; face to face</i> <i>Seminar: 2 hours weekly/26 hours per semester of study</i> <i>Laboratory tutorial: 0</i>					
Number of credits: <i>5</i>					
Recommended semester: <i>the 5th semester in the 3rd year of the full-time form of study,</i> <i>the 5th semester in the 3rd year of the part-time form of study.</i>					
Degree of study: <i>the 1st degree of study (Bachelor's degree)</i>					
Course prerequisites: <i>accomplishment of MT-P-15 (Mechanics of Solid Bodies I), MT-P-21 (Mechanics of Solid Bodies II).</i>					
Assessment methods: <i>To accomplish the given subject, student is obliged to be present at the lessons with the reference to specifications introduced in the study rules for the given study programme. He/she is also obliged to prepare and defend the determined semestral or terminal work as well as he/she has to pass the test successfully.</i>					
Learning outcomes of the course unit: <i>Student has acquired and is familiar with all required and fundamental principles relating to the methods which are closely connected with strength calculations and deformations of supporting constructions (frames, beams) and their features or constituents parts. He/she is able to design simple supporting constructions (frames, beams) in order to prolong and enhance their function during their lifetime.</i>					
Course contents: <i>Elasticity and strength. Thick-walled vessels under the pressure. Tensile and pressure loading. Rotating disks. Stress and strain (deformation). Press, shrink and expansion fitting. Uniaxial, biaxial and triaxial stress. Hypotheses relating to elasticity and strength. Bending and deformation of beams. Torsion, stress and deformation under the torsional loading. Combination of loadings, stresses and subsequent deformation.</i>					
Recommended or required literature: <i>KOPECKÝ M., GOMOLA A., PODOLEC O.: Pružnosť a pevnosť I. - skripta, ALFA Bratislava, 2. vydanie r. 1990.</i> <i>CÚTH V., TÓTH L.: Pružnosť a pevnosť, ES VŠDS Žilina, 1995.</i> <i>HÖSCHL O.: Pružnosť a pevnosť ve strojírenství, SNTL/ALFA Praha, 1971.</i> <i>MIROLJUBOV I.N. a kol.: Riešenie úloh z pružnosti a pevnosti, SNTL Praha, II. vydanie, r. 1981.</i>					
Language: <i>slovak</i>					
Remarks: —					
Evaluation history: /Grading system/					
A	B	C	D	E	FX
<i>Excellent</i>	<i>Laudable</i>	<i>Good</i>	<i>Accepted results</i>	<i>Pass</i>	<i>Fail</i>
Lecturers: <i>prof. Ing. Ján Vavro, PhD., doc. Ing. Ján Vavro, PhD.</i>					
Last modification: <i>31.03.2014</i>					
Supervisor: <i>doc. Ing. Marta Kianicová, PhD.</i>					