

Information sheet for the course Flexibility and Strength II

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of special technology</i>					
Course unit code: <i>MŠT/B/4-27/d</i>			Course unit title: <i>Flexibility and Strength II</i>		
Type of course unit: <i>compulsory</i>					
Planned types, learning activities and teaching methods: <i>2 lecture hours and 2 hour seminars per week, face to face method.</i>					
Number of credits: <i>5</i>					
Recommended semester: <i>4th semester in the 2nd year (full-time)</i> <i>5th semester in the 3rd year (part-time)</i>					
Degree of study: <i>I. (bachelor)</i>					
Course prerequisites: <i>MŠT/B/4-26/d Flexibility and Strength I</i>					
Assessment methods: <i>100% participation in exercises, fulfilling the objectives set exercises, min. 60% attendance at lectures, demonstrate knowledge of subject content in written and oral examination</i>					
Learning outcomes of the course unit: <i>The student has a deep knowledge and cross-cutting issues of the combined stress of mechanical components in terms of flexibility and strength in particular metallic materials, learn to use basic formulas, calculations and assumptions of combined stress in machine parts. Give the foundation for successful management of specialized subjects related mainly to the construction of machinery and equipment.</i>					
Course contents: <i>Whip system and stress. Sizing whip system. Bent slender rods with axial compressive forces. Voltage surges at. Stability direct rods. The critical buckling force. Thick-walled cylindrical vessel and rotating wheels. Pressed connections. Available twisting shaft non-circular cross-section. Shape and fatigue strength. Harmonic load. Fatigue failure. Wöhler curve. Contact stress.</i>					
Recommended of required reading: <i>TREBUŇA, F. - JURICA, V. - ŠIMČÁK, F.: Pružnosť a pevnosť II. EVOL, KOŠICE, 2002.</i> <i>TREBUŇA, F. - JURICA, V. - ŠIMČÁK, F.: Pružnosť a pevnosť II. I. vydanie VIENALA KOŠICE 2000, ISBN 80-7099-478-9, II. vydanie, Vydavateľstvo M. VAŠKA PREŠOV 2002, ISBN 80-7165-364-0.</i> <i>TREBUŇA, F. - JURICA, V. - ŠIMČÁK, F.: Príklady a úlohy z pružnosti a pevnosti II. Viena 2000, ISBN 80-7099-594-7, 345 s.</i> <i>BODNÁR F., MINÁRIK M.: Pružnosť a pevnosť II. TU ZVOLEN, FEAVT, 2009, ISBN 978-80-228-2083-7.</i>					
Language: <i>Slovak</i>					
Remarks:					
Evaluation history: <i>Total number of students being evaluated: 229</i>					
A	B	C	D	E	FX
2,62	1,48	23,14	19,65	40,17	3,4
Lecturers: <i>Dr.h.c. Asooc. prof. Ing. Oto Barborák, CSc. - lecturer</i> <i>Ing. Peter Čelko, PhD. - assistant instructor</i>					
Last modification: <i>15.4.2014</i>					

Supervisor: *Assoc. prof. Ing. Peter Lipták, CSc., guarantee of the study program “Mechanisms in Special Technology”.*