

## Information sheet for the course Experimental Methods in Material Engineering I

<b>University:</b> <i>Alexander Dubček University of Trenčín</i>					
<b>Faculty:</b> <i>Faculty of Industrial Technologies in Púchov</i>					
<b>Course unit code:</b> <i>MT-P-11</i>			<b>Course unit title:</b> <i>Experimental Methods in Material Engineering I</i>		
<b>Type of course unit:</b> <i>compulsory</i>					
<b>Planned types, learning activities and teaching methods:</b> <i>Lecture: 2 hours weekly/26 hours per semester of study; face to face</i> <i>Seminar: 0</i> <i>Laboratory tutorial: 2 hours weekly/26 hours per semester of study; face to face</i>					
<b>Number of credits:</b> <i>4</i>					
<b>Recommended semester</b> <i>the 2<sup>nd</sup> semester in the 1<sup>st</sup> year of the full-time form of study,</i> <i>the 4<sup>th</sup> semester in the 2<sup>nd</sup> year of the part-time form of study,</i>					
<b>Degree of study:</b> <i>the 1<sup>st</sup> degree of study (Bachelor's degree)</i>					
<b>Course prerequisites:</b> <i>none</i>					
<b>Assessment methods:</b> <i>Student must elaborate semestral work and present it during semester. There will be one test on the end semester. Active presence on the laboratory tutorials.</i>					
<b>Learning outcomes of the course unit:</b> <i>The student knows the basic principles of selected experimental methods used for testing the properties of materials and the detection of defects in materials and products.</i>					
<b>Course contents:</b> <i>Static testing of materials, periodic and aperiodic testing, dynamic testing of materials, dynamic mechanical analysis, theory of acoustic waves, , theory of elastic waves, non-destructive material testing with ultrasonic, fatigue and creep of materials, wear testing.</i>					
<b>Recommended of required reading:</b> <i>P. Košťial: Fyzikálne základy materiálového inžinierstva I, ZUSI Žilina 2000.</i> <i>Ptáček, L. a kol.: Nauka o materiálu I. Akademické nakladatelství CERM, Brno, 2001.</i> <i>P. Košťial a kol.: Využitie ultrazvukových vln pri štúdiu povrchov a rozhraní, ŽU Žilina 1998.</i>					
<b>Language:</b> <i>Slovak</i>					
<b>Remarks:</b>					
<b>Evaluation history:</b> <i>139</i>					
A	B	C	D	E	FX
12.95	25.9	30.22	15.83	6.47	8.63
<b>Lecturers:</b> <i>doc. Ing. Marta Kianicová, PhD., Ing. Dana Bakošová, PhD., Ing. Rudolf Valášek</i>					
<b>Last modification:</b> <i>31.03.2014</i>					
<b>Supervisor:</b> <i>doc. Ing. Marta Kianicová, PhD.</i>					