

**Information sheet for the course
Selected Chapters from Material Diagnostics**

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>	
Course unit code: <i>MI-I-PV-28</i>	Course unit title: <i>Selected Chapters from Material Diagnostics</i>
Type of course unit: <i>optional</i>	
Planned types, learning activities and teaching methods: <i>Subject included into final state exam</i>	
Number of credits: <i>2</i>	
Recommended semester: <i>the 4th semester in the 2nd year of the full-time form of study, the 6th semester in the 3rd year of the part-time form of study,</i>	
Degree of study: <i>the 2nd degree of study (Engineer's degree)</i>	
Course prerequisites: <i>Graduation all compulsory and optional subjects from study plan, including subject Material Diagnostics</i>	
Assessment methods: <i>Successfully graduation subject included into final state exam.</i>	
Learning outcomes of the course unit: <i>Student control within final state exam chapter problematic from Material Diagnostics.</i>	
Course contents: <i>Ultrasonic testing. Magnetic defectoscopy. Acoustic defectoscopy. Radiographic testing. Atomic force microscopy. Electron microscopy. Scanning tunnelling microscopy. Thermal analysis, infrared flaw detection, infrared thermography, pyrometers, dilatometers. The principle of measurement of complex modulus, dynamic mechanical analysis. Physical principles of holography, recording and reconstruction of holograms, types of holograms. Applications of holography in the diagnosis of disorders of materials, vibration and thermal fields. Potentiometric defectoscopy. Electromagnetic defectoscopy. Capillary defectoscopy. Densitometry.</i>	
Recommended of required reading: <i>Balog, J., Chovanec, A.: Technická diagnostika. .vyd . Trenčín : TnUAD, 2003. - 115 s., ISBN 80-88914-66-3. Piteľ, J. :Meranie a diagnostika. 1. vyd. Prešov: FVT TU Košice, 2008. Košťál, P. a kol.: Využitie ultrazvukových vln pri štúdiu povrchov a rozhraní, ŽU Žilina 1998.</i>	
Language: <i>Slovak</i>	
Remarks:	
Evaluation history: <i>0</i>	

A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Lecturers: <i>doc. RNDr. Ján Bezečný, CSc.</i>					
Last modification: <i>31.03.2014</i>					
Supervisor: <i>prof. Ing. Darina Ondrušová, PhD.</i>					