Information sheet for the course
Selected Chapters from Experimental Methods of Material Characteristics

University: *Alexander Dubček University of Trenčín*	
Faculty: *Faculty of Industrial Technologies in Púchov*	
Course unit code: *MI-I-P-24*	**Course unit title:** *Selected Chapters from Experimental Methods of Material Characteristics*
Type of course unit: *state examination subjects - compulsory*	
Planned types, learning activities and teaching methods: *Teaching method:* - *face to face method.* *This subject represents one of the subjects relating to the final state exam.*	
Number of credits: *2*	
Recommended semester: *4th semester in the 2nd year full-time* *6th semester in the 3rd year part-time*	
Degree of study: *the 2nd degree of study (Engineer's degree)*	
Course prerequisites: *passing all compulsory and optional subjects of the curriculum, including subject MI-I-P-4 Experimental Methods of Material Characteristics*	
Assessment methods: *Successful passing of the state examinations subjects.*	
Learning outcomes of the course unit: *The student successfully pass the state examination subjects.*	
Course contents: *1. Construction materials and material characteristics.* *2. The limit state of the material.* *3. Tests of mechanical properties - static tests.* *4. Tests of mechanical properties - dynamic tests.* *5. Methods for determining the chemical composition.* *6. Physical methods for the determination of chemical composition (spectroscopic methods, EDX, EDS, XRD, GDS, EBSD).* *7. Macroscopic evaluation of structural defects.* *8. Evaluation of structural characteristics of materials using optical and electron microscopy.* *9. Rupture of materials by overload.* *10. Dilatometer tests.* *11. The basic test of wear.* *12. Evaluation of degradation processes in materials.* *13. Evaluation of quality welds.*	
Recommended of required reading: *Puškár, A. : Medzné stavy materiálov a súčastí. VEDA Bratislava,1989.* *Veles, P.: Mechanické vlastnosti a skúšanie kovov, Alfa, Bratislava, 1989.* *Jandoš, F.,Říman, R.,Gemperle, A.: Využití moderních laboratorních metod v metalografii. SNTL. Praha. 1985* *Hrivňák, I. : Elektrónová mikroskópia ocelí. VEDA Bratislava,1986.* *Martinkovič, M., Hudáková, M., Moravčík, R.: Náuka o materiáloch II - Návody na cvičenia.*	

STU Bratislava 2001.
Konečná, R., Tillová, E, Šupík, V., Skočovský, P.: Návody na cvičenia z Náuky o materiáli II. ŽU EDIS Žilina. 2001.
Bezecný, J. : Vznik trhlín a lomov pri tepelnom spracovaní ocelí. TnU AD. Trenčín 2007.

Language: *Slovak*

Remarks:

Evaluation history:

A	B	C	D	E	FX

Lecturers: *doc. RNDr. Ján Bezecný, CSc.*

Last modification: *31.03.2014*

Supervisor: *prof. Ing. Darina Ondrušová, PhD.*