

Information sheet for the course Material Science II

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>	
Course unit code: <i>MT-P-29</i>	Course unit title: <i>Material Science II</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; face to face</i> <i>Laboratory tutorial: -</i>	
Number of credits: <i>5</i>	
Recommended semester: <i>5th semester in the 3rd year full-time</i> <i>5th semester in the 3rd year part-time</i>	
Degree of study: <i>the 1st degree of study (Bachelor's degree)</i>	
Course prerequisites: <i>MT-P-4 Material Science I</i>	
Assessment methods: <i>examination</i>	
Learning outcomes of the course unit: <i>The student obtains basic information about modifications of the properties of steel with heat and chemical - heat treatment.</i>	
Course contents: <i>Plastic deformation. Recovery and recrystallization.</i> <i>Heat treatment. Austenitizing.</i> <i>The use of ARA and IRA diagrams for the heat treatment</i> <i>Pearlitic transformation.</i> <i>Annealing.</i> <i>Hardening - martensite and bainite transformation.</i> <i>Tempering.</i> <i>Mechanical - thermal treatment.</i> <i>Chemical - heat treatment.</i> <i>Excursion in custom <u>hardening room</u></i>	
Recommended of required reading: <i>Pulc, V., Hrnčiar, V., Gondár, E.: Náuka o materiáli, STU Bratislava, 2004</i> <i>Ptáček, L. a kol.: Náuka o materiálu I, II . Akademické nakladateľství CERM, Brno,2002.</i> <i>Skočovský, P., Bokúvka, O., Konečná, R.,Tillová, E.: Náuka o materiáli pre odbory strojnícke. ŽU. EDIS Žilina. 2001.</i> <i>Martinkovič, M., Hudáková, M., Moravčík, R.: Náuka o materiáloch II - Návody na cvičenia. STU Bratislava 2001.</i> <i>Konečná, R., Tillová, E, Šupík, V., Skočovský, P.: Návody na cvičenia z Náuky o materiáli II. ŽU EDIS Žilina. 2001.</i> <i>Bezecný, J. : Vznik trhlín a lomov pri tepelnom spracovaní ocelí. TnU AD. Trenčín 2007.</i> <i>Roučka, J. : Metalurgie neželezných slitin, CERM, Brno : 2004. ISBN 80-214-2790-6.</i> <i>Michna, Š. a kol. :Encyklopedie hliníku. Děčín: Alcan Děčín Extrusions, 2005, 700 s. ISBN 80-890-4188-4.</i>	

Language: <i>Slovak</i>					
Remarks:					
Evaluation history:					
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>doc. Ing. Marta Kianicová, PhD.</i>					