

Information sheet for the course: Technical Materials

University: Alexander Dubček University of Trenčín	
Faculty: Faculty of Industrial Technologies in Púchov	
Course unit code: MI-I-P-1	Course unit title: Technical Materials
Form, scope and method of educational activity: Form of study: Lecture / Seminar / Laboratory tutorial	
Recommended number of lessons (hours): Weekly: 2 / 1 / 0 During the semester: 24 / 12 / 0 Method of study: combined	
Number of credits: 4	
Recommended semester: 1.	
Degree of study: The 2nd degree of study	
Course prerequisites:	
Assessment methods: Assessment during the semester: Summary assessment of work results during the semester = 40 points Semester work - project and independent work during the semester Final assessment: Assessment of exam results = 60 points Grading scale: Grade A: 91 – 100 points Grade B: 81 – 90 points Grade C: 71 – 80 points Grade D: 61 – 70 points Grade E: 55 – 60 points Grade FX: less than 55 points	
Learning outcomes of the course unit: The student has knowledge of materials in technical practice and their characteristics	
Course contents: Basic groups of technical materials, their characteristics and properties. Development, production and application on the market. Modern technology of metallurgy of iron in steel. Heat resisting and heat proof materials. The essence of heat resistance, creep. High-strength materials for the aviation industry. High alloy steels, superalloys. Materials with shape memory. Construction materials, tool materials. Powder metallurgy and technical ceramics. Light metals and their alloys, Al and their alloys (Mg, Ti and their alloys). Use of pure metals in technology. Materials for electrical engineering. Biomaterials and materials used in medicine.	
Recommended of required reading: JANOVEC, J. a kol.: Perspektivní materiály. Praha: Vydavatelství ČVUT, Praha, 2008. PTÁČIK, L.: Nauka o materiálech. II. Brno: CERM, 1999. Internetové stránky a normy ISO, STN, EN. E-learning TnUAD.	
Language: English	

Remarks: Compulsory course					
Evaluation history: 0					
Total number of graded students:					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Lecturers: doc. Ing. Peter Fabian, PhD., Ing. Mariana Janeková, PhD.					
Last modification: 31.08.2022					
Supervisor: prof. RNDr. Mariana Pajtášová, PhD.					