

**Information sheet for the course
Non-ferrous Metals and Their Alloys**

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>					
Course unit code: <i>MT-P-19</i>			Course unit title: <i>Non-ferrous Metals and Their Alloys</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: 1 hour weekly/13 hours per semester of study; face to face</i>					
Number of credits: <i>3</i>					
Recommended semester: <i>3rd semester in the 2nd year full-time</i> <i>3rd semester in the 2nd year part-time</i>					
Degree of study: <i>the 1st degree of study (Bachelor's degree)</i>					
Course prerequisites: <i>MT-P-4 <u>Material science I</u></i>					
Assessment methods: <i>2 examination papers of students will be evaluated during the course:</i> <i>18 – 20 spots.....classification A</i> <i>16 – 17 spots.....classification B</i> <i>14 – 15 spots.....classification C</i> <i>12 – 13 spots.....classification D</i> <i>10 – 11 spots.....classification E</i> <i>9 and less.....classification Fx</i>					
Learning outcomes of the course unit: <i>Student has a review knowledges in the field and knows applications of non-ferrous metals. Student can apply mechanical, technological and chemical properties in the prax; can predict degradation modes and lifetime metals in the cause of unappropriate industrial processes.</i>					
Course contents: <i>1. Selection of non-ferrous metals</i> <i>2. Mg, Ti, Al alloys</i> <i>3. Ashby diagram, Young modulus</i> <i>4. Metallurgy of Al, alloying elements</i> <i>5. Strengthening of alloys</i> <i>6. Cu, Zn alloys</i> <i>7. Metals with high strength</i> <i>8. Superalloys, degradation of superalloys</i> <i>9. Using of non-ferrous metals.</i>					
Recommended of required reading: <i>1. Askeland, D.R., Phulé, P.P.: The Science and Engineering of Materials. Thomson-Brooks/Cool, 4th ed. 2003 (5th ed. 2005).</i> <i>2. Callister, W.D., Jr.: Materials Science and Engineering. An Introduction. John Wiley & Sons, Inc., 6th ed., 2003.</i>					
Language: <i>Slovak</i>					
Remarks:					
Evaluation history:					
A	B	C	D	E	FX
Lecturers: <i>doc. Ing. Marta Kianicová, PhD., doc. RNDr. Ján Bezečný, CSc.</i>					
Last modification: <i>31.03.2014</i>					
Supervisor: <i>doc. Ing. Marta Kianicová, PhD.</i>					