

## Information sheet for the course Engineering Materials

<b>University:</b> <i>Alexander Dubček University of Trenčín</i>					
<b>Faculty:</b> <i>Faculty of Industrial Technologies in Púchov</i>					
<b>Course unit code:</b> <i>MI-I-P-1</i>			<b>Course unit title:</b> <i>Engineering Materials</i>		
<b>Type of course unit:</b> <i>compulsory</i>					
<b>Planned types, learning activities and teaching methods:</b> <i>Lecture: 2 hours weekly/26 hours per semester of study; face to face</i> <i>Seminar: 1 hours weekly/13 hours per semester of study; face to face</i> <i>Laboratory tutorial: 0</i>					
<b>Number of credits:</b> <i>4</i>					
<b>Recommended semester:</b> <i>1<sup>st</sup> semester in the 1<sup>st</sup> year full-time</i> <i>1<sup>st</sup> semester in the 1<sup>st</sup> year part-time</i>					
<b>Degree of study:</b> <i>the 2<sup>nd</sup> degree of study (Engineer's degree)</i>					
<b>Course prerequisites:</b> <i>none</i>					
<b>Assessment methods:</b> <i>none</i>					
<b>Learning outcomes of the course unit:</b> <i>Students gain knowledge on materials in engineering practice and on their properties</i>					
<b>Course contents:</b> <ol style="list-style-type: none"> <li><i>1. Basic categories of engineering materials, their characteristics and properties</i></li> <li><i>2. Development, production and commercial application</i></li> <li><i>3. Modern technology of iron metallurgy in steel production</i></li> <li><i>4. Heat resistant and creep resistant materials. Fundamentals of creep resistance, creep.</i></li> <li><i>5. High-strength materials for aeronautical industry</i></li> <li><i>6. High-alloy steels, superalloys</i></li> <li><i>7. Materials with shape memory</i></li> <li><i>8. Structural materials, tool materials</i></li> <li><i>9. Powder metallurgy and engineering ceramics</i></li> <li><i>10. Light metals and their alloys. Al and its alloys (Mg, Ti and their alloys)</i></li> <li><i>11. Application of pure metals in engineering</i></li> <li><i>12. Materials for electrical engineering</i></li> <li><i>13. Biomaterials and materials used in medicine</i></li> </ol>					
<b>Recommended references and resources:</b> <ol style="list-style-type: none"> <li><i>1. Janovec, J. a kol.: Perspektivní materiály. Praha: Vydavatelství ČVUT, Praha 2008.</i></li> <li><i>2. Ptáček, L.: Nauka o materiálech. II. Brno: CERM, 1999.</i></li> <li><i>3. Websites and ISO, STN, EN standards.</i></li> </ol>					
<b>Language:</b> <i>Slovak</i>					
<b>Remarks:</b> <i>none</i>					
<b>Evaluation history:</b> <i>Number of classified students : 75</i>					
A	B	C	D	E	FX

10.67	12.0	14.67	18.67	44.0	0.0
<b>Lecturers:</b> <i>prof. Ing. Františka Pešlová, PhD.</i>					
<b>Last modification:</b> <i>31.03.2014</i>					
<b>Supervisor:</b> <i>Prof. Ing. Darina Ondrušová, PhD.</i>					