

Information sheet for the course
The Influence of Materials Technology on Environment

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>	
Course unit code: <i>MI-P-16</i>	Course unit title: <i>The Influence of Materials Technology on Environment</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> <i>Laboratory tutorial: 0</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>none</i>	
Assessment methods: <i>Students will prepare and present a project in the wide field of environment, energetics... After completing all the Lecturers of the subject, students take a written verification focused on knowledge obtained during the semester. The minimum condition for obtaining credits is the successful presentation of the project and the written examination min. 60 %.</i>	
Learning outcomes of the course unit: <i>The student has a basic knowledge in the field of manufacturing technologies and processes and their impact on environment. Students will know cycles of polluting chemicals in environment.</i>	
Course contents: <ol style="list-style-type: none"> <i>1. Chemistry and Environment (environmental issues, rational use of natural resources, biogeochemical cycle of carbon, phosphor nitrogen and sulfur)</i> <i>2. The origin and fate of certain chemicals in the environment</i> <i>3. Chemical processes in environment (reactions in atmosphere, reactions in water, reactions in soil)</i> <i>4. Global environmental problems (smog; stratospheric ozone depletion; acid rain; greenhouse effect)</i> <i>5. Chemical pollution</i> <i>6. Manufacturing operations and manufacturing processes</i> <i>7. Basic technological operations (mechanical operations, thermal operations, diffusion operations)</i> <i>8. Inorganic technology</i> <i>9. Organic technology</i> <i>10. Industry of silicates</i> <i>11. Manufacture of basic metals</i> <i>12. Biochemical production processes</i> 	
Recommended of required reading: <ol style="list-style-type: none"> <i>1. M. Orolínová: Chémia a životné prostredie; Trnavská univerzita v Trnave ,2009</i> <i>2. M. Linkešová, I. Paveleková: Vybrané kapitoly z chemickej a potravinárskej technológie; Vysokoškolské skriptá, Pedagogická fakulta Trnavskej university, 2007</i> 	

3. <i>E. C. Housecroft, A. G. Sharpe, Anorganická chemie; VŠCHT Praha (1. vydání, 2014)</i>					
Language: <i>Slovak</i>					
Remarks: -					
Evaluation history: 0					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Lecturers: <i>Dr.h.c. prof. Ing. Eugen Jóna, DrSc., Ing. Róbert Janík, PhD.</i>					
Last modification: <i>31.03.2014</i>					
Supervisor: <i>prof. Ing. Darina Ondrušová, PhD.</i>					