

Information sheet for the course Technical chemistry

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of special technology</i>					
Course unit code: <i>SaOA/B/3-99/d</i>			Course unit title: <i>Technical chemistry</i>		
Type of course unit: <i>compulsory</i>					
Planned types, learning activities and teaching methods: <i>2 lecture hours, 1 practice hour and one lab hour per week, attendance teaching method.</i>					
Number of credits: 3					
Recommended semester: <i>1st semester in the 1st year (full-time)</i> <i>1st semester in the 1st year (part-time)</i>					
Degree of study: <i>I. (bachelor)</i>					
Course prerequisites: <i>none</i>					
Assessment methods: <i>Final assessment: Assignment form of a written test with emphasis on theoretical knowledge of the subject and the support of the oral response, which shall examine the application of acquired knowledge to concrete examples.</i>					
Learning outcomes of the course unit: <i>The student can analyze factual knowledge, principles and processes, general terms, to give a comprehensive overview of the basic theoretical foundations of chemistry and some technical applications.</i>					
Course contents: <i>The basic chemical concepts, chemical symbols and chemical formulas. Patterns during chemical reactions (basic chemical thermodynamics and kinetics). Basic types of chemical reactions. Atomic structure. Chemical bonding (covalent, ionic, metallic, hydrogen). The states of matter (gas, liquid, solid state). Types of crystal structures. Disorders of crystal structures. Some technical materials and their structure (glass, ceramics, metals and alloys). Physical properties of materials (electrical, magnetic, optical, thermal). Introduction to nuclear chemistry.</i>					
Recommended of required reading: <i>JÓNA, E. – ONDRUŠOVÁ, D. – PAJTÁŠOVÁ, M. – Priemyselná anorganická chémia I., FPT TnU AD, Púchov 2007</i> <i>GARAJ, J.: Chémia – učebné texty pre nechemické odbory, Trenčín 2005</i>					
Language: <i>Slovak</i>					
Remarks: <i>The subject is provided in the winter semester of the first year of full-time study. Compulsory subject.</i>					
Evaluation history <i>Total number of students being evaluated: 59</i>					
A	B	C	D	E	FX
Lecturers: <i>prof. Ing. Jiří Balla, CSc., - lecturer</i> <i>prof. Ing. Jiří Balla, CSc., - assistant instructor</i>					
Last modification: <i>15.4.2014</i>					
Supervisor: <i>prof. Ing. Alexej Chovanec, CSc., guarantee of the study program "Vehicles Maintenance and Repair".</i>					