

Information sheet for the course Environmental aspects of the material production

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>VILA – Joint Glass Centre</i>	
Course unit code: <i>EAMP</i>	Course unit title: <i>Environmental aspects of the material production</i>
Type of course unit: <i>compulsory</i>	
Planned types, learning activities and teaching methods: <i>2h lectures</i>	
Number of credits: <i>3</i>	
Recommended semester: <i>3. semester</i>	
Degree of study: <i>II. (engineer)</i>	
Course prerequisites: <i>none</i>	
Assesment methods: <i>Participation at the lectures.</i> <i>Passing exam (written and oral part). Written part of the exam proves knowledge of a student acquired from the lectures. Minimum 60% from the overall sum of points is necessary for entering the oral part of exam.</i>	
Learning outcomes of the course unit: <i>Student acquires complex knowledge about technologies related to preparation and production of the inorganic materials, glass, metals, polymers, textiles and nanomaterials from the environmental point of view. He/she learns specific technological aspects of the material production and its impact on the environment. He/she will gain the knowledge in the field of alternative sources, environmental technologies and possible ways of pollution elimination and solving the environmental problems.</i>	
Course contents: <ol style="list-style-type: none"> <i>1. Biosphere and its classification. Influence of humans on biosphere and its components. Definition of terms used in the environmental science.</i> <i>2. Factors influencing quality of water and air. Classification of the industrial activities impacts on environment.</i> <i>3. Polluting compounds generated during exploitation and processing of the raw materials and their impact on environment.</i> <i>4. Environmental aspects of production of the inorganic materials (glass and ceramics).</i> <i>5. Environmental aspects of production of the inorganic materials (lime and cement).</i> <i>6. Production of polymers and its influence on environment.</i> <i>7. Environmental impact and challenges in the textile production.</i> <i>8. Environmental impact and challenges in paper and cellulose production.</i> <i>9. Environmental risks related to exploitation of metal and non-metal materials.</i> <i>10. Potential environmental risks related to development and exploitation of nanomaterials.</i> <i>11. Classification of the industrial waste and technologies for its liquidation.</i> <i>12. Environmental sustainability of the industrial productions.</i> <i>13. The alternation sources of energy and environmental technologies.</i> 	
Recommended of required reading: <i>Z.Pánek, V. Figusch, M.Haviar, T. Ličko, P. Šajgalík, J.Dusza: Konštrukčná keramika. R&D Print, Blava 1992</i> <i>Majling J., Plesch G., a kol.: Technológia špeciálnych anorganických materiálov, Slovenská technická univerzita, Fakulta chemickej a potravinárskej technológie, 2002, ISBN 80-227-1734-7</i> <i>J.H. Gibbons: Green Products by Design: Choices for a Cleaner Environment, DIANE Publishing Co, 1992</i> <i>Časopisecká literatúra: Environmental Science and Technology, Environmental Toxicology and</i>	

<i>Chemistry, Journal of Environmental Quality, Environmental Health Perspectives</i>					
Language: <i>Slovak</i>					
Remarks:					
Evaluation history:					
A	B	C	D	E	FX
Lectures: <i>Ing. Dagmar Galusková, PhD.</i>					
Last modification: <i>31. 1. 2014</i>					
Supervisor:					