

Information sheet for the course Environmental Engineering

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>	
Course unit code: <i>MI-I-P-6</i>	Course unit title: <i>Environmental Engineering</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 hour weekly</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>the 2nd degree of study (Engineer's degree)</i>	
Course prerequisites: <i>none</i>	
Assessment methods: <i>The students work out individually the project from environmental engineering sphere. Each student will present of the worked out project in presentation via PowerPoint during seminar from the subject before the teacher and pupils and will answer questions in discussion. After took part of each Lecturers from subject and seminare, the students will take part of written verification focused on obtained knowledge during semester. Minimum condition for obtain of credits is successful taking part defence of the project and obtaining min. 50% points from written certification.</i>	
Learning outcomes of the course unit: <i>The student has knowledge from sphere of global environmental problems, knows and understands a connection between anthropogenic activities and her influence on quality individual component of environment. He knows to characterize the main types of substances air pollutants, water, soil and controls environmental technological processes and their elimination and principle of work of concerned equipment. He has knowledge from problems of the nature protection, the most important international agreements and the basic protection of the environment legislation.</i>	
Course contents: <ol style="list-style-type: none"><i>1. The basic terms - Environmental, environmental engineering like science discipline.</i><i>2. The current problems of the environmental protection - the main global problems, the problems with far reaching consequences, the most serious problems.</i><i>3. The global warming - the greenhouse effect, the greenhouse gases, the consequences of global warming, the possible solutions.</i><i>4. The depletion of the ozone layer - the ozone and ozone layer, the causes and consequences creation of the ozone hole, the possible solutions.</i><i>5. The acidic atmospheric deposition - the causes and consequences creation of the acidic rains, the possible solutions.</i><i>6. Threats to biodiversity - definition of the biodiversity, the causes of the threat, the threats areas, the reason for protecting environmental wealth of the Earth.</i><i>7. The international agreements -The Montreal Protocol, The Kyoto Protocol, Climate Change conference in Nice.</i>	

8. *The influence of anthropogenic activities on components of the biosphere - the atmosphere - composition, properties and function of the atmosphere. The pollution of the atmosphere - nature LZO, LZO anthropogenic origin, harmful substances in air, perspective solutions.*
9. *The influence of anthropogenic activities on components of the biosphere - the hydrospheric - function, properties and types of water. The pollution of the hydrospheric - the pollution of the water, types of the sewage, perspective solutions.*
10. *The influence of anthropogenic activities on components of the biosphere - the pedosphere, the lithosphere - properties and function of the soil. The soil degradation - the contamination, the erosion. Types of contaminants in soil. Perspective solutions.*
11. *Protection of the nature - large surface area and small surface area of protected areas, types of endangered taxons.*
12. *REACH; BAT; BREF; IPKZ - definition, meaning.*

Recommended of required reading:

1. *BLAŽEJ, A. A KOL.: CHEMICKÉ ASPEKTY ŽIVOTNÉHO PROSTREDIA. BRATISLAVA/PRAHA, ALFA/SNTL, 1981.*
2. *HOSTIN, S. – ŠILHÁR, S. – SOLDÁN, M. – LACUŠKA, M.: ENVIRONMENTÁLNE INŽINIERSTVO I. BRATISLAVA, STU, 2004. ISBN 80-227-2013-5*
3. *TÖLGYESSY, J. – PIATRIK, M. – ČÍK, G. – HARANGOZÓ, M.: TECHNOLÓGIA ŽIVOTNÉHO PROSTREDIA. BRATISLAVA, STU, 1998. ISBN 80-227-1048-2*
4. *ŠKÁRKA, B. – POLÍVKA, L. – FENDRICH, E. – HOSTÍN, S. – LACUŠKA, M.: ENVIRONMENTÁLNA CHÉMIA. BRATISLAVA, STU, 2003. ISBN 80-227-1973-0*
5. *PROUSEK, J. – ČÍK, G.: ZÁKLADY EKOLÓGIE A ENVIRONMENTALISTIKY. BRATISLAVA, STU, 2004. ISBN 80-227-2097-6*
6. *HERČÍK M.: ŽIVOTNÍ PROSTŘEDÍ. ZÁKLADY ENVIRONMENTALISTIKY. TU OSTRAVA, 2007.*
7. *KUDRNA K. A KOL.: BIOSFÉRA A LIDSTVO. ACADEMIA, PRAHA, 1988.*

Language: *Slovak*

Remarks:

Evaluation history: The total number of evaluated students: 77

A	B	C	D	E	FX
23.38	24.68	25.97	11.69	12.99	1.3

Lecturers: *Ing. Darina Ondrušová, PhD.*

Last modification: *31.03.2014*

Supervisor: *prof. Ing. Darina Ondrušová, PhD.*