

Information sheet for the course Basic Biochemistry

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>	
Course unit code: <i>MI-I-V-15</i>	Course unit title: <i>Basic Biochemistry</i>
Type of course unit: <i>optional</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: 0</i> <i>Laboratory tutorial: 0</i>	
Number of credits: <i>2</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 2nd degree of study (Engineer's degree)</i>	
Course prerequisites: <i>"none"</i>	
Assessment methods: <i>short answer test and exam</i>	
Learning outcomes of the course unit: <i>Development of the ability to review, consolidate, extend and apply the biochemistry knowledge and techniques learnt, including in a professional context; skills to explain biochemical processes in environmental area.</i> <i>On completion of the unit, students should be able to:</i> <ul style="list-style-type: none"> <i>• Outline the basic concepts of biochemistry;</i> <i>• Demonstrate skills in solution of different environmental problems; xenobiotics, pollutants and biochemistry</i> <i>• Explain how biochemistry information is used as a tool in environmental management;</i> <i>• Outline the issues relating to human interaction with the environment</i> 	
Course contents: <i>The aim of this course is to present and describe fundamental principles of environmental relations together with chemical processes in biological systems. Influence of pollutants on biotic and abiotic factors.</i> <ol style="list-style-type: none"> <i>1. biochemistry, introduction,</i> <i>2. carbohydrates. 3. lipids. 4. aminoacids</i> <i>5. peptides, proteins, function in biological systems</i> <i>6. enzyme, vitamins, 7. nucleic acids, function in biological systems</i> <i>8. chemical structure of biopolymers, biomembrans</i> <i>9. genetic code, 10. photosynthetic phosphorylation</i> <i>11. principles of mass and energy changes, 12. blood biochemistry</i> <i>13. metabolic ways and their disruption through pollutants and poisons</i> 	
Recommended of required reading: <ol style="list-style-type: none"> <i>1. ŠKÁRKA B., FERENČÍK M.: BIOCHÉMIA, ALFA BRATISLAVA 1981, ISBN 063-576-87.</i> <i>2. MUSIL J., NOVÁKOVÁ O.: BIOCHÉMIE V OBRAZECH A SCHÉMATECH, AVICENUM PRAHA, 1990, ISBN 08 -109-89.</i> 	

3. LEVIS D.E.: *ORGANIC CHEMISTRY A MODERN PERSPECTIVE*, TMC USA 1996, ISBN 0-697-35091-6.

4. HALICKÝ P., KOŠOVSKÝ J.: *BIELKOVINY A NUKLEOVÉ KYSELINY*, UK BRATISLAVA 1985, ISBN 85-439-85.

5. BALOG, M., TATARKO, M. A KOL. : *ODHALENÉ TAJOMSTVÁ CHEMIE, VEDA*, BRATISLAVA, 2007, ISBN 978-80-224-0957-5

Language: *Slovak*

Remarks:

Evaluation history:

A	B	C	D	E	FX

Lecturers: *prof. RNDr. Mariana Pajtášová, PhD.*

Last modification: *31.03.2014*

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