

Table 5.2 Course specification

Type and level of studies: bachelor			
Course name: Medical Biochemistry (IB-409)			
Course status: obligatory			
Number of ECTS credits: 8			
Requirement: none			
Course aim Provide students with broad and balanced knowledge of key concepts biochemical diagnostics. Develop practical skills necessary for self-understanding and solving problems and issues in the field of biochemical diagnostics using a standard methodology.			
Course outcome After successful completion of this course, the student is able to: 1. Explain the concepts related to work in clinical (medical) laboratory biochemical 2. Define the metabolic role of certain tissues and metabolites in physiological and / or pathological processes 3. Explain the metabolism of carbohydrates, proteins, lipids and lipoproteins 4. Correlate metabolic processes and methods for monitoring metabolites concentration 5. Apply standard experimental methods used in clinical (medical) laboratory biochemical			
Course content <i>Theory</i> Work in clinical (medical) biochemical laboratory: organization, sampling and safeguards. Metabolism of carbohydrates, proteins and amino acids, lipids and lipoproteins. Reference values of metabolites, methods for their determination and importance in the process of homeostasis, markers of organ function and tissue. Clinical biochemistry in paediatrics and geriatrics. Molecular biology methods in clinical biochemistry, chemical toxicology. Biochemical effects of the tumour. <i>Practice: Practical classes, OFT, SRW</i> Monitoring of homeostasis of selected metabolites in body fluids as tests of function of the relevant organs. Work in a reference clinical biochemistry laboratory.			
Literature 1. T.A. Swanson, S.I. Kim, M. J. Glucksman: Biochemistry, Molecular Biology & Genetics, 5 th ed., Lippincott Williams & Wilkins, Philadelphia, 2010. 2. S. L. Jones: <i>Clinical Laboratory Pearls</i> , Lippincott Williams & Wilkins, Philadelphia, 2001. 3. F. Smith, G. J. Beckett, S. W. Walker, P. W. H. Rae: <i>Clinical Biochemistry</i> , Blackwell Science, Oxford, 1998. 4. Review and original scientific articles			
Number of classes of active teaching			Other classes
Lectures: 3	Practice: 3	OFT:	SRW:
Teaching methods Lectures, laboratory work, seminar			
Assessment of knowledge (maximum of 100 points)			
Pre-exam obligations	Points	Final exam	Points
activity during lecture classes	10	written exam	40
practical teaching	30	oral exam	20