## BACHELOR 'S PROGRAMME BIOCHEMISTRY 2<sup>ND</sup>YEAR OF STUDY, 4<sup>TH</sup> SEMESTER

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COURSE LEVEL         1 <sup>st</sup> cycle (bachelor'sdegree)           YEAR OF STUDY, SEMESTER         2 <sup>rd</sup> year of study,1 <sup>rd</sup> semester           NUMBER OF ECTS CREDITS         5           NUMBER OF HOURS PER WEEK         4 (2lecture hours + 2 seminar/laboratory hours)           NAME OF LECTURE HOLDER         Assoc. Prof. PhD Vasile Robert GRADINARU           NAME OF SEMINAR HOLDER         Assoc. Prof. PhD Vasile Robert GRADINARU           PREREQUISITES         English (B level)           A         GENERAL AND COURSE-SPECIFIC COMPETENCES           General competences:         → Have capacity for analytical and critical thinking.           → Have capacity for planning, time management and self-motivation.           → Act with horiesty, truthfulness, rigor, justice, efficiency and respect.           Course-specific competences:           → Know and understand the composition and characteristics of the molecules that upliving things and the fundamentals of the physicochemical processes occurring ther           → Understand the biochemical mechanisms of small and large moleculesthat supp organismphysiological functioning.           B         LEARNING OUTCOMES           → Explain the principles and application of biochemistry as a multidisciplinary ap between chemistry and biology.           → Analyze and interpret research data and scientific questions using applicable course and laboratory skills.           → Use biochemical concepts to explain the functional role of biological	Cou	RSE CODE	31010030050SL1112203	
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<ol> <li>Lenninger Principles of Biochemistry (6<sup>th</sup> Edition) – Nelson, D. L., Cox, M. M. (2012).</li> <li>Biochemistry (7<sup>th</sup> Edition) – Berg, J.M., Tzmocyko, J.L., Stryer, L. (2012).</li> </ol>		2. Lehninger Principles	of Biochemistry (6 <sup>th</sup> Edition)– Nelson, D. L., Cox, M. M. (2012).	

Е	SEMINAR/LABORATORY CONTENT			
	Aminoacids structure and ionization. Equipments and materials used in Biochemistry laboratory. Biochemical buffers. Protein quantification in solution: direct or colorimetric methods. Levels of protein organization. Enzyme extraction from a animal or vegetal source and activity measurements as function of variours parameters. Characterization of nucleic acids by electrophoresis.			
F	RECOMMENDED READING FOR SEMINARS			
	1. Boyer, R., Biochemistry laboratory: modern theory and techniques, Pearson Educatio San Francisco, CA, 2006.			
2. Katoh, R., Analytical Techniques in Biochemistry and Mole		Techniques in Biochemistry and Molecular Biology, Springer, NY, 2011.		
	<ol> <li>Rehm, H., Protein Biochemistry and Proteomics (Der Experimenter Series),1<sup>st</sup> edi Elsevier, Burlington, USA, 2006.</li> <li>Bollag, D.M., Rozycki, M.D., Edelstein, S.J., Protein methods (2nd Ed.), Wiley-Liss, NY, 19</li> </ol>			
G	EDUCATION STYLE			
LEARNING AND TEACHING METHODS		Narration, demonstrated examples, knowledges synthesis, exposure, guided discovery, lab practicals, workshops, computer-based learning		
ASSESSMENT METHODS		Practical reports (based on lab results), Computer-based and data processing exercises, Essays, Traditional testing		
LANGUAGE OF INSTRUCTION		English		