

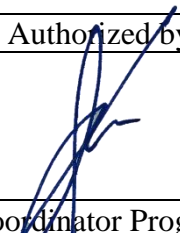




Faculty of Natural Sciences and Mathematics  
Chemistry Department  
Chemistry Education Study Program

Module name		Biochemistry		
Module level, if applicable		2 <sup>nd</sup> year		
Code, if applicable		SPK – 425		
Semester(s) in which the module is taught		4 <sup>th</sup> semester		
Person responsible for the module		Dr. Tatang Shabur Julianto, M.Si.		
Lecturer		Dr. Tatang Shabur Julianto, M.Si. Lina Fauzi’ah, M.Sc.		
Language		Indonesia		
Relation to curriculum		Compulsory		
Teaching methods	Class size	Forms of active participation	Workload 91 hours	
Class discussion	50-60	Discussion	Lecture: 101 (min) x 16 (meeting)	27 hours
			Assignment: 119 (min) x 16 (week)	32 hours
			Independent study: 120 (min) x 16 (week)	32 hours
ECTS credit		3.25		
Credit points		2 SCU		
Requirements according to the examination regulations		Minimum attendance at lectures is 75% (according to UII regulation)		
Recommended prerequisites		N/A		
Related course		Biochemistry lab work		
Module objectives/intended learning outcomes		On successful completion of the course students should be able to: 1. Explain the concept and application of biochemistry in everyday life 2. Explain the features of water in living systems 3. Explain the nature, classification, analysis of proteins and amino acids 4. Explain the definition, function, classification, and mechanism of enzymatic reactions 5. Explain the definition, classification, reactions, and metabolism of carbohydrates		

	<div>6. Explain the definition, classification, analysis, reaction, and lipid metabolism</div> <div>7. Explain the relationship of light with living systems and the mechanism of photosynthesis reactions</div> <div>8. Explain the stages of protein biosynthesis</div>		
Content	<div><div><div>• Introduction of biochemistry</div><div>• Carbohydrate</div><div>• Lipids</div><div>• Protein</div><div>• Nucleic acid</div><div>• Cell energetics</div><div>• Metabolic system</div></div></div>		
Study and examination requirements and forms of examination	Final score (NA) is calculated as follows:		
	Intended learning outcomes	Weight (%)	Technique of assessment
	1	5	Written test: assignment, midterm
	2	10	Written test: assignment, midterm
	3	15	Written test: assignment, midterm
	4	15	Written test: assignment, midterm
	5	20	Written test: assignment, final examination
	6	15	Written test: assignment, final examination
	7	10	Written test: assignment, final examination
	8	10	Written test: assignment, final examination
Media employed	Power point slide presentation, video, Google classroom		
Reading list	<div>Garrett, R.H., and Grisham, C.M., 2012, Biochemistry, John Wiley and Sons, New York.</div> <div>McKee, G., and McKee, J., 2011, Biochemistry: The Molecular Basis of Life, Oxford, USA.</div> <div>Tymoczko, J.L., Berg, J.M., and Stryer, L., 2007, Biochemistry: A Short Course, W.H. Freeman and Company, United States of America.</div>		

Prepared by:	Verified by:	Authorized by:
		
Person responsible for the module	Student representative	Coordinator Program