

UNIVERSITAS NEGERI YOGYAKARTA FACULTY OF MATHEMATICS AND NATURAL SCIENCES DEPARTMENT OF CHEMISTRY 1 Colombo Street Yogyakarta 55281 Phone (0274) 565411, Ext. 1398, Fax (0274)548203 Website: http://kimia.fmipa.uny.ac.id, E-mail: kimia@uny.ac.id

Bachelor of Science in Chemistry

MODULE HANDBOOK

Module name:	Enzymology						
Module level, if applicable:	Enzymology Undergraduate						
Code:	KIM6236						
	KIW0230						
Sub-heading, if applicable: Classes, if applicable:	-						
Semester:	- 6 th						
Module coordinator:							
	Dr. Retno Arianingrum						
Lecturer(s):	Dr. Retno Arianingrum						
Language: Classification within the	Bahasa Indonesia						
curriculum:	Elective Cou	ise					
Teaching format / class	Lectures: 10	0 minutes lectures, 1	20 structured act	ivities and			
hours per week during the semester:	120 individual study per week						
Workload:	Total workload of the activity is 90,67 hours per semester which consists of 100 minutes lectures, 120 structured activities and 120 individual study per week for 16 weeks						
Credit points:	2 SKS (3 EC	TS)					
Prerequisites course(s):	-						
Course Outcomes	 After taking this course, the students have ability to: CO1. explain the fundamental concept of structure and function of enzyme CO2. explain the enzyme kinetically CO3. explain the mechanism of enzyme reaction, the process of enzyme isolation and the application of enzyme in industry 						
Content:	This course studies about the structure and function of enzymes, the understanding of enzymes, enzyme classification and enzyme nomenclature, enzyme monomers and oligomers, the factors that influence enzyme work, the kinetic of enzyme reaction: the molecular mechanisms of enzymatic reactions, the mechanisms of enzymatic reaction without cofactors, enzyme involvement in enzymatic reactions, the kinetics of enzymatic reaction with one substrate, relationship of initial reaction rate with concentration, inhibition, allosteric enzymes. Enzyme application in industry, isolation and purification of enzymes and immobilization enzyme.						
Study / exam achievements:		rk will be weight as fo					
	No CO	Assessment Object	Assessment Technique	Weight			
	1 CO1,	Attitude & activity	Observation				

		CO2,	Structural	Assignment,		
		CO2, CO3.	assignment:	Quiz		
		000.	ability to			
			rasionalize and			
			describing			
			Structural	Assignment		
			assignment:			
			ability to applying			
			the formula		30%	
		according to				
			context		-	
			Structural	Presentation		
			assignment:	& Discusion		
			ability to collaborate,			
			analyze,			
			rasionalize, and			
			communicate			
			Individual	1		
			assignment:			
			skill to collect			
			literacy,			
			understanding,			
			and describing			
			Mid term exam	Written test	30%	
			Final exam	Written test	40%	
Forms of media:	Deer		Droingtor Video hor	Total	100%	
Forms of media.			Projector, Video, har	idouts, PPT sides	s, and	
Reference:	stationaries					
	Α.	•	•	•		
	А.	Underst	anding Enzymes:	An Introductory		
		Underst edition.	anding Enzymes: New Delhi: Drawing	An Introductory Pin Publishing.	Text 1 st	
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PLO and CO mapping

со	PLO									
	Attitude	Generic Skills		Knowledge				Specific Skills		
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1					✓		√		✓	
CO2					✓		√		✓	
CO3					✓		√		✓	