

## **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: kimia.fmipa.uny.ac.id, E-mail: kimia@uny.ac.id

## **Bachelor of Science in Chemistry**

## MODULE HANDBOOK

Module name:	Fundamental of Microbiology
Module level, if applicable:	Undergraduate
Code:	KIM6240
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	6 <sup>th</sup>
Module coordinator:	Dr. Retno Arianingrum
Lecturer(s):	Dr. Retno Arianingrum
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Subject
Teaching format / class hours per week during the semester:	Lectures: 100 minutes lectures, 120 structured activities and 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 ECTS)
Prerequisites course(s):	-
Course Outcomes	After taking this course, the students have ability to:

	<ul> <li>CO1. explain the scope and history of microbiology</li> <li>CO2. explain the structure and function of cell microorganisms</li> <li>CO3. describe the growth and control of microorganisms</li> <li>CO4. explain the metabolism of microorganisms</li> <li>CO5. explain the physiological structure, and the role of Eubacteria and Archaebacteria</li> <li>CO6. explain about microbial genetics</li> <li>CO7. explain the structure, physiology, and role of Viruses, Fungi, Algae and Protozoa</li> <li>CO8. describe the microbiology of health, soil, water, food and industrial structures, physiology, and the role of fungi</li> </ul>						
Content:	This course discusses about the fundamental of understanding of microbes and their applications in various ways the field of life, the understanding of the microbial world which includes aspects of morphology, physiology, genetics, microbial cultivation, the role of microbes in various fields of human life, such as medical microbiology, food microbiology, and the environment.						
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	No	СО	Assessment Object	Assessment Technique	Weight		
	1	CO1,	Attitude	Observation	10%		
		CO2,	Structural	Assignment	10%		
Study / exam achievements:		CO3, CO4, CO5, CO6, CO7, CO8.	assignment: ability to rasionalize and describing				
			Structural assignment: ability to applying the formula according to context	Assignment	10%		
			Structural assignment: ability to collaborate, analyze, rasionalize, and communicate	Assignment	10%		
			Individual assignment: skill to collect literacy, understanding, and describing	Assignment	10%		
			Mid term exam	Written test	20%		
			Final exam	Written test	30%		
	I otal   100%    Board LCD Projector Video, handoute, DDT alideo, and						
Forms of media:	stationaries						

	A. Pelczar, Michael J. 2005. Dasar-dasar mikrobiologi,				
Reference:	Penerjemah Ratna Siri Hadioetomo, Publisher: Jakarta: Ul				
	Pres				
	B. Unus Suriawiria, 1986, Pengantar Mikrobiologi Umum,				
	Penerbit. : Bandung : Angkasa.				
	C. Schlegel, HG dan Schmidt, K. 1994. Mikrobiologi Umum.				
	Gadjah Mada University Press				
	D. Arthur G. Jhonson, Richard J. Ziegaler, 2013, Esensial				
	Mikrobiologi & Imunologi, Penerbit: Karisma				
	E. Michael T. Madigan, Kelly S. Bender, Daniel H. Buckley,				
	W. Matthew Sattley, David A. Stahl, 2017, Brock Biology of				
	Microorganisms, 15th Edition, Published by Pearson				

## PLO and CO mapping

	PLO									
со	Attitude	Generic Skills		Knowledge				Specific Skills		
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1					✓					
CO2					~					
CO3							✓			
CO4							✓			
CO5							✓			
CO6									✓	
C07									✓	
CO8									✓	