

MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME	COURSE CODE: D10D-2006
Module designation	Microbiology	
Semester in which the module is taught	2	
Persons responsible for the module	1. Dr. Mia Miranti Rustama 2. Prof. Ratu Safitri 3. Prof. Nia Rossiana 4. Asri Peni Wulandari, Ph.D 5. Dr. Keukeu Kaniawati Rosada 6. Febri Doni, Ph.D 7. Yolani Syaputri, Ph.D	
Medium of instruction	Indonesian	
Relation to curriculum	Compulsory course	
Teaching methods	Student-Centered Learning, Project-based Learning, Collaborative Learning	
Workload	Total workload : 8160 minutes = 136 hour Lecture and discussion : 3 x 50 minutes x 16 week = 2400 minutes = 40 hour Exercises : 3 x 60 minutes x 16 week = 2880 minutes = 48 hour Self-study : 3 x 60 minutes x 16 week = 2880 minutes = 48 hour	
Credit points	3.00 (5.43 ECTS)	
Required and recommended prerequisites for joining the module	Basic biology	
Module objectives/intended learning outcomes	1. Students are able to explain historical events and developments in microbiology and discuss the importance of microbiology as a science 2. Students are able to explain the distinguishing characteristics of groups of microorganisms and provide examples of groups of microorganisms 3. Students can determine the growth and control factors of microbes, explain their interactions to connect the factors of growth, nutrition, and metabolism for cell growth and the interaction of microbes with the environment, including finding ways to control microorganisms in the environment 4. Students can conceptualize the genetic material of prokaryotic and eukaryotic microorganisms and demonstrate its potential in modern applications in the field of biomolecular science	
Contents	This course covers knowledge of the basic concepts of microbiology (history, cell structure and function, metabolism, genetics), diversity of microorganisms, control of microorganisms, the benefits and impacts of microorganisms in the environment, the use of software, basic instruments and standard methods for the analysis of microorganisms in general and how to document, store and analyze work data and complete assignments in groups and independently.	
Examination forms	Pretest, Posttest, Quiz, Midterm exam, Assignment, and Final exam	
Study and examination requirements	The minimum attendance in lectures is 80%. Final grades are evaluated based on quiz (10%), midterm exam (15%), assignment (10%), final exam (15%), project and participation (50%)	
Reading lists	1. Michael T. Madigan, John Martinko, Thomas Brock, Paul Dunlap, David P. Clark, 2021. <i>Brock Biology of Microorganisms 15th ed.</i> Pearson/Benjamin Cummings. 1061 page 2. Amit Arora · 2021. <i>Textbook of Immunology, Microbiology and Parasitology Books</i> . Penerbit: B. Jain Publishers Pvt. Limited. 3. Tortora, G. J., Funke, B. R., & Case, C. L. (2018). <i>Microbiology: An introduction</i> (13th ed.). Pearson	