



MODULE HANDBOOK

Module name	General Microbiology
Module level, if applicable	Bachelor
Code, if applicable	22060211E16
Courses, if applicable	General Microbiology
Semester(s) in which the module is taught	4 th (fourth)
Person responsible for the module	1. Prof. Dr. Ulfah Utami, M.Si. 2. Ir. Liliék Harianie, M.P. 3. Prilya Dewi Fitriasaki, M.Sc. 4. Muhammad Saefi, M.Pd.
Lecturers	1. Prof. Dr. Ulfah Utami, M.Si. 2. Ir. Liliék Harianie, M.P. 3. Prilya Dewi Fitriasaki, M.Sc. 4. Muhammad Saefi, M.Pd.
Language	Bahasa Indonesia
Relation to curriculum	Compulsory course in the second year (4 th semester) bachelor's degree
Type of teaching, contact hours	100 minutes lectures, 50 minutes laboratory and 180 minutes structured activities per week
Workload	Workload 3 SKS 1. Face to face method (2 sks) Consists of 100 minutes lectures, 120 minutes self- study and 120 minutes structured activity per week for 16 weeks, (5440 minutes = 90,6 hours) equivalent to 3,2 ECTS 2. Laboratory activity method (1 SKS) 70 minutes structured activities per week 100 minutes laboratory for 7 weeks. Total 1.190 minutes = 19,8 hours equivalent to 0,7 ECTS The total workload is 3,9 ECTS
Credit points	3
Requirements according to the examination regulations	Students are required to fulfill 80% class attendance
Recommended prerequisites	Not the recommended prerequisites to take the course
Module objectives/intended learning outcomes	After completing this course, the students should have ability to: 1. Describe the history of microbiology through presentation discussion activities 2. Compare the differences in the structure of various microbial groups through presentation discussion activities and practicum on microscopy-specimen preparation techniques 3. Analyze the rate of microbial growth through presentation discussion activities and culture technique practicum 4. Study various cellular activities through presentation discussion activities and microbial respiration practicum 5. Give consideration to environmental issues related to water quality through practical activities on MPN coliform calculations



UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG

Faculty of Science and Technology

Biology Study Program

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Content	The definition, history, and classification of microbiology, microbial nutrition, microbial breeding, and growth, environmental factors that affect microbial growth, microbial diversity (protozoa, algae, fungi, bacteria, and viruses), microbial genetics, microbial physiology, microbial reproduction, microbial ecology, microbial metabolism, and applied microbiology.																													
Study and examination requirements and forms of examination	<p>The final mark will be weighted as follows:</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Assessment Methods</th> <th>Weight (percentage)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Final examination</td> <td>25%</td> </tr> <tr> <td>2</td> <td>Mid-Term Examination</td> <td>25%</td> </tr> <tr> <td>3</td> <td>Quiz, Homework</td> <td>25%</td> </tr> <tr> <td>4</td> <td>Laboratory & Report</td> <td>25%</td> </tr> </tbody> </table> <p>The final grade will be determined as follows:</p> <table border="1"> <thead> <tr> <th>Range</th> <th>Grade</th> </tr> </thead> <tbody> <tr> <td>[85 – 100]</td> <td>A</td> </tr> <tr> <td>[75 – 85)</td> <td>B+</td> </tr> <tr> <td>[70 – 75)</td> <td>B</td> </tr> <tr> <td>[65 – 70)</td> <td>C+</td> </tr> <tr> <td>[60 – 65)</td> <td>C</td> </tr> <tr> <td>[50 – 60)</td> <td>D</td> </tr> </tbody> </table>	No.	Assessment Methods	Weight (percentage)	1	Final examination	25%	2	Mid-Term Examination	25%	3	Quiz, Homework	25%	4	Laboratory & Report	25%	Range	Grade	[85 – 100]	A	[75 – 85)	B+	[70 – 75)	B	[65 – 70)	C+	[60 – 65)	C	[50 – 60)	D
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Media employed	Whiteboard, Projector, Laptop, Power point, realia media																													
Reading List	<ol style="list-style-type: none"> Madigan, M.T., Martinko, J.M., Stahl, D.A., & Clark, D.P. (2015). <i>Biology of Microorganisms 14th edition</i>. Pearson Education. Jacquelyn G. Black & Laura J. Black (2017). <i>Microbiology: Principles and Explorations, 10th Edition</i>. Wiley Publisher. James G. Cappuccino & Natalie Sherman. (2014). <i>A Laboratory Manual, 10th edition</i>. Pearson Education. Waluyo, L. (2019). <i>Mikrobiologi Umum, cetakan kelima</i>. UMM Press. 																													

PLO and CO Mapping ([The PLO is available on s.id/KodeDeskripsi](#) at “PLO” sheet)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
CO 1		V							
CO 2		V		V					
CO 3		V		V					
CO 4		V		V					
CO 5			V	V					