

Module designation	Microbial Ecology
Semester(s) in which the module is taught	Odd
Person responsible for the module	Dr. Bernadetta Octavia, Dr. Anna Rakhmawati, M.Si.
Language	Bahasa Indonesia
Relation to curriculum	Elective
Teaching methods	Lecture, lesson, project, seminar, exam
Workload (incl. contact hours, self-study hours)	Total workload is 91 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points	2 SKS (3.2 ECTS)
Required and recommended prerequisites for joining the module	Microbiology
Module objectives/intended learning outcomes	PLO 2 PLO 6 PLO 7 PLO 9
Content	This course teaches the concept of microbial ecology and the role of microorganisms related to the environment and daily life so students can have the provision to develop microbiology in various fields
Examination forms	

<b>Study and examination requirements</b>	<p>The final mark will be weight as follow:</p> <table border="1" data-bbox="624 242 1396 1174"> <thead> <tr> <th>NO</th><th>Assessment Techniques</th><th>Percentage Weight Assessment (%)</th><th>Information</th></tr> </thead> <tbody> <tr> <td rowspan="6">1</td><td>Cognitive</td><td>50</td><td>Maximum assessment weight accumulation 50%</td></tr> <tr> <td>Presence</td><td>5</td><td></td></tr> <tr> <td>Quiz</td><td>5</td><td></td></tr> <tr> <td>Task</td><td>10</td><td></td></tr> <tr> <td>Mid Semester Exam</td><td>15</td><td></td></tr> <tr> <td>Final Semester Exam</td><td>15</td><td></td></tr> <tr> <td rowspan="3">2</td><td>Participatory</td><td>50</td><td>Maximum assessment weight accumulation 50%</td></tr> <tr> <td>Case Study</td><td>25</td><td></td></tr> <tr> <td>Team Based Project</td><td>25</td><td></td></tr> <tr> <td></td><td><b>Total</b></td><td><b>100</b></td><td></td></tr> </tbody> </table>				NO	Assessment Techniques	Percentage Weight Assessment (%)	Information	1	Cognitive	50	Maximum assessment weight accumulation 50%	Presence	5		Quiz	5		Task	10		Mid Semester Exam	15		Final Semester Exam	15		2	Participatory	50	Maximum assessment weight accumulation 50%	Case Study	25		Team Based Project	25			<b>Total</b>	<b>100</b>	
NO	Assessment Techniques	Percentage Weight Assessment (%)	Information																																						
1	Cognitive	50	Maximum assessment weight accumulation 50%																																						
	Presence	5																																							
	Quiz	5																																							
	Task	10																																							
	Mid Semester Exam	15																																							
	Final Semester Exam	15																																							
2	Participatory	50	Maximum assessment weight accumulation 50%																																						
	Case Study	25																																							
	Team Based Project	25																																							
	<b>Total</b>	<b>100</b>																																							
<b>Reading list</b>	<p>A. Barton, L.L. and Northup, D.E. 2011. Microbial Ecology. Wiley-Blackwell</p> <p>B. Glazer, A.N. and Nikaido, H., 2007. Microbial Biotechnology Fundamentals of Applied Microbiology. Cambridge University Press. UK</p> <p>C. Madigan, M.T., Martinko, J.M., Bender, K.S., Buckley, D.H. and Stahl, D.A. 2015. Brock Biology of Microorganisms. Pearson Education, Inc, USA</p> <p>D. Mitchell ,R. and Gu Ji-Dong (Ed.) 2010. Environmental Microbiology, 2 nd ed. Wiley-Blackwell</p> <p>E. Cohen, G.N. 2011. Microbial Biochemistry, 2 nd ed. Springer</p>																																								