

	<p style="text-align: center;">UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES</p> <p style="text-align: center;">MASTER OF SCIENCE IN BIOLOGY</p>	<p>COURSE CODE: D20D2128</p>
<p>Module designation</p>	<p>Microbial Ecology</p>	
<p>Semester(s) in which the module is taught</p>	<p>2</p>	
<p>Person(s) responsible for the module</p>	<p>Dr. Keukeu Kaniawati Rosada, M.Si Dr.rer.nat. Tri Dewi K. Pribadi, M.Si Febri Doni, P.hD</p>	
<p>Medium of instruction</p>	<p>Indonesian</p>	
<p>Relation to curriculum</p>	<p>Elective Master of Science in Biology</p>	
<p>Teaching methods</p>	<p>Lecture, discussion, inquiry learning, cooperative learning</p>	
<p>Workload</p>	<p>Total workload: 5440 minutes (90,67 hours)</p> <p>CLASS</p> <p>Lecture, discussion, inquiry learning, cooperative learning: 2 x 50'x 16 weeks = 1600 minutes (26.67 hours)</p> <p>Exercise : 2 x 60'x 16 weeks = 1920 minutes (32 hours)</p> <p>Private study : 2 x 60'x 16 weeks = 1920 minutes (32 hours)</p>	
<p>Credit points</p>	<p>2.00 SKS (3.62 ECTS)</p>	

Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. After completing this course, the student will be able to explain the biodiversity of microorganisms and methods to analyze it. 2. After completing this course, the student will master in explaining the diversity and dynamics of microbial communities and their functions in ecosystems. 3. Students will be able to explain and differentiate the various modes of microbial life. 4. Students will be able to explain the concept and application of microbial communities in environmental improvement. 5. Students will be able to explain the concept and application of microbial community in environmental improvement.
Contents	<p>The Microbial Ecology course explains the interactions between microorganisms and the environment and how complex microbial communities relate to function and stability in natural and artificial systems. This exploration and application of microbial ecology can provide insight as well as stimulate students to find other forms of microbial communities that can be applied for environmental protection and public health along with the recovery of natural resources that have been destroyed and degraded.</p>
Examination forms	Essay and written examination
Study and examination requirements	<p>Minimum attendance at lectures is 80%. Final score is evaluated based on assignment and group case study reports (20%), Assignment (20%), mid semester exam (30%), and end semester exam (30%).</p>
Reading lists	<ol style="list-style-type: none"> 1. Madigan, M. T., J. M. Martinko, K. S. Bender, D. H. Buckley, and D. Stahl. 2015. Brock: Biology of Microorganisms (14th edition). Pearson Education, Inc., Boston. 2. Atlas, R. M. and Bartha, R. 1998. Microbial Ecology: Fundamentals and Applications (4th Edition). Benjamin Cummings: Menlo Park, CA.