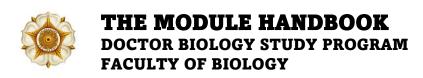


SELECTED TOPIC FOR DISSERTATIONS

Microbial Ecology

Course code	BIDB203124
Course level	Doctoral Program
Semester/ term	Odd/even
Course coordinator	Prof. Dr. Endah Retnaningrum, S.Si., M.Eng.
Lecture(s)	Prof. Dr. Endah Retnaningrum, S.Si., M.Eng.
Language	Indonesian/English
Classification within the Curriculum	Compulsory
Teaching format/ class hours per week during the semester	This course is planned to have 14 teaching weeks and 2 weeks of examination.
Workload	90 hours
Credits	2-0 credits / 3.6 ECTS
Requirements	Receiving approval from the Supervisory Team.
Program Learning Outcome	CPL 2.1.Upon completing this program, the graduates demonstrate an understanding of of the scientific philosophy of biology which is related in depth to structure, function, diversity, reproduction, evolution and engineering of biological systems. CPL 2.2. After attending this program, graduates demonstrate an understanding of substantial and leading theory in the field of biology/biological resources in order to support education for sustainable development CPL 3.1. After completing this program, the graduates will be able to discover or develop new scientific theories/concepts/ideas in biology
Course Learning Outcome	BIDB203124.1 By the end of this course, students gain knowledge and understanding of the adaptation, development, and succession of microorganism populations within ecosystems. BIDB203124.2 By the end of this course, students will be able to analyze analyze the diversity and dynamics of microorganism populations in various ecosystems BIDB203124.3 By the end of this course, students will be able to manage, lead, and develop research on



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	microorganism-organism interactions and
	intercellular communication among microorganisms
	BIDB203124.4 By the end of this course, students will be able to
	human life challenges through the application of
	microbial populations in various ecosystems
Course Description	This course covers the adaptation, development, and succession of
	microorganism populations within ecosystems, as well as the
	diversity and dynamics of these populations in various ecosystems.
	It also explores interactions between microorganisms and other
	organisms, and intercellular communication among
	microorganisms. Recent research on the application of microbial
	populations in diverse ecosystems is integrated into each topic,
	enabling students to analyze and solve relevant problems
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Assessments	The assessment for Selected Topic for Dissertations (Microbial
	Ecology) is based on two main components, with the respective
	criteria and weights:
	A. Participatory Activity (40%)
	Mid-Term Exam (30%)
	Participation (10%)
	B. Project (60%)
	Stuctured Assigment/Task (10%)
	Final-Term Exam (30%)
	Project Result/Case Study/Project Based Learning result
	(20%)
Study Media	Main
and Literature	1. Barton, L. L., Diana E. Northup, D. E. 2011. Microbial Ecology.
and Entorators	John Wiley & Sons, 2011
	Additional
	1. Tate, R. L. 2020. Soil Microbiology. John Wiley & Sons,
	2. Ashok Kumar Chauhan, A. K., Varma, A. 2006. Microbes:
	Health and Environment. Anshan Publishers
	Scientific Publishers
	Scientific Publishers