

Bachelor of BiologyEmail: biologi.fmipa@um.ac.idWebsite: <http://biologi.fmipa.um.ac.id/>**MODULE HANDBOOK**

Module designation	Ecology
Module level, if applicable	Undergraduate
Code, if applicable	NBIOUM6122
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	Odd semester
Person responsible for the module	Prof. Dr. Drs. Fatchur Rohman, M.Si
Lecturer	Prof. Dr. Drs. Fatchur Rohman, M.Si Dr. Agus Dharmawan, M.S Prof. Dr. Ir. Suhadi, M.Si Dr. Vivi Novianti, M.Si Bagus Priambodo, S,Si, M.Si, M.Sc Farid Akhsani, S.Si, M.Si
Language	Bahasa Indonesia
Relation to curriculum	Undergraduate program, compulsory, 4 th semester
Type of teaching, contact hours	Undergraduate degree program: cooperative learning, presentation, discussion, laboratory work, 3 x 50 = 150 minutes and 1 x 170 minutes
Workload	1. Lectures: 3 x 50 = 150 minutes (2.5 hours) per week. 2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week. 3. Laboratory work: 1 x 170 minutes (2.83 hours) per week. 4. Private study: 3 x 60 = 180 minutes (3 hours) per week.
Credit points	4 credit points (~6 ECTS-eq)
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to be eligible for the final examination.
Recommended prerequisites	-
Module objectives/intended learning outcomes	Students are able to: LO3 : Master the theoretical concept and basic procedure in biology, the laboratory management which is integrated by using logical, critical, systematic thinking.
Course Learning Outcomes	1. Understanding the philosophy, concepts, principles and procedures in ecological research.

	2. Acquiring the skills to master the methods and techniques in ecology 3. Acquiring the skills to collect, process, and analyze ecological data 4. Acquiring skills in solving ecological problems	
Content	This course covers the following main topics: • The nature of ecology, • The field of ecological studies, • Environmental factor data, • Environmental factors that affect the performance of organisms, • The structure of the population of living things, • The structure and function of the community, • The characteristics of the ecosystem, • Environmental problems and solutions using an ecological approach	
Learning Activity	Week 1	- Explaining the definition, scope and development of ecology. - Creating a schematic linkage of ecology with other sciences.
	Week 2	- Identifying organizational levels in ecology - Online interactive discussion: The concept of the organizational structure of life in ecological studies (individuals, populations, communities, ecosystems, biomes, biosphere/ecosphere)
	Week 3	Analyzing the factors that limit the distribution: dispersal, habitat selection, physicochemical factors.
	Week 4	Describing and explaining the relationship between the tolerance range of organisms, resources and limiting factors with the performance of living things
	Week 5	Describing and explaining the relationship between the tolerance range of organisms, resources and limiting factors with the performance of living things
	Week 6	Identifying, classifying, and making inferences about population structure
	Week 7	Identifying, classifying, and making inferences about population structure
	Week 8	Identifying, classifying, and making inferences about community structure
	Week 9	Identifying, classifying, and making inferences about community structure

	Week 10	Analyzing articles and journals with ecosystem research topics.
	Week 11	Analyzing articles and journals with ecosystem research topics.
	Week 12	Analyzing articles and journals with ecosystem research topics.
	Week 13	Finding problems in the field, formulating and solving them using ecological methods.
	Week 14	• Finding problems in the field, formulating and solving them using ecological methods. • Field Lectures (KKL) in National Parks
	Week 15	• Finding problems in the field, formulating and solving them using ecological methods. • Field Lectures (KKL) in National Parks
	Week 16	• Finding problems in the field, formulating and solving them using ecological methods. • Field Lectures (KKL) in National Parks
Study and examination requirements and forms of examination	- Concept understanding (35%) : written test - Assignments (papers, individual assignments, practicum reports) (25%) : portofolio - Performance (presentation) (25%) : Observation - Activities (attendance, discussion) (15%) : Observation	
Media employed	LCD, blackboard, and Sipejar.	
Reading list	1. Barbour, M.G. 1980. Terrestrial Plant Ecology. California : B. Cummings. 2. Begon, M, J.L. Harper and C.R. Townsend. 1986. Ecology: Individuals, populations and communities. Oxford : Blackwell. 3. Dharmawan, A. Ibrohim, Hawa T, Suwono, H. Susanto, P. 2004. Ekologi Hewan. Malang: UM Press 4. Kendeigh. S.C. 1980. Ecology with special reference to animals and man. New Jersey : Prentice Hall. 5. Mueller, D. Dombois & H. ElleMBERG. 1974. Aims and Methods of Vegetation Ecology. New York, London, Sydney, Toronto. John Wiley. 6. Odum. F.P 1983. Basic ecology. Philadelphia : Saunders. 7. Syafei, E.S. 1990. Pengantar Ekologi Tumbuhan. Proyek Pembinaan Tenaga Kependidikan. FMIPA-ITB. 8. Odum, E. P. 1977. Ecology. Second Edition. Holt Rinehearat and Winston. London. 9. Krebs, C. J. 2001. Ecology: Experimental analysis of Distribution and Abundance. Fifth Edition. Benjamins	

	Cummings, an imprint of Addison Wesley Longman, Inc. New York.
Date of last amendment made	January, 2022