

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

Module designation	Animal Diversity
Module level, if applicable	Undergraduate
Code, if applicable	NBIOUM6118
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	Odd semester
Person responsible for the module	Sofia Ery Rahayu S.Pd., M.Si.
Lecturer	Sofia Ery Rahayu S.Pd., M.Si. Bagus Priambodo S.Si., M.Si., M.Sc. Farid Akhsani S.Si., M.Si.
Language	Bahasa Indonesia
Relation to curriculum	Undergraduate degree program, compulsory, 3rd semester
Type of teaching, contact hours	Undergraduate degree program: cooperative learning, presentation, 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	NBIOUM6109 Animal Structure and Development 1 NBIOUM6112 Protists NBIOUM6113 Animal Structure and Development 2
Module objectives/intended learning outcomes	Students are able to: (LO3) Master basic biological theoretical concepts in an integrated manner using logical, critical, systematic and innovative thinking through the science and technology approach to analyze various problems in the field of biology.

Course Learning Outcome	1. Understanding the biological characteristics of animal diversity 2. Analyzing the concepts of classifying animals based on their characteristics 3. Creating an animal classification system based on observations in the environment	
Content	This course covers the following main topics: • Animal classification and animal taxonomy • Introduction to phylogenetic trees • Identification and classification of Porifera and Coelenterata • Identification and classification of Platyhelminthes, Nematelminthes, and Annelida • Identification and classification of Mollusks • Identification and classification of Arthropods • Identification and classification of Echinoderms • Identification and classification of Chordates in Sub Phylum Hemichordata, and Urochordata • Identification and classification of Chordata from SubPhylum Cephalochordata, and Agnatha • Identification and classification of Chordata in the Class of Pisces • Identification and classification of the Class Amphibians • Identification and classification of Class Reptilia • Identification and classification of Class Aves • Identification and classification of Class Mammalia	
Learning Activity	Week 1	Semester lecture contracts, lecture rules and ethics, understanding the concept of animal diversity, animal classification, and animal taxonomy
	Week 2	Identifying and classifying the phylum Porifera and Coelenterata, observing members of the phylum Porifera and Coelenterata and preparing reports
	Week 3	Identifying and classifying the phylum platyhelminthes, nemathelminthes, and annelida, observing members of the phylum platyhelminthes, nemathelminthes, and annelida and preparing reports
	Week 4	Identifying and classifying phylum mollusca, observing members of phylum mollusca and preparing reports
	Week 5	Identifying and classifying the phylum arthropoda, observing members of the phylum arthropoda and preparing reports

	Week 6	Identifying and classifying phylum echinoderms, observing members of phylum echinoderms and preparing reports
	Week 7	Identifying and classifying phylum chordata in subphylum hemichordata and urochordata, Identifying and classifying phylum chordata in subphylum cephalochordata and agnatha
	Week 8	MIDTERM EXAMINATION • THEORY TEST MATERIAL: from phylum porifera to chordates • PRACTICUM TEST MATERIAL: from phylum porifera to chordates
	Week 9	Identifying and classifying phylum chordata in class pisces, Identifying and classifying phylum chordata in class pisces and preparing reports
	Week 10	Identifying and classifying the phylum chordata in the class amphibia, Identifying and classifying the phylum chordata in the class amphibia and preparing a report
	Week 11	Identifying and classifying phylum chordata in class Aves, Identifying and classifying phylum chordata in class Aves and preparing reports
	Week 12	Identifying and classifying the phylum chordata in the mammal class, Identifying and classifying the phylum chordata in the class mammal and preparing a report
	Week 13	Observing animals in the environment around students, the topics chosen are adapted to the student environment, activities are carried out in groups
	Week 14	Observing animals in the environment around students, the topics chosen are adapted to the student environment, activities are carried out in groups, presentations
	Week 15	Presentation FINAL EXAMINATION THEORY: from hemichordata to mammals
	Week 16	FINAL EXAMINATION PRACTICUM: from pisces to mammals
Study and examination requirements and forms of examination	Assignment (25%) Midterm examination (25%) Final examination (25%)	

	Performance (25%)
Media employed	Powerpoint, LCD projector, board, animal specimen, youtube, e-learning (SIPEJAR).
Reading list	1. Hickman, C.P., Roberts, L.S., Larson, A., I'Anson, H., and Eisenhour, D.J. 2006. <i>Integrated Principles of Zoology</i> (thirteenth Edition). New York. McGraw Hill Companies. 2. Indriwati, S.E. 2012. <i>Masalah dan Pemecahannya di Laboratorium</i>. Universitas Negeri Malang 3. Indriwati, S.E. 2014. <i>Keanekaragaman Kordata Rendah</i>. Universitas Negeri Malang: LP3M 4. Jordan, E.L. and Verma, P.S. 1983. <i>Chordate Zoologi</i>. S. Chand & Company Ltd. Rom Nagor. New Delhi. 5. Jordan, E.L. and Verma, P.S. 2009. <i>Invertebrate Zoologi</i>. S. Chand & Company Ltd. Rom Nagor. New Delhi 6. Kastawi, Y. dkk. 2001. <i>Petunjuk Praktikum Zoologi Avertebrata</i>. Malang. Jurusan Biologi FMIPA-UM 7. Kastawi, Y. dkk. 2001. <i>Zoologi Avertebrata</i>. Malang. Jurusan Biologi FMIPA- UM. 8. Kastawi, Y., dkk. 2001. <i>Zoologi Vertebrata</i>. Malang: Jurusan Biologi FMIPA – UM. 9. Ruppert E. Edward and Barnes, R.D. 1994. <i>Invertebrate Zoologi</i>. Philadelphia: Saunders College Publishing. 10. Storer & Usinger. 1984. <i>General Zoologi</i>. Mcgraw Hill Book Company Inc. New York. 11. Young, J.Z. 1962. <i>The Life of a Vertebrae</i>. Oxford University Press. New York & Oxford. 12. Cleveland P. Hickman Jr.dkk., 2008. <i>Integrated Principles of Zoology</i>. Ed 14th. McGraw-Hill. New York 13. Kumar, A. & Prakash, S. 2020. Status of Animal Phyla in Different Kingdom Systems of Biological Classification. <i>IJBI</i> 2 (2) 149-154
Date of last amendment made	January, 2022