



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND SCIENCE
DEPARTMENT OF BIOLOGY EDUCATION

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Bachelor of Science in Biology

MODULE HANDBOOK

Module name:	Animal Biosystematics
Module level, if applicable:	Undergraduate
Code:	BIM 6260
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	Even
Module coordinator:	Rizka Apriani Putri, M.Sc
Lecturer(s):	Rizka Apriani Putri, M.Sc
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week
Workload:	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 ECTS)
Prerequisites course(s):	Invertebrate Biology, Vertebrate Biology
Program Learning Outcomes	PLO 4. Comprehensively mastering Biology (core biology) to solve problems in the field of Biology (problem-solving) and to underlie the concepts of related sciences PLO 6. Being adaptive, creative, innovative in applying the concepts of Biology and other related fields PLO 9. Being able to work and create jobs/being an entrepreneur in the field of Biology

	<p>PLO 11. Possessing scientific skills to support the ability to speak in local, national, and international forums</p>																				
<p>Course Outcomes</p>	<p>After taking this course, the students have ability to:</p> <p>CO 1. Understand the basic terminology, history and fundamentals of animal systematic and nomenclature</p> <p>CO 2. Explain the importance of Genetic variation, polymorphic species, geographical races in animal biosystematics</p> <p>CO 3. Understand the concept of species and the formation of new species through evolutionary process (Microtaxonomy)</p> <p>CO 4. Explain the basis of biological classifications (Macrotaxonomy)</p> <p>CO 5. Understand how to choose characters/Operational Taxonomic Units (OTU) in taxonomy and systematics analysis</p> <p>CO 6. Demonstrate the use of OTUs in numeric phenetic and cladistic analysis in animal biosystematics</p>																				
<p>Content:</p>	<p>This course provide students with the advanced knowledge in Biological Systematics particularly in animals. Students will learn about fundamentals of animal systematics, species and species concepts, Macrotaxonomy, and systematics analysis including numeric phenetics and cladistic.</p>																				
<p>Study / exam achievements:</p>	<p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO1 to CO 6</td> <td>Observed attitudes , knowledge, and skills</td> <td>Survey, test, rubrics and manuals</td> <td>60%</td> </tr> <tr> <td>2</td> <td>Review session</td> <td></td> <td></td> <td>40%</td> </tr> <tr> <td colspan="4" style="text-align: right;">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1 to CO 6	Observed attitudes , knowledge, and skills	Survey, test, rubrics and manuals	60%	2	Review session			40%	Total				100%
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<p>Forms of media:</p>	<p>multimedia</p>																				
<p>Reference:</p>	<p>A. Simpson, G.G. 1961, Principles of Animal Taxonomy, Oxford Book Company, New Delhi</p> <p>B. Richards, R.E., 2016, Biological Classification, A Philosophical Introduction, Cambridge University Press, UK</p> <p>C. J.E Winston, 1999, Describing Species : Practical Taxonomic Procedure for Biologist, Columbia University Press, New York</p> <p>D. Hickman, C. P. <i>et al.</i> ,2017, Integrative Principles of Zoology 17th Ed, McGraw Hill Education, New York</p> <p>E. Wiens, J.J. (ed), 2000, Phylogenetic Analysis of Morphological Data, Smithsonian Institution</p>																				

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CO1				✓		✓					✓
CO2				✓		✓					✓
CO3				✓		✓					✓
CO4				✓		✓					✓
CO5				✓		✓			✓		✓
CO6				✓		✓			✓		✓