



THE MODULE HANDBOOK

Magister Biology Study Program FACULTY OF BIOLOGY

ANIMAL BIOSYSTEMATICS

Course code	BIMB 202211
Course level	Magister
Semester/ term	Odd & Even semesters
Course coordinator(s)	Dr.Dra. Rr. Upiek Ngesti Wibawaning Astuti, B.Sc., DAP&E., M. Biomed
Lecture(s)	<ol style="list-style-type: none">1. Dr.Dra. Rr. Upiek Ngesti Wibawaning Astuti, B.Sc., DAP&E., M. Biomed2. Dr. RC. Hidayat Soesilohadi, MS.3. Dr. Dwi Sendi Priyono, S.Si., M.Si
Language	Indonesia
Classification within the Curriculum	Compulsory
Teaching format/ class hours per week during the semester	This course is organised as one class and planned to have 14 teaching weeks and 2 weeks of examination.
Workload	Estimated working hour: 2 credits of theory
Credits	2-1 credits
Requirements	-
Program Learning Outcome	<ul style="list-style-type: none">• CPL K1 has strong knowledge of biological theory, covering all aspects of biological studies at various levels in the organization of life;• CPL GS1. develop logical, critical, systematic, and creative thinking through scientific research; develop scientific concepts and present the results based on scientific principles, procedures, and ethics in the form of theses and scientific publications.• CPL GS5. use information technology in the development of science and apply it in their field of expertise;
Course Learning Outcome	<ul style="list-style-type: none">• The graduates are able to describe and explain the biosystematic position of organisms (animals)• The graduates are able to explain and classify the diversity and biological character of animals (conventionally and molecularly)• The graduates are able to describe the factors that play a role in inheritance of traits, which are derived in macro and microevolution• The graduates are able to plan, analyze and scientifically report on animal biosystematic research in written/oral form• The graduates are able to implement, communicate effectively, and conduct research in the field of



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	biosystematics independently or in groups, and able to solve various biosystematics-related problems
Course Description	In this course, graduates learn about the history of animal biosystematic, animals biosystematic development, taxonomical character, principles and rules in nomenclature, international procedures and codes, the taxonomic position of animals and relationship with other taxon members, the evolution and classification of animals, phylogenetic relationships (monophyletic, polyphyletic and paraphyletic), the use of principles and identification keys in classification, the use of modern techniques in taxonomy, DNA Barcoding, reclassification, as well as the introduction of taxons that have significance.
Assesments	Project (15%), Assignments/quizzes/activeness (10%), Mid Semester exam (35%), Final Semester exam (40%)
Study Media	Google Classrom, Google Form, Youtube, and Scholar google
Literature	<ol style="list-style-type: none">1. Ubaidillah R. dan Sutrisno H., 2009. Pengantar Biosistematik: Teori dan Praktek. Museum Zoologicum Bogoriense, Pusat penelitian Biologi Lembaga Ilmu Pengetahuan Indonesia, Bogor, 200 hal2. Lemey, Philippe, Marco Salemi, and Anne-Mieke Vandamme, 2009. The Phylogenetic Handbook: A Practical Approach to Phylogenetic Analysis and Hypothesis Testing”, 2nd ed, Cambridge University Press.3. Rueda LM., 2004. Zootaxa: Pictorial Keys for the Identification of Mosquitoes (Diptera: Culicidae) associated with Dengue Virus Transmission. Magnolia Press, New Zealand, 60 hal4. Wilkerson RC, Linton YM, Fonseca DM, Schultz TR, Price D, and Strickman DA. 2015. Mosquito Taxonomy (Tribe Aedini) with Evolutionary Relationships, PLOS ONE DOI: 10.1371/journal.pone0133602.5. Lincoln RJ, GA Boxhall, PF Clark. 1982. A Dictionary of Ecology, Evolution and Systematics. Cambridge University Press. Cambridge.6. Wiley EO, 1981. Phylogenetics: The theory and practice of phylogenetic systematic. John Wiley & Sons, New York. 439hal.7. Lemey, P., Salemi, M. and Vandamme, A.M. eds., 2009. The phylogenetic handbook: a practical approach to phylogenetic analysis and hypothesis testing. Cambridge University Press.8. Atmaja VY, Hamidi A, Arisuryanti T, Matsui N, Smith EN, 2019. A New Species of <i>Microhyla</i>



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(ANURA: MICROHYLIDAE) From Sumatra, Indonesia. *Trubia* 45: 25-46.

9. Payarkov F, Nguyen T, Trovimets A, Gorin V. 2020, A New Cryptic Species of the Genus *Microhyla* (Amphibia: Microhylidae) from Langian Vietnam. *Tropobanica the Asian Biodiversity*, 9(2): 136-163
 10. Nater, A., Mattle-Greminger, M.P., Nurcahyo, A., Nowak, M.G., De Manuel, M., Desai, T., Groves, C., Pybus, M., Sonay, T.B., Roos, C. and Lameira, A.R., 2017. Morphometric, behavioral, and genomic evidence for a new orangutan species. *Current Biology*, 27(22), pp.3487-3498.
 11. Book: Phylogeny and evolution of the Mollusca, Ponder and Linberg (ed). 2008. University of California Press, Ltd., which contains: from Cambrian to Paleozoic Mollusca, Classification, Evolutionary Development and Mollusca evolutionary genomics.
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