THE MODULE HANDBOOK
DOCTOR BIOLOGICAL SCIENCES STUDY PROGRAM
FACULTY OF BIOLOGY

SELECTED TOPIC FOR DISSERTATIONS

Biosystematic and Animal Diversity

Course code	BIDB243055
Course level	Doctoral Program
Semester/ term	Odd/even
Course coordinator	Dr. Rury Eprilurahman, S.Si., M.Sc.
Lecture(s)	Dr. Rury Eprilurahman, S.Si., M.Sc. Dr. Dra. Rr. Upiek Ngesti Wibawaning Astuti, B.Sc., DAP&E. M.Biomed. Dr. Dwi Sendi Priyono, S.Si, M.Si.
Language	Indonesian/English
Classification within the Curriculum	Compulsory Specialization Courses
Teaching format/ class hours per week during the semester	This course is planned to have 14 teaching weeks and 2 weeks of examination.
Workload	1,125 hours/day 5 days/week 5,625 hours/week 16 Weeks/Semester total workload : 90 hours/3,6 ECTS
Credits	3.6 ECTS
Requirements	-
Program Learning Outcome	CPL 1.1. Upon completing this program, the graduates demonstrate an attitude of being able to contribute to improving the quality of life in society, nation and state, and the progress of civilization based on Pancasila; CPL 2.1. After attending this program, graduates demonstrate an understanding 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	BIDB243055.1 By the end of this course, students will be able to demonstrate knowledge and understanding of the basic principles of biosystematics and animal biodiversity.. BIDB243055.2 By the end of this course, students will be able to develop knowledge and technology in the field of biosystematics and animal biodiversity, particularly in relation to dissertation research. BIDB243055.3 By the end of this course, students will be able to manage, lead, and develop research in the field of animal biosystematics and biodiversity. BIDB243055.4. By the end of this course, students will be able to apply inter- and multidisciplinary approaches to solve problems in biosystematics and animal biodiversity.
Course Description	This course examines the concepts and methods of biosystematics and animal diversity in relation to the selected dissertation taxon. Topics include taxonomic principles, phenotypic and genotypic variation in animals, species concepts, adaptation and speciation, phylogenetics, and evolutionary mechanisms specific to the studied taxon. Students will explore techniques for identifying, classifying, and analyzing animal biodiversity, as well as the conservation implications of biodiversity. Each topic also refers to current developments in animal biosystematics and real-world case studies related to the dynamic changes and discoveries of new species. Through assignments and projects, students will identify and analyze cases in biosystematics and animal biodiversity.
Assessments	The assessment for Selected Topic for Dissertations (Biosystematic and Animal Diversity) is based on four components, with the respective criteria and weights: 1. Mid-Term Exam (25%) 2. Final-term Exam (25%) 3. Project 1 (25%) 4. Project 2 (25 %)
Study Media and Literature	**Main:** 1.Camp, W.H. and Gilly, C.L.: 1943, 'The Structure and Origin of Species', Brittonia 4, 323– 385. 2. Hennig, W. 1966. Phylogenetics Systematics, trnas. D.D.nDavisand R. angerl. Urbana: University of Illinois Press.

3.Lincoln, R.J., G.A. Boxhall, P.F. Clark. 1982. A Dictionary of Ecology, Evolution and Systematics. Cambridge University Press. Cambridge.
4.Marhold, K. and Tod F. Stuessy, 2011. Modern Plant Biosystematics: Commemorating 50 years of the International Organization of Plant Biosystematists. TAXON 60 (2) • April 2011: 317–319
5.Nelson, G. and N. Platnick. 1981. Systematics and Biogeography: Cladistics and Vicariance. New York: Columbia University Press.
6.Mayr, E.1969. Principles of Systematic Zoology.Mc.Graw-Hill Book Company. New York. 428 hal
7.Mayr, E., 1974. Population, Species, and Evolution. The Belknap Press of Harvard University Press Cambridge, Massachusetts.
8.Mayr, E. and P.D.Ashlock, 1991. Principles of Systematic Zoology. Second Ediition. McGraw-Hill, New York: 475 pp.
9.Simpson, G.G. 1961.Principles of Animal Taxonomy. Columbia University Press, New York.
10.Sokal, R.R. and P.H.A.Sneath. 1963. The Principles of numerical taxonomy. W.H. Freeman and Co., San Fransisco, California.
11.Stace,C.A. 1989. Plant Taxonomy and Biosystematics. Publisher: Hodder Arnold; 2nd ed. 264 pages..
12.Stebbins, G.L. 1971. Processes of Organic Evolution. Prentice-Hall Inc. Englewood Cliffs, New Jersey.
13. Stuessy, T.F. 1989. The Systematic Evaluation of Comparative Data. John Wiley & Sons, New York.
14.Turesson, G.: 1922. 'The Species and the Variety as Ecological Units', Hereditas 3, 100–113.
15.Valentive, D.H and A. Love, 1958.Taxonomic and Biosystematic Category. Brittonia Vol. 10 No. 4 (Oct, 15, 1958). Pp 153-166.
16.Wiley, E.O., 1981.Phylogenetics: The theory and practice of phylogenetic systematic. John Wiley & Sons, New York. 439 pp

Addition:

1. Journal related to dissertation topic