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Module designation	Ornithology
Module level, if applicable	Undergraduate
Code, if applicable	NBIOUM6373
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	Even semester
Person responsible for the module	Sofia Ery Rahayu, S.Pd, M.Si
Lecturer	Sofia Ery Rahayu, S.Pd, M.Si
Language	Bahasa Indonesia
Relation to curriculum	Undergraduate degree program, elective, 6th semester
Type of teaching, contact hours	Undergraduate degree program: cooperative learning, presentation, laboratory work, 2 x 50 = 100 minutes and 1 x 170 minutes.
Workload	1. Lectures: 2 x 50 = 100 minutes (1.67 hours) per week. 2. Exercises and Assignments: 2 x 60 = 120 minutes (2 hours) per week. 3. Laboratory work: 1 x 170 minutes (2.83 hours) per week. 4. Private study: 2 x 60 = 120 minutes (2 hours) per week.
Credit points	3 credit points (~5 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	NBIOUM6118
Module objectives/intended learning outcomes	Students are able to: (LO4) Apply basic concepts, principles and procedures of biology to design investigations as an effort to solve problems in the health, food and environment sectors using technological applications
Course Learning Outcome	1. Mastering the basic concepts of ornithology which is integrated with the anatomy, physiology, and ecology of birds carefully, critically and systematically. 2. Finding and analyzing problems in the field of ornithology and designing investigations through a scientific approach in order to obtain accurate and accountable data.
Content	This course covers the following main topics: ● the origin of birds, ● morphological characteristics of the types of bird feathers and their benefits, ● the factor of the formation of color in bird feathers, ● how to measure the bird's body, ● characteristics of morphology, anatomy, physiology, habitat, life and the role / benefits of birds, ● the factors that cause birds to fly,

	● bird reproductive system, ● techniques for observing birds in their nature / habitat	
Learning Activity	Week 1	Introduction: explanation of the lecture system, assignments, scoring system, the concept of bird diversity, taxonomy/classification based on morphology and protein/DNA barcodes, Practicum Preparation and Bird Watching Projects
	Week 2	Origins of Birds, Bird Anatomy (Skeletal system); Bird Morphology, followed by Practicum on bird anatomy and bird morphology
	Week 3	Feather and Feather System, Bird Anatomy (Skeletal System), Bird Morphology, practicum on bird anatomy and bird morphology
	Week 4	Bird Body Size and Shape, Feather Structure; Bird Anatomy (Digestive system, excretion, reproduction), followed by practicum on feather structure and bird anatomy
	Week 5	Bird Morphology and Anatomy, Feather Structure; Bird Anatomy (Digestive system, excretion, reproduction), practicum on feather structure and bird anatomy
	Week 6	Flying, Adaptation in foraging for food, Feather structure; Bird Anatomy (Digestive system, excretion, reproduction), followed by practicum on feather structure and bird anatomy
	Week 7	Bird Reproduction, Feather Structure; Bird Anatomy (Digestive system, excretion, reproduction), followed by practicum on feather structure and bird anatomy
	Week 8	Bird Migration, Bird Surveying Techniques, MIDTERM EXAMINATION
	Week 9	Bird Life in Habitat, Field Observation, and consultation on project assignment proposals for field observation
	Week 10	Bird Life in Habitat and Field Observation
	Week 11	Bird Life in Habitat and Field Observation
	Week 12	Bird Life in Habitat, Field Observations, Publication in the form of written reports and posters on the results of bird classification from observations in the environment, and Presentation of Project Reports and Posters
	Week 13	Publish in the form of written reports and posters on the results of bird classification from observations in the environment, and Presentation of Project Reports and Posters

	Week 14	Publish in the form of written reports and posters on the results of bird classification from observations in the environment, and Presentation of Project Reports and Posters
	Week 15	Publish in the form of written reports and posters on the results of bird classification from observations in the environment, and Presentation of Project Reports and Posters, Journal Analysis
	Week 16	FINAL EXAMINATION
Study and examination requirements and forms of examination	Assignment (25%) Midterm examination (25%) Final examination (25%) Performance (25%)	
Media employed	LCD, power point, white board, video and moodle (Sipejar)	
Reading list	1. Gill, Frank B. 2010. *Ornithology*. New York: W.H. Freeman and Company. 2. Hickman, C.P., Roberts, L.S., Keen, S.L., Larson, A., and Elsenhour, D.J. 2015. *Animal Diversity* (seventh edition). New York: McGraw-Hill International Edition 3. Mac Kinnon, J., Phillips, K., dan Bas van Balen. 1999. *Burung-burung di Sumatera,Jawa, Bali, dan Kalimantan*. Jakarta: Puslitbang Biologi-LIPI. 4. Rahayu, Sofia E. 2007. *Pengantar Ornithologi*. Malang: Jurusan Biologi-UM.	
Date of last amendment made	January, 2022	