

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

Module designation	Plant Diversity
Module level, if applicable	Undergraduate
Code, if applicable	NBIOUM6119
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	Even Semester
Person responsible for the module	Dra. Sunarmi, M.Pd.
Lecturer	Dra. Sunarmi, M.Pd. Dr. Murni Sapta Sari, M.Si. Andik Wijayanto, S.Si., M.Si. Umi Fitriyati, S.Pd., M.Pd.
Language	Bahasa Indonesia
Relation to curriculum	Undergraduate degree program, compulsory, 4th 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. Private study: 3 x 60 = 180 minutes (3 hours) per week. 4. Laboratory work: 1 x 170 = 170 minutes (2.83 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	PBIOUM6113 Plant 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 outcomes	1. Understanding plant nomenclature based on the International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) 2018

	2. Understand the principles of taxonomy, life cycle, and analysis of kinship 3. Mastering taxonomic procedures and applying them in the study of structural diversity of mosses, ferns, open seed plants, and closed seed plants and can analyze life cycles and kinship relationships between plant groups 4. Making identification keys and herbarium	
Content	This course covers the following main topics: ● Plant nomenclature based on the 2018 international code of nomenclature for algae, fungi and plant (shenzhen code) ● Principles of plant taxonomy ● Taxonomic procedures and their application in the study of the diversity of the structure of mosses, ferns, open-seeded plants and closed-seeded plants and to analyze the relationship between plant groups phenetic and phylogenetic. ● The stages of the life cycle of mosses, nails, open seeds and closed seeds. ● Identification of plants and creation of identification keys, as well as creation of a herbarium.	
Learning activity	Week 1	Introduction, rules, contracts, delivery of tasks and projects Plant nomenclature based on International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) 2018
	Week 2	Plant nomenclature based on International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) 2018
	Week 3	Plant nomenclature based on International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) 2018
	Week 4	Plant nomenclature based on International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) 2018
	Week 5	Plant nomenclature based on International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) 2018
	Week 6	Plant nomenclature based on International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) 2018 Taxonomy principles, life cycles, and analysis of kinship
	Week 7	Taxonomic procedures and their application in the study of structural diversity of mosses as well as analyzing the life cycle and kinship relationships
	Week 8	Taxonomic procedures and their application in the study of structural diversity of mosses as

		well as analyzing the life cycle and kinship relationships MIDTERM EXAMINATION
	Week 9	Taxonomic procedures and their application in the study of structural diversity of ferns, open seed plants, and closed seed plants as well as analyzing the life cycle and kinship relationships
	Week 10	Taxonomic procedures and their application in the study of structural diversity of ferns, open seed plants, and closed seed plants as well as analyzing the life cycle and kinship relationships
	Week 11	Taxonomic procedures and their application in the study of structural diversity of ferns, open seed plants, and closed seed plants as well as analyzing the life cycle and kinship relationships
	Week 12	Taxonomic procedures and their application in the study of structural diversity of ferns, open seed plants, and closed seed plants as well as analyzing the life cycle and kinship relationships
	Week 13	Taxonomic procedures and their application in the study of structural diversity of ferns, open seed plants, and closed seed plants as well as analyzing the life cycle and kinship relationships Comparison of mosses, ferns, open seed plants, and closed seed plants
	Week 14	Identification key and herbarium
	Week 15	Presentation: journal article critical analysis assignment
	Week 16	FINAL EXAMINATION
Study and examination requirements and forms of examination	Assignment (25%) Mid examination (25%) Final examination (30%) Herbarium homework (20%)	
Media employed	LCD, blackboard, and sipejar.	
Reading list	1. Moetolo, A., Sulasmi, Eko Sri, Sunarmi. 2013. Keanekaragaman Tumbuhan Berpembuluh. Malang: Biologi FMIPA UM 2. Sigh G. 2010. Plant Systematic an Integrated Approach 3th Ed. USA: Science Publisher 3. Tjitrosoepomo G. 2004. Taksonomi Tumbuhan. Yogyakarta: Gadjah Mada University Press 4. Turland HJ., Wiersema JH., et al. 2018. International Code of Nomenclature for Algae, Fungi, and Plant (Shenzhen code). Jerman: Koel T2 Botanical Books	

	5. Vashishta, B.R. 1979. Botany for Degree Students Bryophyta. New Delhi: S. Chand & Company Ltd. 6. Vashista, P.C. 1979. Botany for Degree Students Gymnosperms. New Delhi: S. Chand & Company Ltd. 7. Vashista, P.C. 1984. Botany for Degree Students Pteridophytes. New Delhi: S. Chand & Company Ltd.
Date of Class Amendment Made	January, 2022