MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN **FACULTY OF MATHEMATICS AND NATURAL SCIENCES** **BACHELOR OF BIOLOGY PROGRAMME**	**COURSE CODE:** **D10D-2008**
Module designation	Biodiversity	
Semester in which the module is taught	2	
Persons responsible for the module	1. Prof. Parikesit, M,Sc., Ph.D 2. Prof. Dr. Wawan Hermawan, M.Sc. 3. Prof. Johan Iskandar, M.Sc., Ph.D. 4. Prof. Dr. Erri N Megantara 5. Drs. Hikmat Kasmara, M.Si. 6. Dr. Susanti Withaningsih, M.Si.	
Medium of instruction	Indonesian	
Relation to curriculum	Compulsory course	
Teaching methods	Student-Centered Learning, Project-based Learning, Collaborative Learning	
Workload	Total workload : 5440 minutes = 90.67 hours Lecture and discussion : 2 x 50 minutes x 16 weeks = 1600 minutes = 26.67 hours Exercises : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours Self-study : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours	
Credit points	2.00 (3.62 ECTS)	
Required and recommended prerequisites for joining the module	Basic biology	
Module objectives/intended learning outcomes	1. Students are able to explain the level of genetic biodiversity of ecosystem species and the factors that influence it in various ecosystems 2. Students are able to explain the relationship between biodiversity and ecosystem balance as well as the impact of environmental change on biodiversity 3. Students are able to define the concept of biodiversity by strengthening data literacy and human skills in facing global environmental challenges. 4. Students are able to describe various biological research methods and the latest technologies used in the exploration, monitoring, and conservation of biodiversity. 5. Students are able to describe threats to biodiversity such as climate change, habitat fragmentation, and overexploitation with appropriate mitigation and conservation strategies 6. Students are able to analyze the benefits of biodiversity for human life in ecological, economic, social, and cultural aspects, as well as how biodiversity can be utilized sustainably 7. Students are able to identify regulatory policies and principles of biological resource management that support conservation and sustainable use at various scales 8. Students are able to clarify the role of communities in biodiversity conservation through community-based ecotourism approaches and other sustainable practices	
Contents	1. Definition, hierarchy, and importance of biodiversity 2. Variation in biodiversity 3. Global and national biodiversity conditions 4. Issues regarding the decline/loss of biodiversity and its impacts 5. The relationship between the concepts of ecosystems and biodiversity 6. Direct and indirect values of biodiversity 7. Biodiversity policies for conservation purposes 8. The role of society in biodiversity	
Examination forms	Quiz, Midterm exam, Assignment, and Final exam	
Study and examination requirements	The minimum attendance in lectures is 80%. Final grades are evaluated based on quiz (10%), midterm exam (15%), assignment (10%), final exam (15%), project and participation (50%)	

Reading lists	1. Edward.O.Wilson. 1992. The Diversity of Life. W.W. Norton & Company. 2. Marcelo Tabarelli. 2010. Tropical Biodiversity in Human-Modified Landscape : What is our Trump Card. Biotropica 3. Bappenas. 2003. Strategi dan Rencana Aksi Keanekaragaman Hayati Indonesia 2003-2020. Bappenas. Jakarta. 4. Fahrig, L. 2003. Effect of Habitat Fragmentation on Biodiversity. Ann. Rev. Ecol.Evol.Syst. 34:487-515. 5. Kantor Menteri Negara Lingkungan Hidup.1997.Agenda 21 Indonesia : A National Strategy for Sustainable Development. KMNLH dan UNDP. Jakarta. 6. Ines Omann, Andrea Stocker, Jill Jager. 2009. Climate Changes as a Threat to Biodiversity : An Application of the DPSIR Approach. Ecological Economics. Elsevier. 7. Jocelyn F, Jacques L, Paul C, Max D , Pascal M. 2010. Managing Agricultural Change for Biodiversity Conservation in a Mediteraanean upland. Biological Conservation. Elsevier. 8. Joshua J Lawler. 2009. Climate Change Adaptation Strategies for Resources Management and Conservation Planning. The Year in Ecology and Conservation Biology. New York Academy of Sciences. 9. Vermeulen, S dan Koziell, I. 2002. Integrating Global and Local Values. A review of Biodiversity Assessment. International Institute for Environment and Development, London. UK. 10. Wright, S.J. 2005. Tropical Forests in a Changing Environment. Trends Ecol. Evol. 20 : 553-560. 11. Wilson, E. O. (2016). *Half-Earth: Our planet's fight for life*. Liveright Publishing Corporation. 12. Peszko, G., Amann, M., Awe, Y., Kleiman, G., & Rabie, T. S. (2022). *Air pollution and climate change*. World Bank Publications.

Planning. The Year in Ecology and Conservation Biology. New York Academy of Sciences.
8. Marcelo Tabarelli. 2010. Tropical Biodiversity in HumanModified Landscape : What is our Trump Card. Biotropica.
9. Vermeulen, S dan Koziell, I. 2002. Integrating Global and Local Values. A review of Biodiversity Assessment. International Institute for Environment and Development, London. UK.
10. Wright, S.J. 2005. Tropical Forests in a Changing Environment. Trends Ecol. Evol. 20 : 553-560