MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN **FACULTY OF MATHEMATICS AND NATURAL SCIENCES** **BACHELOR OF BIOLOGY PROGRAMME**	**COURSE CODE :** **D10D-50602**
Module designation	Digitalization of Biological Objects	
Semester in which the module is taught	5	
Persons responsible for the module	1. Dr. Budi Irawan, M.Si 2. Dr. Eneng Nunuz Rohmatullayaly, M.Si 3. Dr. Madihah, S.Si., M.Si	
Medium of instruction	Indonesian	
Relation to curriculum	Compulsory course of interest of specialization	
Teaching methods	Lectures, discussion, collaborative learning, project based learning	
Workload	Total workload : 5440 minutes = 90.67 hour Lectures, discussion, and collaborative learning : 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	Plant Structure and Development 1	
Module objectives/intended learning outcomes	1. Students are able to explore techniques for documenting biological objects in the form of photomicrography, photography, videography, and bioacoustics. 2. Students are able to practice photomicrography techniques directly. 3. Students are able to practice photography and videography techniques directly. 4. Students are able to practice bioacoustics techniques directly. 5. Students are able to analyze and evaluate the works produced. 6. Students are able to organize the results of biological object documentation in the form of a database. 7. Students are able to integrate knowledge and techniques for documenting biological objects and design digital museums and/or other collaborative projects.	
Contents	1. Introduction and Contract 2. Photomicrography Techniques 3. Photomicrography Techniques 4. Photography & Videography Techniques 5. Bioacoustics Techniques 6. Database Creation Techniques 7. Exhibition Techniques	
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. Bridson D and Forman L. 1992. Herbarium Handbook. Kew: Royal Botanic Garden 2. Glimn-lacy J and Kaufman PB. 2006. Botany Illustrated. New york: Spinger 3. IBIS. 2014. Indonesian Biodiversity System. Bogor: Research Center For Biology, LIPI 4. Horan A. G. 2013. Digital Heritage: Digitization of Museum and Archival Collections. Research papers. Paper 374. http://opensiuc.lib.siu.edu/gs_rp/374 5. Stow, A. 2011. Digitisation of Museum Collections. A Worthwhile Effort?. Graduating Thesis, BA/Sc. University Of Gothenburg: Department of Conservation. 6. Museu Del Ter. 2020. Coneix el riu. [terhubung berkala]. https://coneixelriu.museudelter.cat/index.php. [diakses 10 Juli 2020]. Barcelona: Maleu. 7. Google. 2020. Google Arts & Culture. [terhubung berkala]. Google Arts & Culture. [diakses 10 Juli 2020]. 8. Aguiar, J.J.M. 2017. On the use of photography in science and taxonomy: how images can provide a basis for their own authentication. Bionomia, 12:44-47. 9. Nathan, T. R. 2011. Photography and Science by Kelley Wilder. Visual Resources(Reviews), 27(4): 1-7