MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN **FACULTY OF MATHEMATICS AND NATURAL SCIENCES** **BACHELOR OF BIOLOGY PROGRAMME**	**COURSE CODE:** D10D-3003
Module designation	Plants Structure and Development 2	
Semester in which the module is taught	3	
Persons responsible for the module	1. Dr. Mohamad Nurzaman 2. Dr. Tia Setiawati 3. Dr. Asep Zainal Mutaqin 4. Ruly Budiono, M.S	
Medium of instruction	Indonesian	
Relation to curriculum	Compulsory course	
Teaching methods	Lectures and discussions	
Workload	Total workload : 5440 minutes = 90.67 hours Lecture and discussion : 2 x 50 minutes x 16 weeks = 1600 minutes = 13.33 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	-	
Module objectives/intended learning outcomes	1. Able to explain the basic concepts of plant development 2. Able to explain the structure and development of meristem tissues 3. Able to explain the structure and development of parenchyma, collenchyma, and sclerenchyma 4. Able to explain the structure and development of the epidermis 5. Able to explain the structure of external and internal secretion glands 6. Able to explain the structure and development of the xylem and phloem 7. Able to explain the structure and development of cambium 8. Able to explain the structure and development of roots 9. Able to explain primary and secondary growth in stems 10. Able to explain the histology and structure and development of leaves 11. Able to explain the structure and development of flowers 12. Able to explain the structure and development of fruit 13. Able to explain the structure and development of seeds 14. Able to explain embryo and sprout development	
Contents	This course contains knowledge about the structure and tissue of meristems, epidermis, support, vessels (vascular), and secretion glands. Also studied are the structure and development of leaf organs, stems, roots, flowers, fruits, seeds, and embryo development and germination.	
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 (15%), midterm exam (35%), assignment (15%), and final exam (35%)	
Reading lists	1. Esau, K. 1965. Plant Anatomy, 2nd edition, John Willey & Sons Inc. New York. 2. Esau, K. 1977. Anatomy of Seed Plants, 2nd edition, John Willey & Sons Inc. NewYork 3. Fahn, A. 1990. Plant Anatomy, 4th edition, Bergamon Press New York. 4. Estiti B. Hidayat. 1995. Anatomi Tumbuhan Berbiji. Penerbit ITB.	