


MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME	COURSE CODE: D10D-601016
Module designation	Seed Physiology	
Semester in which the module is taught	5	
Person(s) responsible for the module	1. Drs. Ruly Budiono, MS, Ph.D 2. Rusdi, Ph.D 3. Dr. Asep Zainal Mutaqin, S.Si., M.T.	
Medium of instruction	Indonesian	
Relation to curriculum	Elective course	
Teaching methods	Lectures, discussions, cooperative learning, Project-based Learning and inquiry learning	
Workload	Total workload : 5440 minutes = 90.67 hours Lectures, discussions, cooperative learning, and inquiry 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	-	
Module objectives/intended learning outcomes	1. Students are able to explain the basic concepts, history and development, as well as practical aspects of Seed Physiology 2. Students are able to explain the growth and development of seeds 3. Students are able to explain the process of storing seeds 4. Students are able to explain the physiology and biochemistry of seed deterioration 5. Students are able to explain the metabolism of seed germination 6. Students are able to explain plant hormones in germination 7. Students are able to explain seed dormancy 8. Students are able to explain the factors that influence seed germination	
Contents	This course discusses the basic concepts needed to explain and understand Seed Physiology material. In general, Seed Physiology material includes Introduction (concepts of Seed Physiology, Seed growth and development, Seed storage processes, Physiology and Biochemistry of Seed Deterioration, Seed and seed germination metabolism, Plant hormones in germination, Seed dormancy, Factors influencing 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 (10%), midterm exam (15%), assignment (10%), final exam (15%), project and participation (50%)	
Reading lists	1. Bewley, J.D. 1996 and M. Black. Physiology and Biochemistry of Seed in Relation to Germination. Springer Verlag. New York. 2. Copeland, L. O and M.B. Mc.Donald 2012. Principle of Seed Science and Technology 4 th ed. Burgers Publishing Company, Minnesota. 3. Kamil, J. 1979. Teknologi Benih. Angkasa Raya, Padang Mayer, A.A and A.P Mayber 1982. The Germination of Seed. Third Edition. Pergamon Press. New York. 4. Bewley, J. D., Bradford, K. J., Hilhorst, H. W. M., & Nonogaki, H. (2013). <i>Seeds: Physiology of development, germination and dormancy</i> (3rd ed.). Springer. New York	