


MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME	COURSE CODE: D10D- 3008
Module designation	Animal Development Practicum	
Semester in which the module is taught	3	
Persons responsible for the module	1. Dr. Kartiawati Alipin 2. Dr. Desak Made Malini 3. Dr. Yasmi P. Kuntana 4. Madihah, M.Si	
Medium of instruction	Indonesian	
Relation to curriculum	Compulsory course	
Teaching methods	Practice, Student-Centered Learning, Project-based Learning, Collaborative Learning	
Workload	Total workload : 2720 minutes = 45.33 hours Practice : 1 x 170 minutes x 16 weeks = 2720 minutes = 45.33 hours Exercises : - Self-study : -	
Credit points	1.00 (1.81 ECTS)	
Required and recommended prerequisites for joining the module	Basic biology	
Module objectives/intended learning outcomes	1. Students are able to distinguish between male and female reproductive systems and prepare ovum and testis specimens to observe the processes of oogenesis and spermatogenesis, as well as the estrus cycle and fertilization. 2. Students are able to relate the processes of early and late embryogenesis. 3. Students are able to identify chicken and mouse embryos. 4. Students are able to analyze the processes of metamorphosis and regeneration.	
Contents	This course studies the process of embryo growth and development until it resembles an adult individual, involving the processes of growth, morphogenesis, and differentiation. It covers gametogenesis, fertilization, cleavage, blastulation, gastrulation & neurulation, early and late organogenesis (ectoderm, mesoderm, endoderm derivatives), embryo adaptation, and normal and abnormal development.	
Examination forms	Quiz, Midterm exam, Assignment, and Final exam	
Study and examination requirements	The minimum attendance in lectures is 100%. Final grades are evaluated based on quiz (10%), midterm exam (25%), assignment (40%), and final exam (25%)	
Reading lists	1. Gilbert, S.F. 2000. <i>Developmental Biology</i> , 6 th ed. Sunderland: Sinauer Associates, Inc. 2. Johnson, M. & B. Everitt. 1988. <i>Essential Reproduction</i> , 3 rd ed. Oxford: Blackwell Scientific Publications 3. Sadler, T.W. 1990. <i>Langmans medical Embriology</i> . 6 th ed. Baltimore Mariland: Williams & Wilkins 4. Carlson, B. M. 1996. <i>Patten's foundations of embryology</i> , 6 th ed. New York: McGraw-Hill, Inc 5. Turner, C.D. & Joseph T.B. 1976. <i>Endokrinologi Umum</i> . Airlangga University Press 6. Mescher, A. L. (2018). Junqueira's Basic Histology: Text & Atlas (15th ed.). McGraw-Hill Education. 7. Netter, F. H. (2018). Atlas of Human Anatomy (7th ed.). Elsevier.	

