

MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME	COURSE CODE: D10D-50603
Module designation	Animal Biotechnology	
Semester in which the module is taught	5	
Persons responsible for the module	1. Dr. Madihah 2. Dr. Desak Made Malini 3. Dr. Yasmi P. Kuntana	
Medium of instruction	Indonesian	
Relation to curriculum	Compulsory course of interest of specialization	
Teaching methods	Lectures, discussions, and collaborative learning	
Workload	Total workload : 5440 minutes = 90.67 hour Lecture, 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	Animals Structure and Physiology	
Module objectives/intended learning outcomes	1. Be able to explain the meaning and scope of biotechnology that uses animals in the fields of agriculture and health. 2. Be able to explain several biotechnology applications in assisted reproductive technology. 3. Be able to explain several techniques to increase animal feed nutrition. 4. Be able to explain several applications of animal cell culture in the health or therapeutic fields in livestock and humans 5. Able to explain several technological applications in the fields of aquaculture and fisheries 6. Able to identify various technologies using animals as subjects for research in the fields of biomedical and medical science as well as for applications on a commercial scale	
Contents	This course studies the application of biological science and engineering using animals, especially in the fields of agriculture and health, which includes techniques for increasing livestock reproduction, techniques for increasing animal feed nutrition; application of animal cell culture in the health or therapeutic fields in livestock and humans; and technology applications for the fields of aquaculture and fisheries.	
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 (20%), midterm exam (30%), assignment (20%), and final exam (30%)	
Reading lists	1. Freshney, R. I. 2010. Culture of animal cells: a manual of basic technique and Specialized Applications, 6 th ed. New York: Wiley-Liss, Inc. 2. Hogan, B., Contantini, F. & Lacy, E. 1986. Manipulating the mouse embryo: a laboratory manual. New York: Cold Spring Harbor Laboratory. 3. Abubakar, M., Saeed, A., Kul, O. (2015). The Role of Biotechnology in Improvement of Livestock: Animal Health and Biotechnology. Berlin: Springer-Verlag. 4. Singh, B., Mal, G., Gautam, S.K., Mukesh, M. (2019). Advances in Animal Biotechnology. Springer. 5. Current Status and Options for Biotechnologies in Aquaculture and Fisheries in Developing Countries (https://www.fao.org/3/i2300e/i2300e04.pdf) 6. Kristanto, A.H., 2022. Domestikasi Ikan Air Tawar Asli Indonesia Mendukung Produksi Perikanan. Jakarta: Penerbit BRIN.	