

MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME	COURSE CODE D10D-601017
Module designation	Immunology	
Semester(s) in which the module is taught	6	
Person(s) responsible for the module	1. Dr. Desak Made Malini 2. Nining Ratningsih, M.I.L 3. Dr. Mia Miranti Rustama	
Medium of instruction	Indonesian	
Relation to curriculum	Elective course	
Teaching methods	Lectures, discussions, cooperative learning, inquiry learning, and project based learning	
Workload	Total workload : 5440 minutes = 90.67 hours Lectures, discussions, : 2 x 50 minutes x 16 weeks = 1600 minutes = 26.67 hours cooperative learning, and inquiry learning 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	1. Microbiology 2. Animal physiology	
Module objectives/intended learning outcomes	1. Able to decipher the working mechanisms of each component of the immune system within an organism. 2. Able to apply the working mechanisms of the immune system within an organism. 3. Able to apply knowledge concepts related to immune diseases. 4. Able to project knowledge in biology, particularly immunology, into everyday life to increase health awareness and provide tangible benefits to the community. 5. Able to organize, manage, and develop the potential of biological resources specifically in the field of immunology to support innovation in natural medicine and improve public health resilience.	
Contents	1. Lecture Contract and Lesson Plan 2. Components of the Immune System, Cells, and Organs 3. Adaptive and Non-Adaptive Immune Systems 4. Mechanisms of Action of Histocompatibility Proteins and Cytokines 5. Explanation of Cell-mediated and Clonal Immunity and Immune Tolerance 6. Genetics and Evolution of IgG, Immunoglobulins and T Receptors, T-Cells: The Complement System 7. Monoclonal and Polyclonal Antibodies 8. Antigen-Antibody Reactions and Types of Antibody Diseases	
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. Abdul Abbas, Andrew Lichtman, Shiv Pilla. 2019. Basic Immunology: Functions and Disorders of the Immune System. 6th Edition. 336 halaman.
2. Kenneth M. Murphy (Author), Casey Weaver (Author), Leslie J. Berg (Author). 2022. Janeway's Immunobiology Tenth Edition. 855 halaman
3. Zheng, S. J. (2024). Veterinary Molecular Immunology. Springer Singapore.