

MODULE HANDBOOK

	<p>UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME</p>	<p>COURSE CODE: D10D-601015</p>
<p>Module designation</p>	<p>Phytopathology</p>	
<p>Semester(s) in which the module is taught</p>	<p>6</p>	
<p>Person(s) responsible for the module</p>	<p>1. Dr. Mohamad Nurzaman 2. Dr. Tia Setiawati</p>	
<p>Medium of instruction</p>	<p>Indonesian</p>	
<p>Relation to curriculum</p>	<p>Elective course</p>	
<p>Teaching methods</p>	<p>Lectures, discussions, cooperative learning, project based learning and inquiry learning</p>	
<p>Workload</p>	<p>Total workload : 5440 minutes = 90.67 hours</p> <p>Lectures, discussions, cooperative learning, and inquiry learning : 2 x 50 minutes x 16 weeks = 1600 minutes = 26.67 hours</p> <p>Exercises : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours</p> <p>Self-study : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours</p>	
<p>Credit points</p>	<p>2,00 (3,62 ECTS)</p>	
<p>Required and recommended prerequisites for joining the module</p>	<p>-</p>	
<p>Module objectives/intended learning outcomes</p>	<ol style="list-style-type: none"> 1. Explaining the concept of plant disease and pathogen-host relationships 2. Comparing biotrophic vs. necrotrophic infection mechanisms 3. Describing the role of pathogenicity compounds in infection 4. Comparing the impact of pathogen infection on physiological disturbances in photosynthesis, transpiration, and nutrient transport 5. Describing innate and adaptive chemical and structural defense mechanisms 6. Analyzing the impact of climate change on disease epidemics 7. Analyzing epidemiological data for C4 outbreak prediction 8. Analyzing the integration of Integrated Pest Management (IPM) in C4 disease management 9. Evaluating control innovations for emerging pathogens 	
<p>Contents</p>	<ol style="list-style-type: none"> 1. Fundamentals of plant diseases, 2. Parasitism and the development of plant diseases, 3. Plant pathogenicity, 4. The effect of pathogens on plant physiological functions, 5. How plants defend themselves against pathogen attacks, 6. The environment and the development of plant diseases, 7. Epidemiology of plant diseases, 8. Control of plant diseases 9. Plant diseases caused by bacteria, fungi, viruses, nematodes, higher plants 	
<p>Examination forms</p>	<p>Quiz, midterm exam, assignment, and final exam</p>	
<p>Study and examination requirements</p>	<p>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%)</p>	
<p>Reading lists</p>	<ol style="list-style-type: none"> 1. Agrios, George N. 2024. Plant pathology. San Diego : Academic Press 2. Mehrotra, R. S., author. 1986 Plant pathology. New Delhi: McGraw-Hill 3. Agrios, George N. 1996. Ilmu penyakit tumbuhan; penerjemah, Munzir Busnia; penyunting, Toekidjo Martoredjo, 1996. Gadjah Mada University Press. 4. Toekidjo Martoredjo. 1992. Pengendalian penyakit tanaman. Yogyakarta 5. Marté, A. M., Tuomi, R. K., & Valkonen, J. P. T. (2020). <i>Plant pathology and plant diseases</i>. CABI. 6. Waller, J. M., Ritchie, B. J., & Holderness, M. (2022). <i>A colour handbook of plant diseases</i>. CRC Press. 	