


## MODULE HANDBOOK

	<b>UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME</b>	<b>COURSE CODE: D10D-601018</b>
<b>Module designation</b>	Biopesticides and Natural Enemies for Insect-pest Control	
<b>Semester in which the module is taught</b>	5	
<b>Person(s) responsible for the module</b>	1. Dr. Melanie, S.Si.,M.Si 2. Prof. Dr. Wawan Hermawan, MS	
<b>Medium of instruction</b>	Indonesian	
<b>Relation to curriculum</b>	Elective course	
<b>Teaching methods</b>	Lectures, discussions, cooperative learning, and inquiry learning	
<b>Workload</b>	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	
<b>Credit points</b>	2,00 (3,62 ECTS)	
<b>Required and recommended prerequisites for joining the module</b>	-	
<b>Module objectives/intended learning outcomes</b>	1. Able to master insightful knowledge about the scope Biopesticides and natural enemies include knowledge about diversity and its use for human welfare, and Environmental sustainability 2. Able to explore and review literacy sources, document, store study results data and be able to complete tasks in groups or independently.	
<b>Contents</b>	This course discusses theories, concepts, and the use of biopesticides and natural enemies in controlling plant pest organisms. Recognize the diversity of plants and their metabolite content as sources of biopesticides and the diversity of biological control agents (pathogens, parasites and nematodes). Through this course, students are encouraged to think critically through exploratory studies and research studies on the application of biopesticides and biological agents and are able to assess the important prospects of biopesticides and control using biological agents in their contribution to sustainable development programs.	
<b>Examination forms</b>	Quiz, midterm exam, assignment, and final exam	
<b>Study and examination requirements</b>	The minimum attendance in lectures is 80%. Final grades are evaluated based on Quizzes (25%), Assignments (25%), midterm exam (25%), and final exam (25%).	
<b>Reading lists</b>	1. Purnomo, H.(2010) Pengantar Pengendalian Hayati. Penerbit Andi. Yogyakarta 2. Debach, P.(1991) Biological Control by Natural Enemies 2nd Edition, Cambridge University Press, Cambridge 3. Pedigo, L. (1999), Entomology and Pest Management, MacMillan Pub. Co 4. Tanada, Y., and Kaya, H. K. (1993), Insect Pathology. Academic Press, Inc. California. 5. Boucias, D.G and Pendland, J.C. (1998), Principles of Insect Pathology, Kluwer Academic Publishers, Massachusetts.	