

Module-LO Matrixes of Plant Protection Study Programme

a. Module -LO of Attitude and Norm (AN) Matrix of Plant Protection Study Programme

						AN-01. Believing in God the Almighty, and is capable of showing religious attitude					
Religion						AN-02. Upholding human values while on duty, based on religion, moral and ethics					
Civic	H					AN-03. Contributing to the improvement of life quality at the society, nation and state levels, and to the advancement of civilization based on Pancasila					
Indonesian		H				AN-04. Playing an important role as a citizen who is proud and loves the country, has spirit of nationalism and responsibility to the nation and state.					
Pancasila			H			AN-05. Respecting to the diversity of culture, insight, religion, belief, and other people's originality.					
Community service program	H			H		AN-06. Being cooperative, sensitive and responsive to the society and environment.					
Swamp Management*		H				AN-07. Complying with the law and discipline in living under society and state.					
Urban entomology*				H		AN-08. Internalizing academic values, norms and ethics. Showing attitude of personal responsibility for the works under his/her expertise					
						AN-09. Showing attitude of personal responsibility for the works under his/her expertise					
						AN-10. Internalizing the spirit of self-confidence, exertion and entrepreneurship.					
						AN-11. Caring about the safety of food crop products from pesticide contamination					

Pesticides and application technique									H	
Integrated pest management										H
Monitoring of pests and diseases									H	
Plant Clinique									H	
Pesticide and environment*									H	
Pesticide residue analyses and bioassay*									H	
Principles of management									H	
Rural sociology		H			H	M				
Entrepreneur-ship									H	

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b. Module -LO of Knowledge (K) Matrix of Plant Protection Study Programme

		K-01. Mastering theoretical concepts of plant protection comprising the causal agents, symptoms, influencing factors, yield losses, and control techniques.			
Inorganic chemistry	M				
Botany	H	K-02. Mastering theoretical concepts of the exploitation of bio-resources to be used as main components of environ-mental friendly pest management system			
Crop Physiology	M		K-03. Mastering theoretical concepts of agricultural ecosystem management as parts of environmentally friendly pest management system		
Basic soil science	H			K-04. Mastering theoretical concepts of appropriate and environmentally friendly pesticide application.	
Soil fertility	H			M	K-05. Mastering theoretical concepts of domestic and international plant quarantine
Crop ecology*	H				K-06. Being cooperative, sensitive and responsive to the society and environment.
Organic Farming*	H				
Swamp Farming*	H				

Fertilizer and fertilizing technology*			H			M
Swamp Management*			H			
Organic Material Management			H			H
Entomology	H				H	
Mycology	H				H	
Vertebrate pest	H				H	
Plant bacteriology	H				H	
Insect collection	H					
Insect ecology	H		H			
Plant pest identification	M	H	M		M	
Plant disease identification	M	H	H		M	
Plant virology*	M				H	
Plant nematology*	H				H	
Acarology*	H				H	
Storage Pest*	H				H	
Principles of crop protection	M	H		H		M
Plant quarantine					H	M

Pesticides and application technique				H		M
Integrated pest management			H		H	M
Biological control and habitat management		H			H	M
Monitoring of pests and diseases	H					M
Plant Clinique			H	H		H
Pesticide and environment*				H		H
Pesticide residue analyses and bioassay*				H		H
International economics*					H	

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c. Module -LO of General Skill (GS) Matrix of Plant Protection Study Programme

Indonesian	H	H	GS-01. Capable of implementing logical, critical, systematic, and innovative thinking in the concept of development or implementation of knowledge and technology reflecting and concerning human values, in accordance with his/her expertise.	GS-02. Capable of showing qualified and measurable self-performance.	GS-03. Capable of researching the implication implementation of knowledge and technology reflecting and concerning human values, in accordance with his/her expertise, based on scientific nature, procedure and ethics, in order to formulate solution, suggestion, design or art criticism.	GS-04. Capable of formulating scientific description based on the result of abovementioned research in the form of script or final assignment report and uploading the work to the university website.	GS-05. Capable of making accurate decision in the context of problem solution in his/her expertise, based on the results of information and data analyses.	GS-06. Capable of maintaining and developing network with supervisor, colleagues, and workmates, both inside and outside his/her institutions.	GS-07. Capable of being responsible for the achievement of working group and conducting supervision as well as evaluation of the accomplishment of works assigned to workers under his/her responsibility.	GS-08. Capable of conducting self-evaluation of working group under his/her responsibility and capable of managing learning process by his/herself.	GS-09. Capable of documenting, saving, and protecting data, and regaining the data to assure the authenticity and to prevent plagiarism
English		H									
Introduction to agricultural sciences	H		H								
Statistics				H							
Scientific methods	H				H						
Field practice						H			M		
Research Project						H	H		H		M

Seminar					H	H				
Academic Agricultural English*										H
Land and agrarian law*					H					
Fundamental of agronomy	H									
Horticultural crop cultivation**	H									
Basic soil science	M									
Soil fertility	M									
Swamp Farming*	M									
Fertilizer and fertilizing technology*	M									
Swamp Management*										M
Plant pest identification			H	H						
Plant disease identification			H	H						
Plant entomology	H									
Plant pathology	H									
Important pests of essential crops	H	H	M							
Important diseases of essential crops	H	H	M							
Seed and post harvest disease	H	H	M							

d. Module -LO of Specific Skill (SS) Matrix of Plant Protection Study Programme

		SS-01. Capable of recognizing and measuring damages caused by plant pest and diseases.	
	<input checked="" type="checkbox"/>	SS-02. Capable of recognizing as well as identifying plant pests and pathogens.	
		SS-03. Capable of planning, executing, and evaluating efficient and effective plant protection system under multi discipline team.	
		SS-04. Capable of creative and innovatively exploiting local bio-resources to be used in environmentally friendly pest management system	
		SS-05. Capable of identifying and modifying local wisdoms by combining with latest knowledge and technology to be applied in the locally specific plant protection system	
		SS-06. Capable of identifying business opportunities in plant protection sector and taking benefit from the opportunities	
		SS-07. Capable of assessing resources involving capital, labor, and technology to initiate business in plant protection sector	
		SS-08. Capable of actualizing creative and innovative ideas related to plant protection technology into commercial activities.	
		SS-09. Capable of conducting basic research on plant protection technology development based on scientific methodology to formulate solution on specific plant protection.	
	<input checked="" type="checkbox"/>	SS-10. Capable of writing research report as described above in the form of scientific paper and presenting the paper in seminar.	
		SS-11. Capable of thinking analytically concerning plant pest and disease cases and responsive to the development of related knowledge and technology	
		SS-12. Capable of performing attractive, efficient, effective and productive communication of plant protection aspects.	
		SS-13. Capable of analyzing and evaluating the potential threats from exotic organisms to the continuation of national bio-resources.	
		SS-14. Capable of identifying pest and plant pathogens quickly and accurately by implementing molecular biotechnology, both microscopic and macroscopically.	
	<input checked="" type="checkbox"/>	SS-15. Capable of collecting representative samples of pests and plant pathogens within large crop population	
English			
Botany			
Experimental design			

Weed control*			M		H												
Pest forecasting system			H													H	H
Introduction to agricultural economics						M	M										
Farm management*						M	M										
Agricultural extension*				M	M							M					
Entrepreneur-ship						H	H	M									
Principles of business*						H	H	M									
Silkworm farming*						H	H	M									
Mushroom farming*						H	H	M									

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