



Universitas Gadjah Mada
 Faculty of Agriculture
 Agronomy Study Program

Course Syllabus

Course Code	Course Name	Credits	Semester	Course Status	Requirement
PNA20193110	Crop Physiology	3	5 th	Compulsory	-
Learning Outcome	1	Able to evaluate the theoretical concept with technology approach for problem solving skill to an area of interest in agronomy/plant breeding based on experimental method.			
	2	Able to think scientifically in problem solving and decision making in agriculture related to crop physiology.			
	3	Able to design and implement agricultural business including food crop production, industrial plantation, or horticultural sector from assembling new cultivars by breeding activities to cultivating plants considering several aspects of ecological environment, economic, and social through conventional system, organic-farming, and smart-farming based on Good Agricultural Practices (GAP) approach.			
	4	Able to define and solve the general problem of sustainable agriculture, particularly in plantation crops and agriculture systems in suboptimal area, and also have ability to write the experimental results in academic report and /or scientific publication.			
	5	Having the ability to develop networks, adapt, be creative, provide contributions, supervise, evaluate, and make decisions to exhibit individual and group performance in order to appropriately apply science and knowledge in the community.			
Course Description	This courses study the processes in crops body that are cultivated at the individual level until the population is linked to growth and yield. The effect of genetic and environmental factors on crop physiological processes is discussed. The discussion of genetic factors is more focused on differences in anatomical and morphophysiological characteristics between cultivars that affect physiological processes. The influence of environmental factors on physiological processes discussed is the influence of the physical environment in the form of water, light and temperature.				
Course Content	<ol style="list-style-type: none"> 1. Introduction and growth analysis. 2. Strategies to maximize the utilize of sunlight 3. Source and sink relationship 4. Environmental physiology in relation to water 5. Environmental physiology in relation to light 6. Environmental physiology in relation to temperature 				

Reference	<ol style="list-style-type: none">1. Corley, R. H. V. 1983. Oil Palm and Other Tropical Crops. In. Potential Productivity of Field Crops Under Different Environments. IRRI. Los Banos.2. Corley, R. V. H. 2003. The Oil Palms. Blackwell Science. Oxford.3. Gardner, F.P., R. B. Pearce and R. L. Mitchel. 1985. Physiology of Crop Plants. Iowa State University Press. Ames.
Lecturer	<p>Dr. Ir. Endang Sulistyaningsih, M.Sc.</p> <p>Eka Tarwaca Susila Putra, S.P., M.P., Ph.D.</p> <p>Valentina Dwi Suci Handayani, S.P., M.Sc., Ph.D.</p> <p>Haviah Hafidhotul Ilmiah, S.Pd., M.Sc.</p>