Module Name	**Plat Biochemistry**
Module Level, if applicable	Beginner
Code if Applicable	0210200249
Subtitle, if applicable	-
Courses, if applicable	0210200249 (Plant Biochemistry)
Semester(s) in which the module is taught	2
Person responsible for the module	Dr. Ir. Machmudi, M.Si.
Lecturer	Dr. Ir. Machmudi, M.Si.
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Department of Agrotechnology, Faculty of Agriculture and Animal Science.
Type of teaching, contact hours	Lecture, Project, Independent Learning
Workload	● Lecture : 2 sks × 50 minutes × 16 weeks ● Project : 2 sks × 60 minutes × 16 weeks ● Independent Learning 2 sks × 60 minutes × 16 weeks
Credit points	SKS 2 SCH x (1.5) = 3.0 ECTS
Requirements according to the examination regulations	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	No Prerequisites
Module Objectives (Intended learning outcomes)	Students can understand the introduction to biochemistry and the structural parts of plant cells, the meaning of metabolism, compounds and molecules, carbohydrates II, the Krebs cycle to biomolecule DNA
Module Content	The plant biochemistry module encompasses a comprehensive exploration of the molecular processes that govern the life and functions of plants. At its core, this module delves into the intricate biochemical pathways that dictate plant growth, development, and responses to environmental stimuli. Students undertaking this course are introduced to fundamental concepts such as photosynthesis, respiration, and nutrient assimilation, unraveling the molecular intricacies that underlie these vital processes. The study of plant hormones and signaling pathways further elucidates how plants coordinate their responses to internal and external cues. Enzyme kinetics and metabolic regulation are also key focal points, providing students with insights into the dynamic control mechanisms that govern cellular activities. As part of the module, contemporary research advances in plant biochemistry are explored, fostering an understanding of how these insights contribute to developments in agriculture, biotechnology, and environmental science.

	Through a combination of theoretical knowledge and practical applications, students gain a holistic appreciation of plant biochemistry, preparing them to address complex challenges in the realm of plant biology.
Study and examination requirements and forms of examination	**Cognitive:** Midterm exam, Final exam, Quizzes, Assignments **Affective:** Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Recommended Literature	For Class A. Compulsory - Lehnenger, Nelson. DM, Cox 2020. Principles of Biochemistry. ISBN10: 1464126119 - Caroline Bowsher, Alyson Tobin. 2021. Plant Biochemistry. Published March. by Garland Science - Buchanan B. B., Granssen W., Jones R. Biochemistry and Molecular biology of Plants. Wille bLackwell. B. Option - Wirahadikusumah M. 2012. Biokimia Protein, Enzim, dan Asam Nukleat. Bandung (ID): ITB. - Suharsosno Martoharsono. 2019 Biokimia. Gadjah Mada University Press.
Date of Last Amendment	22nd August 2022