

120220242 Biochemistry

Module Name	Biochemistry
Module Level, if applicable	Intermediate
Code if Applicable	120220242
Subtitle, if applicable	-
Courses, if applicable	120220242 Biochemistry
Semester(s) in which the module is taught	3 rd
Person responsible for the module	Afifa Husna, STP., MTP., M.Sc
Lecturer	Hanif Alamudin Manshur, S.Gz., M.Si..
Language	Indonesian
Relation to curriculum	Compulsory Course for undergraduate program in the Food Technology Department, Faculty of Agriculture and Animal Science
Type of teaching	Lecture, Practicum
Workload	<ul style="list-style-type: none"> • Lecture: 2 SKS X 50 minutes X 16 weeks • Practicum: 1 SKS X 170 minutes X 16 weeks • Project: 2 SKS x 60 minutes x 16 weeks • Independent learning: 2 SKS X 60 minutes X 16 weeks
Credit points	3 SKS X 1.5 = 4.5 ECTS
Requirements according to the examination regulations	<ol style="list-style-type: none"> 1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	General Biology, Organic Chemistry, Inorganic Chemistry Courses
Module Objectives (Intended learning outcomes)	<p>On completion of this course, students should be able to :</p> <ul style="list-style-type: none"> • Understand the basic concepts of food chemical composition, including carbohydrates, proteins and lipids. • Be able to explain the biochemical processes involved in food processing and digestion. • Identify the role of bioactive compounds in human health and disease prevention. • Evaluate food preservation techniques and the biochemical mechanisms behind them. • Apply biochemical knowledge to improve the nutritional and sensory

	quality of food products through laboratory works.
Module Content	This course introduces basic concepts about the interactions between chemical compounds in food and the human body. Students will study the structure, function, and biochemical role of carbohydrates, proteins, lipids, and vitamins in digestive and metabolic processes. Emphasis is placed on understanding the mechanisms of enzymatic reactions, aroma formation, and food preservation techniques. Through this course, students will develop an in-depth understanding of the relationship between biochemistry and food in the context of health and nutrition.
Study and examination requirements and forms of examination	Cognitive: Midterm exam, Final exam, Quizzes, Practicum Report, 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	Presentation, white board, sets of practicum tools
Recommended Literature	A. Compulsory 1. Campbell, M. K., & Farrell, S. O. 2009. <i>Biochemistry</i> . 2. Simpson, B. K., Nollet, L. M., Toldrá, F., Benjakul, S., Paliyath, G., & Hui, Y. H. (Eds.). 2012. <i>Food biochemistry and food processing</i> . John Wiley & Sons. B. Option 1. Videos from Youtube related to the food biochemistry 2. National and international journals related to food biochemistry
Date of Last Amendment	22 nd April 2022