

Module Name	Food Chemistry and Biochemistry
Module Level, if applicable	Intermediate
Code if Applicable	120224698
Subtitle, if applicable	-
Courses, if applicable	120224698 Food Chemistry and Biochemistry
Semester(s) in which the module is taught	3 rd
Person responsible for the module	Prof. Dr. Ir. Noor Harini, MS., Hanif Alamuddin M., S.Gz., M.Si.
Lecturer	Prof. Dr. Ir. Noor Harini, MS., Hanif Alamuddin M., S.Gz., M.Si.
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Departement of Food Technology, Faculty of Agriculture and Animal Science
Type of teaching	Lecture, Project
Workload	<ul style="list-style-type: none"> ● Lecture: 4 sks X 50 minutes X 16 weeks ● Project: 4 sks X 60 minutes X 16 weeks ● Independent learning: 4 sks X 60 minutes X 16 weeks
Credit points	4 SKS X 1.5 = 6 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	Organic Chemistry, Food Ingredient Knowledge
Module Objectives (Intended learning outcomes)	<p>On successful completion of this course, student should be able to :</p> <ul style="list-style-type: none"> ● Know the concept of implementation and understanding of chemical compounds in foodstuffs about the main components and additional/supporting components. ● Know the chemical structure, chemical character and efforts to improve the quality of food and processed products. ● Know, explore and develop several macro chemical compounds in foodstuffs consisting of water, carbohydrates, proteins and fats as well as several micro chemical compounds consisting of vitamins, minerals, food enzymes, food pigments and food hormones

<p>Module Content</p>	<p>This course is a chemical technology-based course in food to prepare students to know chemical and functional properties discussing the concept of implementation and understanding of chemical compounds in foodstuffs about the main/macro components, namely water, carbohydrates, proteins and fats. In addition, it discusses micro components such as vitamins, minerals, food enzymes, food pigments and food hormones. In addition, it also discusses the chemical structure, chemical character of food ingredients in an effort to improve the quality of food ingredients and their processed products</p>
<p>Study and examination requirements and forms of examination</p>	<p>Cognitive: Midterm exam, Final exam, Quizzes, Assignments Psychomotor: Practice Affective: Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.</p>
<p>Media employed</p>	<p>Classical teaching tools with white board and power point presentation</p>
<p>Recommended Literature</p>	<p>For Class</p> <p>A. Compulsory</p> <ol style="list-style-type: none"> 1. De Man, J.M. 1997. Kimia Makanan. Penerbit ITB. Bandung 2. Winarno, F.G. 2009. Kimia Pangan dan Gizi, Gramedia Pustaka Utama, Jakarta. 3. Keenan, Kleinfelter and Wood. 2007. Kimia untuk Universitas. Diterjemahkan oleh A.H. Pudjaatmaka. 4. Fennema. 2010. Food Chemistry. 5. Bennion. 2008. Chemistry of Food. 6. Tranggono dkk. 1990. Kimia, Nutrisi dan Pangan. PAU UGM Yogyakarta. 7. Geissman, and Crout.1969. Organic Chemistry os Secondary Plant Metabolism. Freeman, Cooper & Company, California-USA 8. Ketaren. 1986. Pengantar Teknologi Minyak dan Lemak Pangan. UI-Press, Jakarta 9. Rahayu, K. 1991. Bahan Ajaran : Teknologi Enzim. PAU Pangan dan Gizi UGM, Yogyakarta 10. Robinson, T. 1995. Kandungan

	<p>Organik Tumbuhan Tinggi. Penerbit ITB Bandung</p> <p>11. Sri Raharjo. 2004. Kerusakan Oksidatif Pada Makanan. PAU-UGM, Yogyakarta</p> <p>B. Option</p> <ol style="list-style-type: none"> 1. Almatsier, S. 2003. Dasar Ilmu Gizi. PT. Gramedia Pustaka Utama. Jakarta 2. Djaelani, A. 2000. Ilmu Gizi Untuk Mahasiswa dan Profesi Z(Jilid 1). Penerbit Dian Rakyat Jakarta Timur 3. Eskin, M. 1979. <i>Plant Pigment, Flavors and textures ;The Chemistry and Biochemistry of Selected Coumpounds</i>. Academic Press, san Francisco- New York. London 4. Hardjono S. 1996. Sintesis Bahan Alam. Gadjah Mada University Press. Yogyakarta. 5. Eskin, N.E.M.1990. <i>Biochemistry of foods</i>. Second Edition. Academic Press, Boston. London
Date of Last Amendment	22 nd Agustus 2022