



MINISTRY OF EDUCATION AND CULTURE  
UNIVERSITAS NEGERI SURABAYA  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
DEPARTMENT OF NATURAL SCIENCES  
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Undergraduate Programme in Science Education

Module Handbook

Module Name:	<i>Dasar-dasar Biokimia</i> (Introductory of Biochemistry)
Module Level:	Bachelor degree/Undergraduate Programme
Course Code:	8420103163
Abbreviation, if applicable:	-
Courses included in the module, if applicable:	Not applicable
Semester/term	IV/second year (sophomore)
Module coordinator(s):	Prof. Dr. Erman, M.Pd.
Lecturer(s):	Prof. Dr. Erman, M.Pd. Dra. Martini, M.Pd. Siti Nurul Hidayati, S.Pd., M.Pd. Wahyu Budi Sabtiawan, S.Si., M.Pd., M.Sc.
Language:	<i>Bahasa Indonesia</i> (Indonesian Language)
Classification within the curriculum:	Compulsory / Elective
Teaching format/class hours per week during the semester:	3 contact hours of lectures (Indonesia credit semester or <i>sks</i> *)
Workload:	3 x 50 minutes lectures, 3 x 60 minutes structured activity, 3 x 60 minutes individual activity, 14 weeks per semester, 119 total hours per semester ~ 4.77 ECTS**
Credit point:	3 <i>sks</i> (4.77 ECTS)
Requirements:	– General Chemistry
Learning goals/competencies:	<b>Course Learning Outcomes (CLOs):</b> After taking this course, students will be able to: 1. Utilizing science and technology to understand the role of nutrients as an energy source; 2. Mastering the structure, function, and biochemical reactions of nutrients; 3. Be able to write down ideas for preventing metabolic disorders.
Content:	Structure and function of carbohydrates, lipids and proteins; The chemical composition of the protoplasm; Energy metabolism; Carbohydrate metabolism; Lipid metabolism; and Protein metabolism.
Attribute Soft skill:	Discipline, collaboration, responsibility, and argumentation in the natural classroom setting
Study/exam achievements:	Students are considered to be competent and pass if at least get 40% of the maximum final grade. The final grade (NA) is calculated based on the following weight:

	Assessment Components	Percentage Contribution
	Participation	20%
	Assignment	30%
	Mid-semester test	20%
	Final semester test	30%
	<b>Total</b>	<b>100%</b>
Learning Methods	Problem-based learning, lecturing, discussion, and presentation (structured activities).	
Form of Media:	LCD, PowerPoint slides, worksheets.	
Literature (primary references):	<ol style="list-style-type: none"> <li>1. Campbell. M.K. 1999. Biochemistry (3rd Ed). Harcourt College Publisher Foreworth.</li> <li>2. Erman. 2007. Dasar-dasar Biokimia Olahraga. Surabaya: Unesa University Press.</li> <li>3. Mathew. C.K. Van Holde. K.E.A. Hem, K.G. 2000. Biochemistry (3rd). San Fransisco: Longman Inc.</li> <li>4. Stryer. L. 1996. Biokimia (ed 4). Jakarta: Penerbit Buku Kedokteran EGC.</li> <li>5. Yohanes Ngili. 2010. Biokomia Dasar. Bandung: Rekayasa Sains.</li> </ol>	
Notes:	<p><b>*1 sks in learning process = three contact hours that consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes)</b> according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.</p> <p><b>**1 sks = 1,59 ECTS</b></p>	