UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY EDUCATION
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Bachelor of Education in Chemistry **MODULE HANDBOOK**

Module name:	**Biology for Chemistry**
Module level, if applicable:	Undergraduate
Code:	KIM 6303
Sub-heading, if applicable:	-
Classes, if applicable:	2
Semester:	1st
Module coordinator:	Sukisman Purtadi, M.Pd
Lecturer(s):	Dr. Agung Wijaya Subiantoro, S.Pd.,M.Pd.; Yuni Wibowo, S.Pd.,M.Pd.
Language:	Bahasa Indonesia and English
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	• Lectures: 100 minutes lectures, 120 minutes structured activities and 120 minutes individual study per week • Laboratory Work: 170 minutes includes the laboratory work and it's report per week.
Workload:	Total workload of the activity is 136 hours per semester which consist of 100 minutes lectures, 120 minutes structured activities, 120 minutes individual study per week, and 170 minutes include laboratory work and it's report.
Credit points:	2SKS (3.28 ECTS) lectures, and 1SKS (1,64 ECTS) laboratory Work
Prerequisites course(s):	-
Course outcomes:	After taking this course, the students are expected to be able to: CO1. able to show a critical attitude and care about biodiversity. CO2. able to master the concept of biological characteristics as a science and core principles of biology related to objects (animals, plants, fungi, protists, monera, bacteria) at the level of organization of life, and biological problems and the application of biology to human life. CO3. able to apply the concepts and principles of biology in solving biological problems for human life
Content:	This course discusses about the basic definition of objects and biological issues, the scientific method in learning biology, the structure of biology; the living things' characteristics concept; energy and nutrition; changes of energy; entropy; metabolism; enzyme and energy transfer-ATP and survival living on earth, the level organization of life, ecosystems, and the benefits of biology for human life.
Study / exam achievements:	Attitude assessment is carried out at each meeting by

<table>
<tr><td></td><td>observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is marked very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not taken into account in the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude. The final mark will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO1,
CO2,
CO3.</td><td>Assignments
Practicum
Final Exam
Activities</td><td>Presentation / written test</td><td>30%
20%
20%
30%</td></tr>
<tr><td colspan="3"></td><td>Total</td><td>100%</td></tr>
</table></td></tr>
<tr><td>Forms of media:</td><td>Chemistry experiment tools and materials, Board, LCD Projector, Laptop/Computer, Module</td></tr>
<tr><td>References:</td><td>Campbell, N. A, J. B. Reece, L. A. Urry, M. L. Cain, S. A. Wasserman, P. V. Minorsky, R. B. Jackson. (2008). Biologi, Jilid 1, 2, 3, Edisi Bahasa Indonesia. Jakarta: Erlangga.
Solomon, E. F., Berg, L. R., dan Martin, S. W. (2008). Biology, Eight Edition. Thompson Brooks/ Cole.
Starr, C., C. A. Evers, L. Starr. (2008). Biology, Concepts and Applications, Seven Edition. Thompson Brooks/ Cole.
BSCS. (2006). Biology, a Molecular Approach. New York: McGrawHill Glencoe.
Rezba, R. J., Sparague, C. S., Fiel, R. L., Funk, H. J., Okey, J. R., & Haus, H. H. (1995). Learning and Assessing Science Process Skills. (3rd ed.). Iowa: Kendall Hunt Publishing Company..</td></tr>
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PLO and CO mapping

	PLO					
	Attitude		Knowledge	Specific Skill	General Skill	
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CO1			√			
CO2			√			
CO3				√		