<table>
<tr><td colspan="2">  </td><td colspan="4">Faculty of Natural Sciences and Mathematics
Chemistry Department
Chemistry Education Study Program</td></tr>
<tr><td colspan="2">Module name</td><td colspan="4">Biology</td></tr>
<tr><td colspan="2">Module level, if applicable</td><td colspan="4">1st Year</td></tr>
<tr><td colspan="2">Code, if applicable</td><td colspan="4">SPK – 101</td></tr>
<tr><td colspan="2">Semester(s) in which the module is taught</td><td colspan="4">1st semester</td></tr>
<tr><td colspan="2">Person responsible for the module</td><td colspan="4">Dr. Tatang Shabur Julianto, M.Si.</td></tr>
<tr><td colspan="2">Lecturer</td><td colspan="4">Dr. Tatang Shabur Julianto, M.Si.
Rio Christy Handziko, S.Pd.Si, M.Pd.</td></tr>
<tr><td colspan="2">Language</td><td colspan="4">Indonesia</td></tr>
<tr><td colspan="2">Relation to curriculum</td><td colspan="4">Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Class size</td><td>Forms of active participation</td><td colspan="3">Workload 91 hours</td></tr>
<tr><td rowspan="3">Class discussion</td><td rowspan="3">50-60</td><td rowspan="3">Discussion</td><td>Lecture: 100 (min) x 16 (meeting)</td><td>27 hours</td></tr>
<tr><td>Assignment: 120 (min) x 16 (week)</td><td>32 hours</td></tr>
<tr><td>Independent study: 120 (min) x 16 (week)</td><td>32 hours</td></tr>
<tr><td colspan="2">ECTS credit</td><td colspan="4">3.25 hours</td></tr>
<tr><td colspan="2">Credit points</td><td colspan="4">2 SCU</td></tr>
<tr><td colspan="2">Requirements according to the examination regulations</td><td colspan="4">Minimum attendance at lectures is 75% (according to UII regulation)</td></tr>
<tr><td colspan="2">Recommended prerequisites</td><td colspan="4">N/A</td></tr>
<tr><td colspan="2">Related course</td><td colspan="4">Biochemistry</td></tr>
<tr><td colspan="2">Module objectives/intended learning outcomes</td><td colspan="4">On successful completion of the course students should be able to:
1. Explain the elements of life which include the cell as the structure of life, the function of water, and the chemical bonds in DNA strands
2. Explain about respiration and metabolism
3. Explain the structure and function of plants
4. Explain the structure and function of animals
5. Explain about biodiversity
6. Explain about ecology
7. Explain the concept and theory of the evolution of living things</td></tr>
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<table>
<tr><td>Content</td><td>

Cells as the structure of life, function of water, and chemical bonds in DNA strands
Respiration and metabolism
Plant structure and function
Animal structure and function
Biodiversity: at the level of genes, species, ecosystems, kinship between living things
Ecology: the components that make up the ecosystem, interactions within the ecosystem, the flow of energy and matter as an ingredient of ecosystem dynamics
Evolution of living things: evolution, phylogeny, evolutionary processes

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<tr><td>Study and examination requirements and forms of examination</td><td>
Final score (NA) is calculated as follows:
<table>
<tr><th>Intended learning outcomes</th><th>Weight (%)</th><th>Technique of assessment</th></tr>
<tr><td>1</td><td>10</td><td>Written test: assignment, midterm</td></tr>
<tr><td>2</td><td>10</td><td>Written test: assignment, midterm</td></tr>
<tr><td>3</td><td>20</td><td>Written test: assignment, midterm</td></tr>
<tr><td>4</td><td>20</td><td>Written test: assignment, midterm</td></tr>
<tr><td>5</td><td>20</td><td>Written test: assigment, final examination</td></tr>
<tr><td>6</td><td>10</td><td>Written test: assigment, final examination</td></tr>
<tr><td>7</td><td>10</td><td>Written test: assigment, final examination</td></tr>
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</td></tr>
<tr><td>Media employed</td><td>BSCS Cube, power point slide presentation, video, Google classroom</td></tr>
<tr><td>Reading list</td><td>

Campbell, N.A., Reece, J.B., Urry, L.A., and Cain, M.L., Wasserman S.A., Minorsky P.V., Jackson R.B. 2011, *Campbell Biology, 9th ed., Pearson Benyamin Cumming* Publ., San Francisco.
Cecie Starr, Ralph Taggart. 1998. *Structure and Function of Animals*. Wadsworth Publisher.
Darwin, Charles. 1859. *The Origin of The Species by Means of Natural Selection*.
Friedhelm Goltenboth, Kris H. Timotius, Paciencia P. Milan, Josef Margraf. 2006. *Ecology of Insular Southeast Asia: The Indonesian Archipelago*. Elsevier. Amsterdam.
J. L. Chapman, M. J. Reiss. 1999. *Ecology: Principles and Applications. Second Edition*. Cambridge University Press. UK

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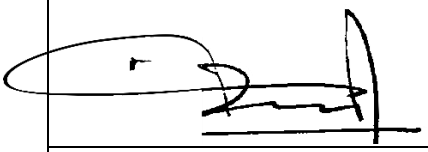
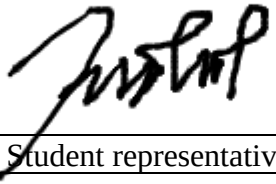
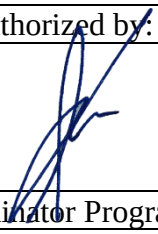
	Jennifer W. MacAdam. 2011. *Structure and Function of Plants*. John Wiley & Sons Publisher, Wiley Blackwell. Iowa USA. Mochamad Indrawan, Richard B. Primack, Jatna Supriatna. 2012. *Biologi Konservasi*. Yayasan Obor Indonesia. Jakarta

Prepared by:	Verified by:	Authorized by:
		
Person responsible for the module	Student representative	Coordinator Program