



# THE MODULE HANDBOOK

## FACULTY OF BIOLOGY

### General Biology

<b>Module code</b>	BIO 10001
<b>Module level</b>	Undergraduate
<b>Abbreviation, if applicable</b>	-
<b>Sub-heading, if applicable</b>	-
<b>Courses included in the module, if applicable</b>	-
<b>Semester/term</b>	Odd
<b>Module coordinator(s)</b>	Drs. Sudjino, M.S.
<b>Lecture(s)</b>	1. Drs. Sudjino, M.S. 2. Dr. R C Hidayat Soesilohadi, M.S. 3. Drs. Sutikno, S.U.
<b>Language</b>	Indonesia
<b>Classification within the Curriculum</b>	Compulsory
<b>Teaching format/class hours per week during the semester</b>	This course is organised into 3 parallel classes and planned to have 14 teaching weeks and 2 weeks of examination.
<b>Workload</b>	Estimated working hour: 12 hours/week.
<b>Credit points</b>	4-0 credits
<b>Requirements</b>	-
<b>Learning goals/competencies</b>	<b>1. Knowledge and understanding</b> <ol style="list-style-type: none"><li>The basic principles of physics and chemistry related to the structure and process.</li><li>takes place in plants, animals and humans.</li><li>Principles and theories related to the structure, function, and reproduction that occurs.</li><li>In plants, animals and humans.</li><li>The relationship between the dimension of space and time with the natural change and change on the body at a time.</li><li>The metabolism in the bodies of organisms.</li><li>The concepts of biological phenomena that occur in real life.</li><li>Definition of terms in the field of biology.</li></ol>



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### 2. Ability/intellectual skill

- a. Plan, implement and report on a research of the biological field.
- b. Analyze and resolve the problems and develop a plan of activities in the biological field.
- c. Formulate and prove a hypothesis.
- d. Integrate and evaluate information and data on the biology of living beings from various sources.

### 3. Practical skill

- a. Plan and implement validly an experiment / research in Biological field.
- b. Design and use of laboratory and field equipment.
- c. Analyze the results of the experiment and determine the validity and truth.
- d. Using the scientific literature and make notes effectively.
- e. Create and present a technical report scientifically.

### 4. Managerial and transferable skill

- a. Applying the principles of mathematics, chemistry and physics in biological field
- b. Working in a group.
- c. Applying and integrating biology into other sciences.
- d. Using information and communication technology effectively.
- e. Set the time resources effectively and efficiently.
- f. Learning independently and effectively for professional development and in career.

### 5. Attitude

- a. Being able to anticipate problems and seeking to resolve a problem related to the
- b. organism.
- a. Have a curiosity.
- b. Be sensitive to changes and environmental issues within the scope of the global /
- c. regional / local as well as trying to solve them, either individually or in groups.

### Content

General Biology discusses living creatures and symptoms full of life included in the material: biology as a science, the underlying material life, the cell as a unit and the structure and function, energy for life, genetic information, cell cycle, mutation, recombinations and gene engineering, growth and development, structure and function of organism that support life, regulation and coordination, evolution, biodiversity, ecology and behavior, developmental biology and utilization of biology in the future.



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<b>Study/ exam achievements</b>	<ol style="list-style-type: none"><li>1. Midterm: 30 %</li><li>2. Final examination: 30 %</li><li>3. Quiz and discussion in eLISA: 20 %</li><li>4. Presentation and working in a gorup: 20 %</li></ol>
<b>Forms of media</b>	White board, LCD, e-learning, video and animation.
<b>Literature</b>	<ol style="list-style-type: none"><li>1. Brum, G.D., L.K. Mc. Kane, and G. Karp.1991. Biology: Exploring Life. John Wiley &amp; Sons, Inc. New York, Chichester, Singapore.</li><li>2. Campbel, N.A., L.G. Mitchell, J.B. Reece.2001. Biology: Concepts and Connections. The Benjamin/Cummings Publishing Co. California, Singapura.</li><li>3. Kimball, J.W.1982. Biology. 5<sup>th</sup>. Ed. Addison Wesley Publishing. Co. Reading, Massachusset.</li><li>4. Purves, W.K., G.H. Orians, and H.C. Heller. 1992. Life: The Science of Biology 3<sup>th</sup> .Ed. W.H. Freemann and Co. Salt Lake City, Utah.</li><li>5. Solomon, E.P., L.R. Berg, D.W. Martin.1985. Biology. 5<sup>th</sup> Ed. Saunders College Publishing. New York.</li></ol>