



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND SCIENCE DEPARTMENT OF BIOLOGY EDUCATION

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Bachelor of Science in Biology

MODULE HANDBOOK

Module name:	Laboratory Work in Natural Feed Technology
Module level, if applicable:	Undergraduate
Code:	BIM 6198
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	4 th
Module coordinator:	Drs. Sudarsono, M.Si
Lecturer(s):	Drs. Sudarsono, M.Si
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format/class hours per week during the semester:	One hundred minutes of lectures, 120 minutes of structured activities, and 120 minutes of individual study per week
Workload:	The total workload is 91 hours per semester, which consists of 100 minutes of lectures, 120 minutes of structured activities, and 120 minutes of individual study per week for 16 weeks.
Credit points:	1 SKS (3 ECTS)
Prerequisites course(s):	-
Program Learning Outcomes	PL3 Obey the law and discipline in community and state life by internalizing academic values, norms, and ethics. PL4 Master the structure of biology in-depth to solve interrelated problems in the field of biology and other related sciences. PL6 Be adaptive, creative, and innovative in applying biology and related sciences.

	<p>PL7 Be skilled in applying biological techniques in the laboratory and everyday life.</p> <p>PL8 Be skilled in utilizing local potential according to a particular interest in the study of biology.</p> <p>PL9 Be able to have a career or create employment/entrepreneurship opportunities in the field of biology.</p>
Course Outcomes	<p>After cultivation of natural food (<i>Rotifera</i>) in the field and the laboratory (<i>Chlorella vulgaris</i>), the students have the ability to:</p> <p>CO1. Identify the plankton from Rotifers</p> <p>CO2. Differentiate the types of plankton in the two ecosystems</p> <p>CO3. Classify the plankton from Rotifers</p> <p>CO4. Compare the diversity of plankton in two ecosystems by calculating the diversity index</p> <p>CO5. Explain the level of eutrophication by calculating the index of dominance and diversity index</p> <p>CO6. Describe the diversity of plankton from Rotifers</p> <p>CO7. Explain the role of plankton in the ecosystem</p> <p>CO8. Describe the life cycle of <i>Chlorella vulgaris</i></p> <p>CO9. Identify the dynamics of the plankton population (Rotifers)</p> <p>CO10. Describe the succession of plankton populations (Rotifers)</p>
Content:	<p>This course studies the natural feed technology in practice, which includes 1). Identifying the plankton from Rotifers, 2). Differentiating the types of plankton in the two ecosystems, 3). Classifying the plankton from Rotifers, 4). Comparing the diversity of plankton in two ecosystems by calculating the diversity index, 5). Explaining the level of eutrophication by calculating the index of dominance and diversity index, 6). Describing the diversity of plankton from Rotifers, 7). Explaining the role of plankton in the ecosystem, 8). Describing the life cycle of <i>Chlorella vulgaris</i>, 9). Identifying the dynamics of the plankton population (Rotifers), and 10).</p>

	Describe the succession of plankton populations (Rotifers)																									
Study/exam achievements:	The final mark will be weighed 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>Looking for references and Making a research proposal</td><td>Observed attitudes, knowledge, and skills</td><td>Survey, test, rubrics, and manuals</td><td>20%</td></tr><tr><td>2</td><td>Presentation and Q & A</td><td>Observed attitudes, knowledge, and skills</td><td>Survey, test, rubrics, and manuals</td><td>30%</td></tr><tr><td>3</td><td>Final Exam and Making Project</td><td>Observed attitudes, knowledge, and skills</td><td>Survey, test, rubrics, and manuals</td><td>50%</td></tr><tr><td colspan="4">Total</td><td>100%</td></tr></table>	No	CO	Assessment Object	Assessment Technique	Weight	1	Looking for references and Making a research proposal	Observed attitudes, knowledge, and skills	Survey, test, rubrics, and manuals	20%	2	Presentation and Q & A	Observed attitudes, knowledge, and skills	Survey, test, rubrics, and manuals	30%	3	Final Exam and Making Project	Observed attitudes, knowledge, and skills	Survey, test, rubrics, and manuals	50%	Total				100%
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Total				100%																						
Forms of media:	Multimedia																									
References:	A. Wirosaputro, S. 1998. Clorella Makanan Kesehatan Global Alami. Yogyakarta: Universitas Gajah Mada. B. Djarijah, S.A. 1995. Pakan Alami. Yogyakarta: Kanisius. C. Dahril, T. 1996. Rotifer Biologi dan Pemanfaatannya. Pekanbaru: UNRI-Press. D. Busniar, Munzir. 2006. Entomologi. Padang: Andalas University Press. E. Yurisman & Sukendi. 2004. Biologi dan Kultur Pakan Alami. Pekanbaru: UNRI Press.																									

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CO1				√		√					
CO2			√			√	√	√	√		
CO3				√		√	√	√	√		
CO4				√		√	√	√	√		
CO5				√		√	√	√	√		
CO6				√		√	√	√	√		
CO7				√		√	√	√	√		
CO8				√		√	√	√	√		
CO9				√		√	√	√	√		
CO10				√		√	√	√	√		