



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 Economical Botany
Module level, if applicable:	Undergraduate
Code:	BIM6190
Sub-heading,if applicable:	-
Classes,if applicable:	-
Semester:	Odd
Module coordinator:	Dr. Ir. Suhartini, MS
Lecturer(s):	Dr. Ir. Suhartini, MS.
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	170 minutes for pretest, preparation and report making per week
Work load:	Total workload is 41,5 hours per semester which is used for pretest, practicum preparation, practice, report making, report presentation and response for 16 weeks.
Credit points:	1 SKS (1,5 ECTS)
Prerequisites course(s):	Botany, Entrepreneurship
Perogram Learning Outcomes:	<ol style="list-style-type: none"> 4. Comprehensively mastering Biology (core biology) to solve problems in the field of Biology (problem-solving) and to underlie the concepts of related sciences 5. the techniques and methodologies in Biology as well as familiar with the equipment used in Biology laboratories in order to get the knowledge of Biology (how we know what we know) 6. Being adaptive, creative, innovative in applying the concepts of Biology and other related fields 7. Being skillful in applying the techniques used in laboratories and daily life Being skillful in applying the techniques used in laboratories and daily life 9. Being able to work and create jobs/being an entrepreneur in the field of Biology 10. Having managerial ability to supervise and evaluate workers and optimizing the networks in order to develop professionalism Having managerial ability to supervise and evaluate workers and optimizing the networks in order to develop professionalism 11. Possessing scientific skills to support the ability to speak in local, national, and international forums
Course Outcomes	After taking this practice, the students have ability to:

	<p>CO 1. Identify plants of economic value from food crops, product plans and economic analysis</p> <p>CO2. Identify economic value crops from vegetable and fruit crops, product plans and economic analysis</p> <p>CO3. Identifying economic value crops from fibrous plants, wood, tannins & dyes, product plans and economic analysis</p> <p>CO4. Identifying economic value crops from rubber plants, essential oils, fats, sugars & resins, product plans and economic analysis</p> <p>CO5. Identifying economic value plants from medicinal and beverage plants, product plans and economic analysis</p> <p>CO6. Identifying economic value plants from ornamental plants, their design and economic analysis</p> <p>CO7 .. Able to make processed products of one type of plant with economic value accompanied by an analysis of its business</p> <p>CO8 .. Responsible for planning, implementing and reporting economic botanical utilization activities in the form of scientific articles independently and in groups.</p>															
Content:	Laboratory Work in Economic Botany identify plants of economic value from food crops including cereals, vegetables & fruits, fiber, wood, tannins & dyes, rubber, oil, essential oils, & resins, medicines, plants that can produce drinks, plants ornamental; the use of plant parts, by designing and analyzing its economy, making one of the products of the plant with its business analysis, communicating the results of the analysis and practice in the form of presentations and making articles both in individual and group activities.															
Study/exam achievements:	<p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO1 to CO6</td> <td>Observed attitudes , knolwedge, and skills</td> <td>Survey, test, rubrics and manuals</td> <td>100%</td> </tr> <tr> <td colspan="4">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1 to CO6	Observed attitudes , knolwedge, and skills	Survey, test, rubrics and manuals	100%	Total				100%
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1	CO1 to CO6	Observed attitudes , knolwedge, and skills	Survey, test, rubrics and manuals	100%												
Total				100%												
Forms of media:	Real objects, model, multimedia															
Reference:	<p>A. Hans, C.C. 1973. House Plants & Indoor Gardening. Hongkong: Octopress Book Ltd.</p> <p>B. Hill, F.A. 1982. Economic Botany. New York-Toronto-London: McGraw Hill Book Company Inc.</p> <p>C. Pandey, B.P. 1980. Economic Botany. New Delhi: S. Chand & Company Ltd.</p> <p>D. Tyler, V.E., Brady, L.R. & Robbers, J.E. 1988. Pharmacognosi. Washington-Philadelphia: Lea and Febiger.</p> <p>E. Simpson, B.B. & Ogorzaly, M.C. 1986. Economic Botany Plants in Our World. New York: McGraw Hill Book Company Inc.</p>															

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CO1				V	V	V			V		
CO2				V	V	V			V		

