

**Bachelor of Biology**Email: [biologi.fmipa@um.ac.id](mailto:biologi.fmipa@um.ac.id)Website: <http://biologi.fmipa.um.ac.id/>**MODULE HANDBOOK**

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| Module designation                                    | Ethnobotany  |
| Module level, if applicable                           | Undergraduate  |
| Code, if applicable                                   | NBIOUM6308   |
| Subtitle, if applicable                               | -  |
| Courses, if applicable                                | -  |
| Semester(s) in which the module is taught             | Odd semester   |
| Person responsible for the module                     | Drs. I Wayan Sumberartha, M.Sc.  |
| Lecturer  | Dr. Sulisetijono, M.Si.<br>Yunita Rahmawati, S.Gz., M.Si.  |
| Language  | Bahasa Indonesia   |
| Relation to curriculum                                | Undergraduate degree program, elective, 7th semester.  |
| Type of teaching, contact hours                       | Undergraduate degree program: cooperative learning, presentation, laboratory work, 2 x 50 = 100 minutes and 1 x 170 minutes  |
| Workload  | 1. Lectures: 2 x 50 = 100 minutes (1.67 hours) per week.<br>2. Exercises and Assignments: 2 x 60 = 120 minutes (2 hours) per week.<br>3. Laboratory work: 1 x 170 minutes (2.83 hours) per week.<br>4. Private study: 2 x 60 = 120 minutes (2 hours) per week.   |
| Credit points   | 3 credit points (~5 ECTS-eq)   |
| Requirements according to the examination regulations | A student must have attended at least 80% of the lectures to be eligible for the final examination.  |
| Recommended prerequisites                             | -  |
| Module objectives/intended learning outcomes          | Students are able to:<br>(LO4) Apply basic concepts, principles and procedures of biology to design investigations as an effort to solve problems in the health, food and environment sectors using technological applications.  |
| Course learning outcomes                              | 1. Having sensitivity in finding, analyzing and solving ethnobotanical problems through the application of knowledge and technology by following the rules of the scientific method<br>2. Mastering and applying the concept of traditional use of plant species for: use of plants for medicine, health and |

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|                   | <p>cosmetics, complementary to traditional ceremonies/rituals, and other uses to support the necessities of life: food, clothing, boards, household utensils, ropes rigging and weaving, dyes, and security, so that they have the ability to adapt to changing situations and conditions</p> <ol style="list-style-type: none"> <li>3. Mastering the concept of human and environmental relations so that ethnic perceptions of plant organisms in the environment are obtained, including language, customs and the history of plant use</li> <li>4. Determining how to mix and use plants for medicine, health and cosmetics, complementary to traditional ceremonies/rituals, and other uses to support the necessities of life: food, clothing, boards, household utensils, rigging and weaving, dyes, and security.</li> <li>5. Making decisions based on accurate information and data to solve problems in the field of ethnobotany</li> <li>6. Being responsible for planning, implementing and reporting ethnobotanical research in the form of scientific articles independently and in groups.</li> </ol> |  |
| Content           | <p>This course covers the following main topics:</p> <ul style="list-style-type: none"> <li>● Definition of ethnobotany; ethnobotany history; science related to the development of ethnobotany; the fields of modern ethnobotany studies: ethnopharmacology, ethno anthropology, ethno-medicine, ethno agronomy, ethnolinguistics, ethnoecology and botanical economics</li> <li>● Traditional medicine and simplicia</li> <li>● Ergastic objects and simplicia</li> <li>● Traditional medicine (jamu) - market survey</li> <li>● Plants for health and cosmetics</li> <li>● Food plants (cereals and non-cereals)</li> <li>● Plants for clothing &amp; boards</li> <li>● Plants for traditional ceremonies</li> <li>● Estimated total benefit value</li> <li>● Plants as household utensils, rigging &amp; woven materials</li> <li>● Plants for ethnoveterinary weapons &amp; security</li> </ul>  |  |
| Learning activity | Week 1  | <ul style="list-style-type: none"> <li>● Summarizing ethnobotany terms and ethnobotany study materials</li> <li>● Observing herbal medicine traders in traditional markets</li> <li>● Finding information on lerak (<i>Sapindus rarak</i>) plants in their respective areas</li> </ul> |
|                   | Week 2  | Simplicia observation (macroscopic & microscopic, histochemistry)  |

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| Week 3  | <ul style="list-style-type: none"> <li>● Theory: Parts of plants used for medicine and health</li> <li>● Practicum 2: Macro &amp; Microscopy, histochemistry of Zingiberaceae rhizome; root (alang-alang), cassava, sweet potato</li> </ul>   |
| Week 4  | <ul style="list-style-type: none"> <li>● Practicum 3: Macro and Microscopy, histochemistry of cosmetic leaves (betel, basil), suji leaves, binahong</li> <li>● Practicum: 4: Macro &amp; Microscopy, flower histochemistry (flower parts, pollen)</li> </ul>  |
| Week 5  | <ul style="list-style-type: none"> <li>● Introduction and Observation of surrounding plants</li> <li>● Practicum 5: Making herbal medicine 1</li> </ul>   |
| Week 6  | Practicum: Making herbal medicine   |
| Week 7  | Practicum 6: traditional cosmetic ingredients (bridal scrubs)   |
| Week 8  | <ul style="list-style-type: none"> <li>● Practicum 7: Macro &amp; Microcopy of stems (sugarcane, pandak pulp)</li> <li>● Practicum 8: Macro &amp; Microscopic Fruits: Bixa, areca nut</li> <li>● Observation of nearby plants by use group, e.g. shade plants, fences</li> <li>● Ethnobotany research project proposal framework</li> </ul> |
| Week 9  | Practicum 9: materials for making necessities, traditional ceremonies: diamonds, janur (young coconut leaf) decoration<br>MIDTERM EXAMINATION   |
| Week 10 | Practicum 10: tumpeng making materials; traditional food  |
| Week 11 | Practicum 11: Macro & Microscopy of grains: nutmeg, areca nut, nuts, sunflower  |
| Week 12 | Job Training 2  |
| Week 13 | Practicum 12: decorative materials from wild plants   |
| Week 14 | Practicum 13: drink ingredients from plants   |
| Week 15 | Practicum 14: food ingredients from plants<br>Research implementation   |
| Week 16 | FINAL EXAMINATION   |

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| Study and examination requirements and forms of examination | Assignment, quiz, midterm examination, final examination, performance   |
| Media employed  | LCD, blackboard, and Sipejar  |
| Reading list  | <ol style="list-style-type: none"> <li>1. Ethnobotany: Evolution of a Discipline</li> <li>2. Schultes, R. E. and Reis, S V. 1995. <i>Ethnobotany: evolution of a discipline</i>. Portland, Or: Dioscorides Press.</li> <li>3. Balick, M. J. and Cox, P. A. 1996. <i>Plants, people, and culture: the science of ethnobotany</i>. New York: Scientific American Library.</li> <li>4. Balai Penelitian Tanaman Rempah dan Obat. 2019. <i>Tanaman Obat</i>. BPTR: Bogor.</li> <li>5. Purwanto, Y., E. Sukara, Hartono, J. Susyafrianto dan A. Munawir. 2014. Indonesian Biosphere Reserve: to linkage biological and cultural diversity for sustainable development. Direktorat KKBHL, Ditjen PHKA, Kementerian Lingkungan Hidup dan Kehutanan. Jakarta. 254 p.</li> </ol> |
| Date of Class Amendment Made                                | January, 2022   |