Module Descriptions

Module designation	Plant Systematics *Sistematika Tumbuhan*
Course Code	8420504221
Semester/Term	4rd semester
Person responsible for the module	Prof. Dr. Wisanti, M.S. Dr. Novita Kartika Indah, S.Pd., M.Si. Putut Rakhmad Purnama, M.Si., Ph.D.
Language	Bahasa Indonesia (Indonesian language)
Relation to curriculum	Compulsory course
Teaching methods	Lecture, lab work
Workload	Contact hours: 3 x50 minutes lectures, 3 x50 minutes laboratory works Private study: 3 x60 minutes structured activity, 3 x60 minutes individual activity Total 180 hours per semester ~ 6.36 ECTS**
Credit Point	4 CUs
Required and recommended prerequisites for joining the module	Plant Structure and Development
Module Objectives/intended learning outcomes	1. Able to analyze the basic principles of plant taxonomy logically and systematically in understanding the diversity and kinship of plants (*knowledge*) 2. Able to apply critical and systematic thinking to identify, describe, classify, and analyze plant diversity (*attitude and social*) 3. Able to apply critical and systematic thinking to analyze plant diversity as a basis for designing biodiversity learning materials (*special competence*) 4. Students are able to apply analytical, creative, and communicative skills to develop contextual biology learning resources based on local plants as a form of eco-innovation (*general competence*) 5. Able to communicate ideas and research results on plant diversity which are poured into the form of biology learning

<table>
<tr><td></td><td>resources for high school students effectively, both orally and in writing (general competence)
6. Able to explain the characteristics and life cycles of vascular and non-vascular plants and their relationship to adaptation to the environment (knowledge)
7. Analyze plant diversity based on variations in morphological, anatomical, and life cycle characters in vascular and non-vascular plant groups (special competence)</td></tr>
<tr><td>Content</td><td>Plant Systematics studies: the basic principles of taxonomy and its relationship to the objects of diversity of non-vascular plants and vascular plants. The basic principles of taxonomy include character and character traits, characterization, description, taxonomic evidence, identification, nomenclature and classification systems. Kinship includes phenetic, phylogenetic, and primitive/advanced character traits. The diversity of non-vascular plants (bryophytes) and vascular plants (ferns and their relatives, as well as seed plants) discusses the sporophyte and gametophyte generations related to their characteristics, variations and life cycles.</td></tr>
<tr><td>Examination forms</td><td>Written exam</td></tr>
<tr><td>Requirements for successfully passing the module</td><td>Study Requirement

Attendance: students must attend at least 75% of the lectures to be eligible for the final examination.

Study examination

The final grade (NA) is calculated based on the following ratio:

<table>
<tr><td>Assessment Components</td><td>Percentage of contribution</td></tr>
<tr><td>Participation</td><td>20%</td></tr>
<tr><td>Assignment</td><td>30%</td></tr>
<tr><td>Mid-semester test</td><td>20%</td></tr>
<tr><td>Final semester test</td><td>30%</td></tr>
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<td>Grade conversion of 0-100 scale into 0-4 scale is set as below:
<table>
<tr><th>Letter</th><th>Number</th><th>Grade Interval</th></tr>
<tr><td>A</td><td>4,00</td><td>85 ≤ A ≤ 100</td></tr>
<tr><td>A-</td><td>3,75</td><td>80 ≤ A- < 85</td></tr>
<tr><td>B+</td><td>3,50</td><td>75 ≤ B+ < 80</td></tr>
<tr><td>B</td><td>3,00</td><td>70 ≤ B < 75</td></tr>
<tr><td>B-</td><td>2,75</td><td>65 ≤ B- < 70</td></tr>
<tr><td>C+</td><td>2,50</td><td>60 ≤ C+ < 65</td></tr>
<tr><td>C</td><td>2,00</td><td>55 ≤ C < 60</td></tr>
<tr><td>D</td><td>1,00</td><td>40 ≤ D < 55</td></tr>
<tr><td>E</td><td>0,00</td><td>0 ≤ E < 40</td></tr>
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<tr>
<td>Reading List</td>
<td>Simpson, M.G. 2010. Plant Systematics. Amsterdam: Elsevier.

Van Steenis, C.G.G.J. 1993. Flora for Schools in Indonesia. Jakarta: PT Pradnya Paramita.

Wisanti, Kurniawan, A. & Indah, N.K. Unesa Botanical Clearinghouse Website, http://bch.unesa.ac.id.

Wisanti, Indah, N.K. & Putri, E.K. 2016. Plant Taxonomy 1: Scope of Taxonomy, Bryophyta. Surabaya: Unesa University Press.

Wisanti, Indah, N.K. & Putri, E.K. 2018. Plant Systematics Practical Guidebook. Surabaya: Unesa University Press</td>
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