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|  | **UNIVERSITAS NEGERI YOGYAKARTA** FACULTY OF MATHEMATICS AND SCIENCE DEPARTMENT OF BIOLOGY EDUCATION Colombo 1 Street Yogyakarta 55281 Phone: (0274)565411 Ext. 217, (0274)565411(Administration Office),fax (0274)548203  Website:fmipa.uny.ac.id, E-mail :humas\_fmipa@uny.ac.id |

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| **Bachelor of Science in Biology** | **MODULE HANDBOOK** |

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| Module name: | Plant Morphology |
| Module level, if applicable: | Undergraduate |
| Code: | BIM6203 |
| Sub-heading,if applicable: | - |
| Classes,if applicable: | - |
| Semester: | Odd |
| Module coordinator: | Dra. Budiwati, M.Si. |
| Lecturer(s): | Dra. Budiwati, M.Si., Dra. Ratnawati, M.Sc., Drs. Sudarsono, M.S. |
| Language: | Bahasa Indonesia |
| Classification within the curriculum: | Compulsory Course |
| Teaching format / class hours per week during the semester: | 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual studyper week |
| Work load: | Total workload is 91 hours per semester which consists of 100 minuteslectures, 120 minutes structured activities, and 120 minutes individual study per weekfor 16 weeks. |
| Credit points: | 2 SKS (3 ECTS) |
| Prerequisites course(s): | - |
| Perogram Learning Outcomes: | 4. Comprehensively mastering Biology (core biology) to solve problems in the field of Biology (problem-solving) and to underlie the concepts of related sciences  6. Being adaptive, creative, innovative in applying the concepts of Biology and other related fields  9. Being able to work and create jobs/being an entrepreneur in the field of Biology  11. Possessing scientific skills to support the ability to speak in local, national, and international forums |
| Course Outcomes | After taking this course, the students have ability to:  CO1. menjelaskan tentang struktur morfologi batang  CO2 menjelaskan tentang struktur morfologi daun  CO3 menjelaskan tentang struktur morfologi akar  CO4 menjelaskan modifikasi akar, batang dan daun  CO4 menjelaskan struktur morfologi bunga  CO5. menyusun diagram bunga dengan benar  CO6 menyusun formulasi bunga dengan benar  CO7. menjelaskan arsitektur pohon  CO8 menjelaskan struktur buah  CO9 dapat merekonstruksi bunga menjadi buah  CO10 mnjelaskan struktur morfologi biji  CO11. membedakan biji beralbumin dan non albumin, |
| Content: | Mata kuliah ini menjelaskan tentang struktur morfologi luar tumbuhan yang meliputi bentuk, permukaan, jenis organ pokok tumbuhan yaitu akar, batang dan daun serta modifikasinya yaitu bunga, buah dan biji, umbi, rizoma, stolon. Mata kuliah ini juga membahas tentang konstruksi dan arsitektur pohon, serta beberapa bentuk respon morfologi batang, akar dan daun terhadap lingkungan. |
| Study/exam achievements: | The final mark will be weight as follow:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **CO** | **Assessment Object** | **Assessment Technique** | **Weight** | | 1 | CO1 to CO11 | Observed attitudes , knolwedge, and skills | Survey, test, rubrics and manuals | 100% | |  |  |  | Total | 100% | |
| Forms of media: | Real objects, model, multimedia |
| Reference: | 1. Foster and Gifford. 1974. ***Comparative Morphology***. San Francisco : Vicas Publisher 2. Hartmann, H.T., Kester, D.E, Davies, F.T. and R.L.Geneve. 1997. ***Plant Propagation-Principles and Practice.*** New Jersey: Prentice Hall International, Inc. 3. Hsuan Keng. 1987. *Malayan Seed Plants*. Singapore : University Press Singapore.   D.Jones Jr, S.B. and A.E. Luchsinger. 1987. *Plant Systematics*. International Edition. Singapore : Mc Graw-Hill.  E. Lawrence, G.H.M. 1968. *Taxonomy of Vascular Plants.* New York: The Macmillan Company  F. Raven, P.H., *et al*. 1992. *Biology of Plants.* New York : Worth Publishers.  G. Tjitrosoepomo, G. 1990. **Morfologi Tumbuhan.** Yogyakarta: Gadjah Mada University Press.  H. Tjitrosoepomo, G. 1991. **Taksonomi Tumbuhan (Spermatophyta).** Yogyakarta: Gadjah Mada University Press. |

**PLO and CO mapping**

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|  | **PLO1** | **PLO2** | **PLO3** | **PLO4** | **PLO5** | **PLO6** | **PLO7** | **PLO8** | **PLO9** | **PLO10** | **PLO11** |
| **CO1** |  |  |  | ✓ |  |  |  |  |  |  |  |
| **CO2** |  |  |  | ✓ |  |  |  |  |  |  |  |
| **CO3** |  |  |  | ✓ |  |  |  |  |  |  |  |
| **CO4** |  |  |  | ✓ |  |  |  |  |  |  |  |
| **CO5** |  |  |  | ✓ |  |  |  |  |  |  |  |
| **CO6** |  |  |  | ✓ |  | ✓ |  |  |  |  |  |
| **CO7** |  |  |  | ✓ |  | ✓ |  |  |  |  |  |
| **CO8** |  |  |  | ✓ |  | ✓ |  |  |  |  |  |
| **CO9** |  |  |  | ✓ |  | ✓ |  |  |  |  |  |
| **CO10** |  |  |  | ✓ |  | ✓ |  |  |  |  |  |
| **CO11** |  |  |  | ✓ |  | ✓ |  |  | ✓ |  | ✓ |