

### Undergraduate Programme in Biology

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### MODULE HANDBOOK

|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                             |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Module Name                                                 | Plant systematic                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Module level, if applicable                                 | Bachelor                                                                                                                                                                                                                                                                                                                                                                                                        |                                             |
| Code, if applicable                                         | BIO425026                                                                                                                                                                                                                                                                                                                                                                                                       |                                             |
| Subtitle, if applicable                                     | -                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |
| Courses, if applicable                                      | -                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |
| Semester(s) in which the module is taught                   | 5 <sup>th</sup> (fifth)                                                                                                                                                                                                                                                                                                                                                                                         |                                             |
| Person responsible for the module                           | Dias Idha Pramesty, M.Si                                                                                                                                                                                                                                                                                                                                                                                        |                                             |
| Lecturer(s)                                                 | Dias Idha Pramesty, M.Si<br>Shilfiana Rahayu, M.Sc                                                                                                                                                                                                                                                                                                                                                              |                                             |
| Language                                                    | Indonesia                                                                                                                                                                                                                                                                                                                                                                                                       |                                             |
| Classification within the curriculum:                       | Elective subject                                                                                                                                                                                                                                                                                                                                                                                                |                                             |
| Type of teaching, contact hours                             | 150 minutes lectures and 180 minutes structured activities per week.                                                                                                                                                                                                                                                                                                                                            |                                             |
| Workload                                                    | Total workload is 136 hours per semester, which consists of 150 minutes lectures per week for 14 weeks, 180 minutes structured activities per week, 180 minutes individual study per week, in total 16 weeks per semester, including mid exam and final exam.                                                                                                                                                   |                                             |
| Credit points                                               | 3 credits (4.5 ECTS)                                                                                                                                                                                                                                                                                                                                                                                            |                                             |
| Requirements according to the examination regulations       | Students must meet a minimum attendance of 75% of the total meetings to be able to take the final exam                                                                                                                                                                                                                                                                                                          |                                             |
| Recommended prerequisites                                   | No prerequisites stated on                                                                                                                                                                                                                                                                                                                                                                                      |                                             |
| Module objectives/intended learning outcomes                | After completing this course, the students: <ol style="list-style-type: none"> <li>1. Able to analyze basic concepts and principles in systematics</li> <li>2. Able to analyze the classification of low- and high-level plants</li> <li>3. Able to analyze the concept of phylogeny tree reconstruction and create a phylogeny tree</li> <li>4. Able to make a key to determination and a herbarium</li> </ol> |                                             |
| Content                                                     | As an elective course for biology students at least semester 5. This course discusses the principles of plant taxonomy, including the concept and importance of taxonomy for biology, the ability to describe, identify, classify plants and nomenclature as well as the recognition of plant members in the Bryophyta, Pteridophyta and Spermatophyta groups.                                                  |                                             |
| Study and examination requirements and forms of examination | The final mark will be weighted as follows:                                                                                                                                                                                                                                                                                                                                                                     |                                             |
|                                                             | NO                                                                                                                                                                                                                                                                                                                                                                                                              | Assessment methods (components, activities) |
|                                                             | 1                                                                                                                                                                                                                                                                                                                                                                                                               | Final Examination                           |
|                                                             | 2                                                                                                                                                                                                                                                                                                                                                                                                               | Mid-Term Examination                        |
|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                 | Weight (percentage)                         |
|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                 | 35%                                         |
|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                 | 35%                                         |

|                | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Class Activities : Quiz, Homework, etc. |    |              |              | 30% |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----|--------------|--------------|-----|--------------|--------------|----|--------------|--------------|---|------|---|---|----------|-----|---|----------|----|---|----------|----|---|----------|-----|---|----------|---|---|----------|----|----|----------|----|---|----------|---|----|----------|---|---|----------|----|----|-----|---|--|
|                | The final assessment is expressed in the form of a letter value converted from a number value with the following categories:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |    |              |              |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
|                | <table><tr><th>NO</th><th>Number Value</th><th>Letter Value</th><th>NO</th><th>Number Value</th><th>Letter Value</th></tr><tr><td>1</td><td>≥ 95</td><td>A</td><td>7</td><td>65-69.99</td><td>B/C</td></tr><tr><td>2</td><td>90-94.99</td><td>A-</td><td>8</td><td>60-64.99</td><td>C+</td></tr><tr><td>3</td><td>85-89.99</td><td>A/B</td><td>9</td><td>55-59.99</td><td>C</td></tr><tr><td>4</td><td>80-84.99</td><td>B+</td><td>10</td><td>50-54.99</td><td>C-</td></tr><tr><td>5</td><td>75-79.99</td><td>B</td><td>11</td><td>55-34.99</td><td>D</td></tr><tr><td>6</td><td>70-74.99</td><td>B-</td><td>12</td><td>&lt;35</td><td>E</td></tr></table>                                                                                                                                                                                                                                                              |                                         |    |              |              | NO  | Number Value | Letter Value | NO | Number Value | Letter Value | 1 | ≥ 95 | A | 7 | 65-69.99 | B/C | 2 | 90-94.99 | A- | 8 | 60-64.99 | C+ | 3 | 85-89.99 | A/B | 9 | 55-59.99 | C | 4 | 80-84.99 | B+ | 10 | 50-54.99 | C- | 5 | 75-79.99 | B | 11 | 55-34.99 | D | 6 | 70-74.99 | B- | 12 | <35 | E |  |
| NO             | Number Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Letter Value                            | NO | Number Value | Letter Value |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| 1              | ≥ 95                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A                                       | 7  | 65-69.99     | B/C          |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| 2              | 90-94.99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A-                                      | 8  | 60-64.99     | C+           |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| 3              | 85-89.99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A/B                                     | 9  | 55-59.99     | C            |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| 4              | 80-84.99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | B+                                      | 10 | 50-54.99     | C-           |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| 5              | 75-79.99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | B                                       | 11 | 55-34.99     | D            |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| 6              | 70-74.99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | B-                                      | 12 | <35          | E            |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| Media employed | Lcd Projector, e-learning ( <a href="https://daring.uin-suka.ac.id/">https://daring.uin-suka.ac.id/</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         |    |              |              |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |
| Reading list   | <ol style="list-style-type: none"><li>1. Michael. G.S. 1953. Plant Systematics. Elsevier Academic Press. USA.</li><li>2. Tjitrosoepomo. G. 1993. <b>Taksonomi</b> Umum (Spermatophyta). Yogyakarta: Gajah Mada University Press.</li><li>3. Tjitrosoepomo. G. 1998. <b>Taksonomi</b> Umum (Schizophyta, Thallophyta, Bryophyta, Pteridophyta). Yogyakarta: Gajah Mada University Press.</li><li>4. Sudarsono, Ratnawati dan Budiwati. 2005. <b>Taksonomi Tumbuhan Tinggi</b>. Malang: UM Press.</li><li>5. Bean, A.R. (Ed.). 2010. Collecting and Preserving Plant Specimens, A Manual, Version 4. Queensland Herbarium, Department of Environmental and Resource Management, Brisbane</li><li>6. The Herb Society of America. 2005. The Use and Methods of Making a Herbarium/Plant Specimens: An HSA Guide.</li><li>7. Simpson, M. G. 2013. Plant Systematics Laboratory Manual. San Diego State University</li></ol> |                                         |    |              |              |     |              |              |    |              |              |   |      |   |   |          |     |   |          |    |   |          |    |   |          |     |   |          |   |   |          |    |    |          |    |   |          |   |    |          |   |   |          |    |    |     |   |  |

### PLO and CO Mapping

|      | PLO 1 | PLO 2 | PLO 3 | PLO 4 | PLO 5 | PLO 6 | PLO 7 | PLO 8 | PLO 9 | PLO 10 | PLO 11 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| CO 1 |       |       |       | ✓     | ✓     |       |       |       |       |        |        |
| CO 2 |       |       |       | ✓     | ✓     |       |       |       |       |        |        |
| CO 3 |       |       |       | ✓     | ✓     |       |       |       |       |        |        |
| CO 4 |       |       |       | ✓     | ✓     |       |       |       |       |        |        |