



THE MODULE HANDBOOK

Magister Biology Study Program

FACULTY OF BIOLOGY

PLANTS REPRODUCTIVE BIOLOGY

Course code	BIMB 202115
Course level	Magister
Semester/ term	Even
Course coordinator(s)	Prof. Dr. Kumala Dewi MSc.St.
Lecture(s)	1. Prof. Dr. L. Hartanto Nugroho M.Agr.Sc. 2. Dr. Maryani M.Sc. 3. Dr. Diah Rachmawati M.Si
Language	Indonesia
Classification within the Curriculum	Elected
Teaching format/ class hours per week during the semester	This course is planned to have 14 teaching weeks and 2 weeks of examination.
Workload	Estimated working hour: 2 credits of theory
Credits	2-0 credits
Requirements	-
Program Learning Outcome	<p>AT1. Students are expected to be able to internalize academic values, norms, and ethics as well as show an independent and responsible attitude in their field of expertise related to plant aspects of reproductive biology (Attitude);</p> <p>KN1. The graduates are able to demonstrate knowledge and understanding of biological theories, regarding the reproduction of plant aspects (Knowledge);</p> <p>KN2. Graduates demonstrate knowledge and understanding of biological systems and biotechnological methods to solve problems related to plant aspects of reproductive biology (Knowledge)</p> <p>GS1. Graduates are able to develop logical, critical, systematic, and creative thinking through scientific concepts and research (General Skills)</p>
Course Learning Outcome	<p>CLO1. Students understand the process of plant reproduction related to flower control either genetically or molecularly.</p> <p>CLO2. Students understand the factors involved in the reproduction of angiosperms</p> <p>CLO3. Students understand the molecular mechanism of angiosperm plant reproduction</p> <p>CLO4. Students understand the process of embryogenesis, sexual and asexual seed development as well as seed structure and anatomy.</p> <p>CLO5. Students are able to design research and analyze data related to the factors that influence the development of flowers and seeds.</p>



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Course Description	Reproductive biology of plant aspects is a course that discusses the reproductive process in angiosperms. This course emphasizes the understanding of the factors that initiate flowering, the structure and function of flowers, seeds and fruit. This lecture will also discuss the process, location, and importance of gametogenesis, fertilization including multiple fertilization, the importance of seed maturation, dormancy and germination from physiological and molecular aspects. Students who take this course are expected to be able to design research related to factors that can induce flowering, successful fertilization, increase the frequency of fruit formation, break dormancy and induce seed germination.																																										
Assesments	<table border="1"><thead><tr><th>Component Evaluation</th><th>Percentage</th><th>CPMK 1</th><th>CPMK 2</th><th>CPMK 3</th><th>CPMK 4</th><th>CPMK 5</th></tr></thead><tbody><tr><td>Quiz</td><td>10%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr><tr><td>The task of making a journal review related to learning materials</td><td>15%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr><tr><td>Review presentation</td><td>10%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr><tr><td>Midterm exam</td><td>30%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr><tr><td>Final exams</td><td>35%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr></tbody></table>	Component Evaluation	Percentage	CPMK 1	CPMK 2	CPMK 3	CPMK 4	CPMK 5	Quiz	10%	√	√	√	√	√	The task of making a journal review related to learning materials	15%	√	√	√	√	√	Review presentation	10%	√	√	√	√	√	Midterm exam	30%	√	√	√	√	√	Final exams	35%	√	√	√	√	√
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Study Media	Lecture Slides (PPT) Journal via Internet E-Books																																										
Literature	<ol style="list-style-type: none">1. Maheshwari, P. 1950. An Introduction to the Embryology of Angiosperms. First Edition Mc Graw-Hill Book Company, Inc. new York Toronto London.2. Johri, B.M. (ed.). 1984. Embryology of Angioperms. Springer – Verlag, Berlin.																																										