



THE MODULE HANDBOOK
DOCTOR BIOLOGY STUDY PROGRAM
FACULTY OF BIOLOGY

SELECTED TOPIC FOR DISSERTATIONS

Plant Ecophysiology

Course code	BIDB203107
Course level	Doctoral Program
Semester/ term	Odd/even
Course coordinator	Prof. Dr. Diah Rachmawati, S.Si., M.Si.
Lecture(s)	Prof. Dr. Diah Rachmawati, S.Si., M.Si.
Language	Indonesian/English
Classification within the Curriculum	Compulsory
Teaching format/ class hours per week during the semester	This course is planned to have 14 teaching weeks and 2 weeks of examination.
Workload	90 hours
Credits	2-0 credits / 3.6 ECTS
Requirements	Receiving approval from the Supervisory Team.
Program Learning Outcome	<p>CPL 2.1. Upon completing this program, the graduates demonstrate an understanding of the scientific philosophy of biology which is related in depth to structure, function, diversity, reproduction, evolution and engineering of biological systems.</p> <p>CPL 2.2. After attending this program, graduates demonstrate an understanding of substantial and leading theory in the field of biology/biological resources in order to support education for sustainable development</p> <p>CPL 3.1. After completing this program, the graduates will be able to discover or develop new scientific theories/concepts/ideas in biology</p>
Course Learning Outcome	<p>BIDB203107.1 By the end of this course, students will be able to evaluate the role of abiotic and biotic environmental factors in plant metabolism, growth, and development, as well as the physiological, biochemical, and molecular response mechanisms of plants to global climate change.</p> <p>BIDB203107.2 By the end of this course, students will be able to integrate and analyze problems related to plant ecophysiology and strategies to address them from various sources.</p>



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Course Description	This course explores the role of environmental factors as resources for plants, plant interactions with abiotic and biotic environmental factors, and environmental signaling affecting plant metabolism, growth, and development. It also examines the physiological, biochemical, and molecular response mechanisms of plants to environmental changes. Case studies address the effects of dynamic abiotic and biotic environmental factors on plant metabolism, growth, and development, as well as strategies to mitigate the impacts of global climate change.
Assessments	<p>The assessment for Selected Topic for Dissertations (Plant Ecophysiology) is based on two main Component, with the respective criteria and weights:</p> <ul style="list-style-type: none">A. Participatory activity (20%)<ul style="list-style-type: none">• Participation (20%)B. Project(80%)<ul style="list-style-type: none">• Project Result/Case Study/Project Based Learning result (80%)
Study Media and Literature	<ol style="list-style-type: none">1. 1. Lambers, H., F.S. Chapin III, T.L. Pons. 2008. Plant Physiological Ecology. Springer-Verlag New York, Inc.2. Pareek, A., Sopory, S.K., Bohnert, H.J. and Govindjee. 2010. Abiotic Stress Adaptation in Plants: Physiological, Molecular and Genomic Foundation. Springer. The Netherlands.3. Pessarakli, M. 2014. Handbook of Plant and Crop Physiology. 3rd Edition. CRC Press. Taylor & Francis Group. Boca Raton London New York4. Taiz, L. and E. Zieger. 2015. Plant Physiology 5 Ed. Sinauer Associates, Inc., Publisher. Sunderland, Massachusetts.