THE MODULE HANDBOOK
DOCTOR BIOLOGICAL SCIENCES STUDY PROGRAM
FACULTY OF BIOLOGY

SELECTED TOPIC FOR DISSERTATIONS

Capita Selecta

Course code	BIDB203103
Course level	Doctoral Program
Semester/ term	Odd/even
Course coordinator	Prof. Dr. Kumala Dewi, M.Sc.St.
Lecture(s)	Prof. Dr. Kumala Dewi, M.Sc.St. Prof. Dr. Endah Retnaningrum, S.Si., M.Eng. Prof. Dr. rer. nat. Andhika Puspito Nugroho, 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	1,125 hours/day 5 days/week 5,625 hours/week 16 Weeks/Semester total workload : 90 hours/3,6 ECTS
Credits	3.6 ECTS
Requirements	-
Program Learning Outcome	CPL 1.1. Upon completing this program, the graduates demonstrate an attitude of being able to contribute to improving the quality of life in society, nation and state, and the progress of civilization based on Pancasila CPL 1.2.Upon completing this program, the graduates demonstrate an attitude of being able to demonstrate honesty, responsibility, self-confidence, emotional maturity, ethics, and awareness of being a lifelong learner CPL 2.1.Upon completing this program, the graduates demonstrate an understanding of of the scientific philosophy of biology which is related in depth to structure, function, diversity, reproduction, evolution and engineering of biological systems. CPL 4.3. After participating in this program, graduates will be able to apply the philosophy of biological systems in developing

	biological concepts in the areas of food, health, bioenergy, biomaterial and/or the environment.
Course Learning Outcome	BIDB203103.1 By the end of this course, students will explain various factors influencing plant growth and secondary metabolite synthesis. They demonstrate an understanding of plant adaptation and interactions with the environment, including factors related to global climate change BIDB203103.2 By the end of this course, students will be able to explain the regulation and interaction of glucosinolate biosynthetic pathways, as well as understand the mechanisms of mycorrhizal infection and the application and analysis of mycorrhizal colonization in plant roots. BIDB203103.3 By the end of this course, students will be able to to compose a dissertation research proposal
Course Description	This course provide fundamental knowledge on various factors influencing plant growth and secondary metabolite synthesis, understanding of plant adaptation and interaction with the environment and global climate change factors. understanding of the regulation and interaction of glucosinolate biosynthetic pathways; and knowledge of mycorrhizal infection mechanisms, including their application and analysis in plant roots.
Assessments	The assessment for Selected Topic for Dissertations is based on three main components, with the respective criteria and weights: A. Participatory Activity (5%) • Participation (5%) B. Project (5%) • Project Result/Case Study/Project Based Learning result (5%) C. Kognitif/Knowledge (90%) • Structured Assignment/Task (5%) • Quizz (5%) • Mid-term Exam (40%) • Final-term Exam (40%)
Study Media and Literature	1. Bhatla, S.C.· Manju, A.L. 2018. Plant Physiology, Development and Metabolism. Springer. 2. Suarez, M.F. dan P.V. Bozkhov. 2008. Plant Embryogenesis. Springer. 3. Taylor et al. 2017. Essentials of Developmental Plant Anatomy. Oxford University Pres. 4. Chen, X and T. Laux. 2012. Growth and Development. (Eds) Current Opinion in Plant Biology 15(1): 1-110.