

Module Handbook

Modul Name	Plant morphogenesis
Modul Level	Bachelor
Abbreviation, if applicable	BIB303
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester	Even (4 th semester)
Module Coordinator	Prof. Hery Purnobasuki, Ph.D
Lectures	Prof. Hery Purnobasuki, Ph.D
Language	Bahasa Indonesia
Classification Within The Curriculum	Compulsory Course / Elective Studies
Teaching format/ class hours per week during semester	300 minutes/ week
Workload per semester	100 min lecture + 100 min structural assignment + 100 min self-assignment x 13 weeks; total 3900 min = 65 hours 65/25 = 2.6 ECTS
Credit point	2
Requirement	Plant embryology
Learning Outcome	<p>General competence (knowledge) : Students are able to explain the principles of growth and development of the plant, to explain some mechanisms of morphogenesis in various organs of plants, and apply the theory of plant morphogenesis to analyze data on the descriptive observation in research related to plant growth correctly.</p> <p>Specific competence :</p> <ol style="list-style-type: none"> 1. Able to understand the basic concept of plant morphogenesis 2. Able to explain growth and development patterns of plant 3. Able to explain concept and patterns of germination 4. Able to explain meristem development as a beginning of morphogenesis 5. Able to explain polarity concept of plant cell 6. Able to understand and analyze plant differentiation process 7. Able to explain the process of leaf morphogenesis 8. Able to explain the process of vascular tissue morphogenesis 9. Able to explain the process of flower morphogenesis 10. Able to explain the process of fruit morphogenesis 11. Able to describe and analyze about morphogenesis factor 12. Able to understand and analyze the communication process in morphogenesis 13. Able to understand and analyze the mechanism of photomorphogenesis
Content	The pattern of plant growth and development, morphogenesis germination, bud morphogenesis, leaves morphogenesis, formation of flowers, flower morphogenesis, reproductive organ development, pollination and apomixis, seeds and fruit morphogenesis, root morphogenesis, morphogenesis of vascular tissue.
Softskill Attribute	Dicipline and argumentation
Learning Methode	Class and discussion
Media	LCD

Assesment	<p>Students are considered to be competent and pass if at least get 40 of maximum mark of the exams (UTS dan UAS), structured activity (group discussion).</p> <p>Final score (NA) is calculated as follow: paper project (20%), mid exam (30%), final exam (40%), and softskill (10%).</p> <p>Final index is defined as follow:</p> <p>A = 75-100 AB = 70-74,99 B = 65-69,99 BC = 60-64,99 C = 55-59,99 D = 40-54,99 E = 0-39,99</p>
Literature	<ol style="list-style-type: none"> a. Lyndon, R.F. (1990). <i>Plant Development in the Cellular Basis</i>. Unwin Hyman. London b. Wareing, P.F. & Phillips, I.D.J. (1986), <i>Growth and Differentiation in Plant</i>. 3rd ed. Pergamon Press. England. c. Graham, C.F. & Warein, P.F. (1984). <i>Developmental Control in Animals & Plants</i>. 2nd ed. Blackwell Scientific Publication. Oxford. d. Stephen H. Howell, 1998. <i>Molecular Genetic of Plant Development</i>, Cambridge University, United kingdom.
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