THE MODULE HANDBOOK
FACULTY OF BIOLOGY

Plant Anatomy

Module code	BID 20602IUP
Module level	2nd year of Undergraduate Program in Biology
Abbreviation, if applicable	-
Sub-heading, if applicable	-
Courses included in the module, if applicable	-
Semester/term	Odd
Module coordinator(s)	Prof. Dr. Laurentius Hartanto Nugroho, M.Agr.
Lecture(s)	1. Prof. Dr. Laurentius Hartanto Nugroho, M.Agr. 2. Dr. Suharyanto, M.S., M.Sc.
Language	English
Classification within the Curriculum	Elective course
Teaching format/class hours per week during the semester	This course is organized into one class and planned to have 14 teaching weeks and 2 weeks of examination.
Workload	Estimated working hour: 10,5 hours/week.
Credit points	2-1 credits
Requirements	Plant Structure and Development (BIB 10601IUP)
Learning goals/ competencies	After completing this course, students can understand various constituent organ tissues of plants from various taxon especially higher plants as well as its development.
Content	Plant anatomy is a subject that studies the composition of six kinds of tissue (meristem, epidermis, parenchyma, vascular, mechanic, and secretory) in both vegetative and generative organs of Angiosperm plants and organ structures of plants which have high economic value. Because of plant anatomy course is an advanced course with prerequisite plant structure and development, the subject matter is emphasized on the comparison of the structure of the plant organs in various taxon of higher plants especially the plant with high economic value. This course is given in odd and even semester as an elective course for students of the Faculty of Biology who has an interest in the structure of the plant body. This course is equipped with a practical work that conducted in the laboratory with the aim to allow students to

	understand and explore the theory and concepts given in the course.
Study/exam achievements	**1. Theory**: a. Midterm: 30 % b. Final examination: 45 % c. Tasks/quiz: 20 % d. Presentation: 15 % **2. Laboratory work**: a. Pretest: 25 % b. Slide quality: 15 % c. Laboratory work report: 20% d. Laboratory work examination: 40 %
Forms of media	White board, notebook, LCD
Literature	1. Bhojwani, S.S. and S.P. Bhatnagar, 1999, The Embryology of angiosperms, Vikas Publishing House PVT. LTD. 2. Cutter, E.G., 1970. Plant Anatomy: Experiment and interpretation. Part I: Cell and Tissues. Addison Wesley Publ. Co. Ontario. 3. Eames, A.J. and L. H. MacDaniel. 1981. An introduction to plant anatomy. TMH Edit. Tata McGrow-Hill Publ. Comp. Ltd. Bombay 4. Esau, K., 1965, Plant Anatomy, 2nd edition, Wiley Eastern Private United, New Delhi. 5. Esau, K., 1979, Anatomy of seed plants, Wiley Eastern LTD. 6. Fahn, A., 1990, Plant anatomy, 4th edition, Pergamon Press. 7. Hidayat, E.B., 1995, Anatomi tumbuhan berbiji, Penerbit ITB Bandung 8. Johansen, D.A., 1950, Plant embryology: Embryology of the spermathophyta, Chronica Botanica Co. 9. Maherwari, P., 1955, An introdduction to the embryology of angiosperms. 1st edition, Mc Grow-Hill Book Co.Inc. New York. 10. Pandey, B.P.,1982, Plant anatomy, 3rd edition, S. Chan and Company Ltd. New York.