Plant Reproduction and Breeding

Module name		*Plant Reproduction and Breeding*
Module level		4th year of Bachelor program
Abbreviation, if applicable		-
Sub-heading, if applicable		-
Courses included in the module, if applicable		BI4208 Plant Reproduction and Breeding
Semester/term		8th Semester
Module coordinator(s)		Dr. Trimurti Hesti Wardhini
Lecturer(s)		Dr. Trimurti Hesti Wardhini
Language		Indonesian
Classification within the Curriculum		Elective courses for Bachelor Program in Biology
Teaching format/ class hours per week during the semester		Lecture (face to face teaching): 2 x 1 hour x 12 weeks Assignment: Student class presentation/group: 2 hours x 2 weeks Quizzes: 15 minutes x 8 weeks
Workload	Total Workload	96 hours; 2 Credits

Workload	Face to face teaching	Structured Activities	Independent study	Exam	Total
Lecture	28	32	32	4	96

Credit points	*Plant Reproduction and Breeding (2 Credits)*
Requirements	-
Content	*(1) plant reproduction: reproductive organs and their development, pollination, fertilization, embryogenesis, sexual incompatibility, polyembriony, apomixis, partenocarp* *(2) plant breeding: conventional and modern. Conventional breeding: cuttings, grafting, etc., pollen preservation, artificial pollination, mutation (polyploidyzation using colchicine), modern breeding: manipulation/gene engineering, gene transformation, the pros and cons of plant breeding programs*
Learning goals/competencies	Students are able to : - Explain plant reproduction concept and cultivation - Apply the technology for daily utilization

Study/exam achievements	Mid Term Exam	Final Exam	Presentation	Assignments	Class Activities	Total
	35%	35%	15%	10%	5%	100%

Forms of media	Classical teaching tools:	White board, power point presentation
	Digital teaching tools:	Video/CD, Website

Literature	1. Hartmann & Kester. 2001. Plant Propagation: principles and practices. Prentice Hall 2. Molecular Biology of Plant Reproduction 3. Bhojwani, S.S. & W.Y . Soh. 2002. Current Trends in the Embryology of Angiospermae. Kluwer Academic Publ. Dodrecht-Boston-London 4. Raghavan, V. 1997. Molecular Embryology of Flowering plants. Cambridge Univ. Press. Cambridge