Formulation of Growth Media and Nutrition

Module name		*Formulation of Growth Media and Nutrition*				
Module level		4th year of Bachelor program				
Abbreviation, if applicable		-				
Sub-heading, if applicable		-				
Courses included in the module, if applicable		BI4207 Formulation of Growth Media and Nutrition				
Semester/term		8th Semester				
Module coordinator(s)		Dr. Taufikurrahman				
Lecturer(s)		Dr. Taufikurrahman				
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				
		Face to face teaching	Structured Activities	Independent study	Exam	Total
	Lecture	28	32	32	4	96
Credit points		*Formulation of Growth Media and Nutrition (2 Credits)*				
Requirements		-				
Content		*1. Type of growth media, soil and artificials* *2. Turnover of macro and micronutrients in soil and their function in plants* *3. Soil fertility, plant nutrient availability, transport, metabolism and nutrient deficiency/toxicity diagnosis* *4. Crop fertilisation strategies (inorganic and organic): effects on yield and quality* *5. Sustainable management of organic manures: animal waste and greens manures*				
Learning goals/competencies		Students are able to : - Integrate and correlate soil condition and media on growth and productivity of plants - Design plant production system				
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. Alex C. Wiedenhoeft. 2006. Plant Nutrition. Ed. William G. Hopkins, Chelsea House. An imprint of Infobase Publishing, New York, USA 2. Geoff Hamilton. 2008. Organic Gardening. Dorling Kindersley Ltd, UK 3. Sharon Pastor Simson & Martha C. Straus. 2010. Basics of Horticulture. Oxford Book Company.				