General Microbiology

Module name		General Microbiology				
Module level		2nd year of Bachelor program				
Abbreviation, if applicable						
Sub-heading, if applicable						
Courses included in the module, if applicable		BM2101 General Microbiology				
Semester/term		3rd Semester				
Module coordinator(s)		Dr. Pingkan Aditiawati				
Lecturer(s)		Dr. Pingkan Aditiawati Dr. Isty A. Purwasena				
Language		Indonesian				
Classification within the Curriculum		Compulsory courses for Bachelor Program in Biology				
Teaching format/ class hours per week during the semester		*Lecture (Face to face lecture):* 3 hours x 16 weeks				
Workload	Total Workload	144 hours; 3 CU				
		Face to face teaching	Assignment/ homework	Independent study	Exam	Total
	Lecture	44	48	48	4	144
Credit points		*General Microbiology (3 CU)*				
Requirements						
Content	This course activities consist of lectures with scope: • The history and development of microbiology; • Scope of Microbiology; • Microbial characteristics: Structure of prokaryote and eukaryote; Microbial nutrition and cultivation; • Microbial control: principal, physical and chemical agents; • Prokaryote main group: Bacteria; • Eukaryote: fungi, algae and protozoa; • Metabolism: biochemical process, energy usage and production; • Microbe genetics: variability and heredity, genetic modification; • Microbes and diseases; • Environmental microbiology and industrial microbiology					
Learning goals/ competencies	After completion of this module, students are expected to be able to: Knowledge • demonstrate an uderstanding of basic concepts in microbiology including evolution, cell structure & function, metabolic pathway, flow of genetic information, microbial system and impact of microorganisms to human life • describe the importance and role of microorganisms in human life Skill • able to handle microorganisms and observe their different types based on their morphological structure and physiology. Compentence • develop an ability to apply microbiological concept and principles at the basic and applied level					
Study/exam achievements	*Lecture (100%):* • *Midterm exam* • *Final exam* • *Quizzes* • *Assignments* • *Student Presentation*					
Forms of media	*Classical teaching tools:*	*white board/ chalk and talk, power point, tutorial*				
	Integrated teaching tools:					
	Digital teaching tools:					
	Problem based teaching tools:	*Case study*				
Literature	1. Black, J. 2007. Microbiology: Principles and Applications, 7th ed. John Wiley					

	2. Madigan, M. T., J. M. Martinko & J. Parker, 2006. Brock Biology of Microorganisms, 11th ed. Pearson Prentice Hall International, Inc., New Jersey 3. Pelczar, M. J. E. C. S. Chan & N. R. Krieg, 1993, Microbiology concept and application, McGraw Hill, Inc., Toronto