

Modul Handbook

Modul Name	Bioproduct, Biosafety and Biosecurity
Modul Level	7/Bachelor
Abbreviation, if applicable	KHL 421
Sub-heading, if applicable	
Courses included in the module, if applicable	
Semester/term	7
Module coordinator(s)	Emy Koestanti Sabdoningrum, drh., M.Kes
Lecturer(s)	1. Dr. C.A. Nidom, drh., MS 2. Emy Koestanti Sabdoningrum, drh., M.Kes
Language	Bahasa Indonesia and English
Classification within the curriculum	Compulsory/elective course
Teaching format/class hours per week during the semester	2 class hour lecture (170 minutes lecture) x 14 weeks
Workload per semester	340 minutes lecture is divided into 100 minutes face to face interaction, 100 minutes structural assignment and 140 minutes independent study.
Credit points	2 (~3.02 ECTS)
Requirements	Bacteriology & Micology; Virology; Zoonosis, Environmental Health.
Learning goals/competencies	After completing this subject students will be able to apply princips of Bioproduct, Biosafety and Biosecurity as well as Regulation of Material Transfer Agent properly and correctly.
Content	This subject discuss definition of bioproduct, types of bioproduct (vaccines, serum and stem cell, inoculants, probiotic, enzymes, fermentation product); process to produce bioproduct; description of biological agent safety; Indonesia biological treasure; technique of biological safety; regulation on Material Transfer Agent , identification method of Material Transfer Agent ; biosecurity on laboratory, region and country level; country defence aspect.

Softskills attribute	Team work, interpersonal communication, discipline, achievement motivation, analytical thinking.
Study/exam achievements	Final exam (3/33,33%)+Mid term exam (2/22,22)+Assignment (1,5/16,67%)+ Quizzes (1,5/16,67%)+Soft Skill (1/11,11%)
Forms of media	Computer projector, white board, AULA (Airlangga University e-Learning Application)
Literatures	<ol style="list-style-type: none"> 1. Cataloluk, O. 2001. Molecular Characterization of the Gene Encoding for the Salivaricin B Activity and its Flanking Sequences. 2. Garneau S., CA.Ference, MJ. Van Belkum, M.E. Stiles, and J.C.Veders. 2003. Purification and Characterization of Brochocin A and Brochocin B (10-43),a functional Fragment Generated by Heterogous Expression Appl. and Environmental Microbiology. 3. Hesk, AM.2008. Introduction to Bioinformatics.3th Ed, Oxford University Press USA. 4. Radosewljevic, V and G Belojevic. 2009. In Bio Security and Bio Terrorism: Biodefense Strategy, Practice and Science @ UlarYAnm Liebert, Inc.