

1. Module XXII: Impact and Application III (Health)

1.1. Module Objectives

On completion of this module, the students will be able to:

- define and describe basic concept of microorganisms-host interaction and host defends mechanism in responses to microorganisms-host interaction
- describe the application of that knowledge that related to development of disease prevention
- define and describe the application of knowledge to discover the pathogenicity of pathogen and defense mechanism to its pathogen

1.2. Module Data

Person in charge	Dr. Ernawati Giri Rachman
Credits	3
Course	BM4101 Microbial pathogenesis and immunology
Module examination	Written test

1.2.1. Sub-module I: Microbial pathogenesis and immunology

Lecturer	Dr. Ernawati Giri Rahman
Semester	7
Type of submodule / course	Compulsory
Credits	3
Workload - class lecture (hr/sem)	3 hours lectures, 3 hours structured activities, 3 hours individual study, 16 weeks per semester, and total 144 hours a semester
Workload details	Textbook reading assignment, group discussion, paper review, presentation
Classification within the curriculum:	General Studies / Compulsory Course/ Elective Course
Type of assessment/examination	Written Test : Midterm exam, Final exam, Assignments, Presentation
Language	Bahasa Indonesia
Course Target / Outcome	<ul style="list-style-type: none">• Students will be able to define and describe basic concept of microorganisms-host interaction and host defends mechanism in responses to microorganisms-host interaction

	<ul style="list-style-type: none"> • Students will be able to describe the application of that knowledge that related to development of disease prevention • Students will be able to define and describe the application of knowledge to discover the pathogenicity of patogen and defense mechanism to its pathogen
Teaching methods	Interactive Teaching
Contents (SAP)	
1	Introduction: reationship between microorganism and host, and concept related to disease and infection
2	Normal flora
3	Basic concept of immunology
4	Innate immunity and defense system in body surface
5	Innate immunity- adaptive immune respons
6	Adaptive immune respons
7	Mid-Term Test
8	Adaptive immune respons and its relation to innate immunity
9	Bacteria phatogenesis
10	Bacteria phatogenesis
11	Viral phatogenesis
12	Viral phatogenesis
13	Manipulation immune response against infection
14	Presentation I
15	Presentation II
16	Final Test
Literature / Sources	<ul style="list-style-type: none"> • Janeway, C.A. 2012. Immunology, The Immune System in Health and Diseases, Garland Science Publ 8th ed., New York • Salyers and Whitt. 2010. Bacterial Pathogenesis, a Molecular Approach, 3rd ed, ASM Press, Washington. • Madigan, M. T., J. M. Martinko & J. Parker, 2006. Brock Biology of Microorganisms, 11th ed. Pearson Prentice Hall International, Inc., New Jersey • Flint SJ, Enquist LW, Krug RM, Racaniello VR, Skalka AM. 2009. Principles of Virology, ASM Press
Other specialties	