

1. Module XXX: Impact and Application III B (Health)

1.1. Module Objectives

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

- describe and list diagnostic techniques (not only culture methods but also molecular techniques).
- describe clinical application of those techniques
- choose and Asses the suitable technique for spesific pathogen

1.2. Module Data

Person in charge	Dr. Ernawati Giri Rachman
Credits	2
Course	BM4205Diagnostic Microbiology
Module examination	Written test

1.2.1. Sub-module II: Diagnostic Microbiology

Lecturer	Dr. Ernawati G. Rahman/Debbie Sofie Retnoningrum
Semester	8
Type of submodule / course	Elective
Credits	2
Workload - class lecture (hr/sem)	2 hours lectures, 2 hours structured activities, 2 hours individual study, 16 weeks per semester, and total 96 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 describe and list diagnostic techniques (not only culture methods but also molecular techniques).• Students will be able to describe clinical application of those techniques• Students will be able to choose and Asses the suitable technique for spesific pathogen
Teaching methods	Interactive Teaching
Contents (SAP)	

1	Detection with culture
2	Detection with biochemical test
3	Detection with immunological test : Rapid TEST and ELISA
4	Detection with molecular technique : PCR, Reverse Transcriptase (RT) PCR, quantitative PCR dan Real time PCR
5	PCR, sequencing, polimorphism and genotype determination
6	Transcription-Mediated Assay (TMA), Branched DNA, Microarray DNA
7	Mid-Term Test
8	Microarray protein
9	Pathogen in digestive system
10	Pathogen in respiration system
11	Pathogen in recirculation system (blood)
12	Easy cultivate pathogen in laboratorium
13	Hard cultivate pathogen in laboratorium
14	Presentation
15	Presentation
16	Final Test
Literature / Sources	<ul style="list-style-type: none"> • Persing, D (editor). 2003. Molecular Microbiology : Diagnostic Principle and practise, ASM Press, Washington DC • Brooks G.F, Butel JS, Morse SA. 2004. Medical Microbiology. Mc Graw Hill. Singapore • Nath, SK, Revankar SG. 2006. Problem Based Microbiology. Elseiver. Philadelphia • Recent Papers
Other specialties	