

Modul designation	Biomedic 3 (Basic Diagnostic and Therapy)
Semester in which the module is taught	1st Semester of Academic/Bachelor Stage
Person responsible for the module	<ol style="list-style-type: none"> <li>1. Heni Mufflihah, dr., M.Kes., PhD.</li> <li>2. Yuke Andriane, dr., MKes.</li> <li>3. Meta Maulida, drg., M.Kes</li> <li>4. Ismawati, dr., MKes.</li> <li>5. Dr. Yani Triyani, dr., SpPK., MKes.</li> </ol>
Language	Bilingual (Indonesia & English)
Relation to curriculum	Compulsory
Teaching methods	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Tutorial</li> <li>- Laboratory activity</li> </ul>
Workload	<p>Total workload : 4 weeks</p> <p>Contact hours : Lecture 2 hours/week  Tutorial 3 hours/meeting (3 meeting/week)  Laboratory activity 3 hours/meeting</p>
Credit points	5 ECTS (4 SKS)
Required & recommended prerequisites for joining the module	-
Module Objective	<p>At the end of course, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Explain the morphology and characteristics of bacteria, viruses, and fungi. (C2)</li> <li>2. Explain the bacterial classification, morphology, virulence factors, and pathogenesis of Shigella (C2)</li> <li>3. Explain the types of microscopes, staining and bacterial culture and identification of Gram-positive and Gram-negative bacteria (C2)</li> <li>4. Explain the classification of parasites. (C2)</li> <li>5. Explain the classification of helminths based on habitat, taxonomy, mode of transmission (STH and non-STH), morphology, life cycle, diagnostic stage, and infective stage. (C2)</li> <li>6. Explain the classification of protozoa based on their habitat (intestine, blood and tissue); life cycle of pathogenic protozoa in the intestine; morphological differences of infective and diagnostic stages of protozoan pathogens in the intestine. (C2)</li> <li>7. Explain the classification of insects, types of hosts, and vectors. (C2)</li> </ol>

	<ol style="list-style-type: none"><li>8. Explain the definition, etiology, pathogenesis, and pathophysiology of helminth infestations and bacterial infections. (C2)</li><li>9. Explain the definition, etiology, and pathogenesis of cell injury and cell death. (C2)</li><li>10. Explain the etiology, pathogenesis, and histopathological features of acute and chronic inflammation. (C2)</li><li>11. Explain the nomenclature, characteristics, pathogenesis, and histopathological features of neoplasia. (C2)</li><li>12. Explain the types of specimens for examination of stool, body fluid, blood, liver function test, renal function test, and urinalysis (C2)</li><li>13. Explain the principles and procedures for examining urine, blood, and feces. (C2)</li><li>14. Analyze the results of urine, blood, and feces examinations in patient management according to disease cases. (C4)</li><li>15. Analyze symptoms based on the pathogenesis and pathophysiology of the disease based on the concepts of anatomical pathology and clinical pathology. (C4)</li><li>16. Explain the classification of drugs based on the type of drug. (C2)</li><li>17. Explain the process/stages and factors that influence pharmacokinetics (ADME) and pharmacodynamics, as well as an introduction to the components of pharmacological properties. (C2)</li><li>18. Explain individual responses to drugs according to the principles of pharmacology. (C2)</li><li>19. Explain drug side effects and drug monitoring (MESO) according to WHO regulations. (C2)</li><li>20. Explain the principles of drug interactions according to the principles of pharmacology. (C2)</li><li>21. Explain the principles of rational use of drugs and antibiotics according to the principles of pharmacology. (C2)</li><li>22. Explain the calculation of drug doses according to the principles of pharmacology. (C2)</li><li>23. Determine the advantages and disadvantages of the types of WHEELS and various drug dosage forms according to the principles of pharmacy science. (C3)</li><li>24. Behave politely, ethically, and professionally in communicating in accordance with the principles of bioethics and humanities. (C2)</li></ol>
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Content	Biomedical Module 3 discusses basic sciences, including parasitology, microbiology, clinical pathology, anatomical pathology, and pharmacology.
Examination forms	Multidisciplinary Examination (MDE), SOOCA, Lab exam
Study and examination requirements	System Pass Criteria : Minimum MDE, SOOCA and Lab exam score 55.5 (C)
Reading list	<ol style="list-style-type: none"> <li>1. Koneman's Color Atlas and Textbook of Diagnostic Microbiology, 6th edition, Lippincott Williams &amp; Wilkins</li> <li>2. Problem-Based Microbiology, Elsevier Saunders</li> <li>3. Medical microbiology, 5th edition, Elsevier Mosby, Philadelphia</li> <li>4. Clinical Bacteriology, Manson Publishing</li> <li>5. Jawetz, Melnick, &amp; Adelberg's Medical Microbiology, 23rd Edition, The McGraw-Hill Companies</li> <li>6. Cotran RS, Kumar V, Collins T. Robbins Pathologic Basis of Disease.</li> <li>7. Henry JB. Clinical Diagnosis and Management by Laboratory Methods. 20th edition. WB Saunders Co. Philadelphia London</li> <li>8. Goodman &amp; Gilman's. In: The Pharmacological Basis of Therapeutics, 10th ed. p. 412-419</li> <li>9. Mycek et al . Absorption, Distribution, and Elimination of Drugs. In: Lippincott's Illustrated Reviews: Pharmacology. 2nd ed. New York. p. 1-4</li> <li>10. Sastramihardja, S. H. Buku Pedoman Kuliah : Farmakologi Klinik. Ed. 2. Bandung</li> <li>11. Katzung B G . Basic and Clinical Pharmacology, 9th ed, Lang</li> </ol>