

**APPENDIX MODUL 6 : IMMUNOLOGICAL**

<b>Module name</b>	Immunological Medicine
<b>Module level, if applicable</b>	Basic Medical Education
<b>Code, if applicable</b>	20Y00510902
<b>Subtitle, if applicable</b>	-
<b>Course, if applicable</b>	Basic Medical Specialist Education
<b>Semester(s) in which the module is taught</b>	1
<b>Person responsible for the module</b>	1. Dr Upik A. Miskad, Ph.D, Sp.PA(K) 2. Prof. dr. Syarifuddin Wahid, Ph.D, Sp.PA(K)
<b>Lecturer</b>	1. Prof.dr. Syarifuddin Wahid, PhD, Sp.PA(K), SpF 2. dr. Upik A.Miskad, Ph.D, Sp.PA(K) 3. dr. St Wahyuni, PhD 4. dr. Agussalim Bukhari, M.Med, Ph.D, Sp.GK (K)
<b>Language</b>	Indonesian Language [Bahasa Indonesia]
<b>Relation to Curriculum</b>	This course is a compulsory course and must be passed by students before completing the first semester
<b>Type of teaching, contact hours</b>	Learning methods in this subject are: · Lecture (26,67 hours) · Structured Assignment (32 hours) · Private Study (32 hours)  Contact hours for Theory is 90,67 hours
<b>Workload</b>	For this course, students are required to meet a minimum hours in one semester, which consist of:  <ul style="list-style-type: none"> <li>• Lecture (0,89 ECTS)</li> <li>• Structured Assignment(1,07 ECTS)</li> <li>• Private Study (1,07 ECS)</li> <li>• Total ECTS: 3,02</li> </ul>
<b>Credit points</b>	2 credit points (equivalent with 3,02 ECTS)
<b>Requirements according to the examination Regulations</b>	Students must have attended all classes and submitted all class assignments that are scheduled before final tests.
<b>Recommended prerequisites</b>	-
<b>Module objective / intended learning outcomes</b>	<p><b>Knowledge</b>  <b>K1</b> : Able to understand and explain basic knowledge including genetics, molecular biology, histology  <b>K2</b> : Able to understand and explain the knowledge of disease pathogenesis from organ to cellular level, which includes pathobiology, organ pathology, cellular and subcellular pathology</p> <p><b>Skill</b>  <b>S1</b> : Able to develop logical, critical, systematic, and creative thinking through scientific research or design creation, compile scientific conceptions and the results of their studies based on rules, procedures, and ethics. scientific writing in the form of a thesis published in an accredited scientific journal</p>

	<p><b>Competence</b>  <b>C1 : Able to able to apply immunology in diagnosing disease and its treatment</b></p>
<b>Content</b>	<ol style="list-style-type: none"> <li>1. Cells and Tissues in the immune system</li> <li>2. Innate immunity</li> <li>3. Antigens, antibodies and complement</li> <li>4. Cytokines, immune receptors and signal transduction</li> <li>5. Adaptive immunity, MHC Antigen processing, and antigen presentation to T lymphocytes</li> <li>6. Lymphocyte development, antigen receptor gene rearrangement</li> <li>7. T cell activation and differentiation</li> <li>8. B cell activation and antibody production</li> <li>9. Effector mechanisms of cellular immunity and humoral immunity</li> <li>10. Reproductive Immunity</li> <li>11. Transplant immunology</li> <li>12. Immunity to tumours</li> <li>13. Immunological and Autoimmune Tolerance</li> <li>14. Hypersensitive and allergic disorders</li> <li>15. Congenital and acquired immunodeficiency</li> <li>16. Applicative immunological techniques and immunological updates</li> </ol>
<b>Forms of Assessment</b>	<ul style="list-style-type: none"> <li>• MCQ Exam : 70%</li> <li>• Oral Presentation : 30%</li> </ul>
<b>Study and examination requirements and form of examination</b>	<p><b>Study and examination requirements:</b></p> <ul style="list-style-type: none"> <li>• Students must attend 15 minutes before the class start, and 30 minutes before examination start</li> <li>• Students must switch off all electronic devices (for offline class)</li> <li>• Students must switch on the camera/video during the class (for online class)</li> <li>• Students must inform the lecturer if they will not attend the class due to sickness, etc.</li> <li>• Students must submit all class assignment before the deadline</li> <li>• Students must attend the exam to get final grade</li> </ul> <p><b>For examination:</b>  Multiple Choice Question using vignette (for theory) and oral presentation</p>
<b>Media Employed</b>	Video and Power Point Presentation
<b>Reading List</b>	<p><b>Compulsory:</b></p> <ol style="list-style-type: none"> <li>1. Abbas AK, Lichtman AH. Basic Immunology. 4th Ed. Philadelphia:WB Saunders Company, 2012.</li> <li>2. Immunology is easier to understand: Prof.dr. Syarifuddin Wahid, PhD, Sp.PA (K), SpF, dr. Upik A. Miskad, PhD, Sp.PA K). Surabaya. Brilliant International. 2019</li> </ol> <p><b>Additional:</b></p> <ol style="list-style-type: none"> <li>3. Abbul K Abbas &amp; Andrew H. Litchman: Cellular and Molecular Immunology Eight Edition</li> </ol>