

## Module Handbook

Modul Name	Animal Physiology (Practical Work)
Modul Level	Bachelor
Abbreviation, if applicable:	BIF 221
Sub---heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester	Odd
Module Coordinator	Drs. Saikhu Akhmad Husen, M.Kes
Lectures	Drs. Saikhu Akhmad Husen, M.Kes Dr. Dwi Winarni, M.Si Dr. Alfiah Hayati, M.Kes Soegiharto, S.Si, M.Si
Language	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course / <del>Elective Studies</del>
Teaching format/ class hours per week during semester	300 minutes/ week
Workload per semester	100 min lecture + 100 min structural assignment + 100 min self-assignment x 13 weeks; total 3900 min = 65 hours 65/25 = 2.6 ECTS
Credit point	1
Requirements	-
Learning goals/competencies	<p><b>General Competence (Skill)</b> Students are able to discuss and apply the human physiology principles and experimental animal, as well as operate the lab equipment involved.</p> <p><b>Specific Competence</b></p> <ol style="list-style-type: none"> <li>1. Explaining and operating the working principle of sphygmomanometer and its factors.</li> <li>2. Determining the Hb level of Human using Sahli method</li> <li>3. Measuring human glucose level using glucometer</li> <li>4. Determining the number of erythrocyte and the counting method using <i>Improved Neubauer</i> counting booth</li> <li>5. Determining the number of leucocyte and the counting method using <i>Improved Neubauer</i> counting booth</li> <li>6. Explaining in vitro enzymatic reaction of digestion and its inhibition factors</li> <li>7. Explaining the working principle of antigen-antibody and agglutination reaction in order to determine blood types.</li> <li>8. Determining the blood coagulation timing</li> <li>9. Determining the consumption of oxygen and its factors, as well as determining the volume of student's lungs.</li> <li>10. Determining the location and timing of receptor taste.</li> <li>11. Determining the motility and morphology of spermatozoa</li> <li>12. Students become skilled in handling experimental animals for research purposes.</li> <li>13. Understanding ureter, urethra, and vesical urinary with their functions.</li> </ol>

Content	Students are able to explain the working principle of sphygmomanometer as well as the factors that affect the blood pressure; to determine the Hb level; to measure glucose level; to count the number of erythrocytes and leukocytes, as well as the using of <i>Improved Neubauer</i> counting booth; to explain the reaction of in vitro enzymatic digestion and its inhibitor factors; to explain the working principles of antigen-antibody and agglutination reaction in blood type determination; to determine blood coagulation timing; to determine the consumption of oxygen and its factor; to determine the location and timing of receptor taster; to measure the motility and spermatozoa morphology.
Soft skill Attribute	Discipline and Team Work
Study/ exam achievements	Students are considered to be competent and pass if at least get 40% of maximum. Final score (NA) is calculated as follow: Pre-test (10%), paper project (20%), mid exam (30%), final exam (30%), soft skill (10%)  Final index is defined as follow: A : 75 - 100 AB : 70 - 74.99 B : 65 - 69.99 BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E : 0 - 39.99
Form of media	Laboratory equipment
Learning Method	Practical Work
Literature	<ol style="list-style-type: none"> <li>a. Schmidt – Nelson. 1991. <i>Animal Physiology, Adaptation and Environment</i>, Cambridge University Press.</li> <li>b. Guyton. 1995. <i>Fisiologi Manusia dan Mekanisme Penyakit</i>, EGC – Jakarta.</li> <li>c. Anonimus. 2000. <i>Petunjuk Praktikum Fisiologi Hewan</i>, Jurusan Biologi – UGM, Tidak dipublikasikan.</li> </ol>
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