UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF SCIENCE EDUCATION
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Bachelor of Education in Science **MODULE HANDBOOK**

Module name:	**Biophysics Practicum**
Module level, if applicable:	Undergraduate
Code:	IPA6133
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	6th
Module coordinator:	Dr. Dadan Rosana, M.Si
Lecturer(s):	Didik Setyawarno, M.Pd., M.Si and Joko Sudomo, M.A.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	50 minutes lectures and 75 minutes structured activities per week.
Workload:	Total workload is 70,5 hours per semester which consists of 50 minutes lectures, 75 minutes structured activities, and 75 minutes individual study per week for 16 weeks.
Credit points:	1 SKS (1.5 ETCS)
Prerequisites course(s):	-
Targeted learning outcomes:	After careful study of this chapter you should be able to do the following: CO1. osmotic pressure on plants, CO2. heat of plant material, CO3. mechanical benefits and the relation of muscles working on human skeletal structure, push-ups, CO4. the influence of environmental temperature on body temperature, CO5. resistance human body, CO6. sound propagation through the skull, blood pressure, CO7. fluid flow in blood transfusions or infusions into blood vessels,

<table>
<tr><td></td><td>CO8. and electrical currents and voltages in fruit</td></tr>
<tr><td>Content:</td><td>This practicum course contains biophysical practicum instructions consisting of ten practicum titles which include: osmotic pressure on plants, heat of plant material, mechanical benefits and the relation of muscles working on human skeletal structure, push-ups, the influence of environmental temperature on body temperature, resistance human body, sound propagation through the skull, blood pressure, fluid flow in blood transfusions or infusions into blood vessels, and electrical currents and voltages in fruit</td></tr>
<tr><td>Study / exam achievements:</td><td>Attitude assessment is carried out at each meeting by observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.
The final mark will be weight as follow:

<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO1, CO2, CO3, CO4, CO5, CO6 and CO7</td><td>a. Individual Assignment
b. Group Assignment
c. Quiz
d. Observation
e. Portfolio</td><td>Presentation / written test</td><td>15%
15%

15%
25%
30%</td></tr>
<tr><td colspan="4">Total</td><td>100%</td></tr>
</table>
</td></tr>
<tr><td>Forms of media:</td><td>Board, LCD Projector, Laptop/Computer</td></tr>
<tr><td>Literature:</td><td>Martin Zinke-Allmang. (2017). Physics for the Life Sciences, 3rd Edition. Cengage Learning EMEA. New York.

Dadan Rosana. (2016). Modul Biofisika. Program Studi Pendidikan IPA, FMIPA, Universitas Negeri Yogyakarta

Cromer H.Alam, Physics for the life science, 1977 McGraw Hill, Inc, New York</td></tr>
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PLO and CO mapping

				PLO											
	Attitude			Knowledge				Spesific SKill							
	PLO 1	PLO 2	PLO 3	PLO 1	PLO 2	PLO 3	PLO 4	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8
CO1								✓		✓			✓		✓
CO2									✓	✓		✓	✓		
CO3								✓	✓			✓			✓
CO4									✓		✓	✓		✓	
CO5								✓			✓			✓	✓
CO6									✓	✓		✓	✓		
CO7								✓		✓			✓		✓
CO8									✓	✓		✓	✓		