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:	**General Physics 1**
Module level, if applicable:	Undergraduate
Code:	IPA6206
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	1th
Module coordinator:	Maryanto, M.Pd.
Lecturer(s):	Dr. Dadan Rosana, M.Si and Maryanto, M.Pd.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course
Teaching format / class hours per week during the semester:	100 minutes lectures and 120 minutes structured activities per week.
Workload:	Total workload is 90,67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.
Credit points:	2 SKS (3 ETCS)
Prerequisites course(s):	-
Targeted learning outcomes:	After careful study of this chapter you should be able to do the following: CO1. understand and apply physical concepts in particular the concepts of mechanics, heat and sound and thermodynamics in the field of technology, CO2. have a scientific and honest attitude in making observations and reporting on the results of investigations on physical quantities. CO3. has the ability to take measurements of physical quantities and can apply them in higher technology fields
Content:	The General Physics course is a compulsory subject for

<table>
<tr><td></td><td>students majoring in Science Education. This lecture is an application/ application of Physics concepts into the field of Education. In this course, facilitated by lecturers, students will study This course is a prerequisite for the study program expertise group in the S-1 program of the Science Education Study Program. After taking this lecture students are expected to be able to master the basic knowledge of mechanics, waves, sounds, optics and heat and can develop and apply it to study higher physics knowledge. In this lecture, one-dimensional motion, two-dimensional motion, dynamics, effort and energy are discussed, linear momentum and collision, rotation, balance, gravity, fluid mechanics, vibration, wave, sound, optics and heat. Lectures are conducted using conceptual and contextual approaches with demonstration methods, inquiry, project base learning, discussion, question and answer, and direct instruction.</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. Mid
e. Final Exam</td><td>Presentation / written test</td><td>15%
15%

15%
25%
30%</td></tr>
<tr><td colspan="4">Total</td><td>100%</td></tr>
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</td></tr>
<tr><td>Forms of media:</td><td>Physics demonstration tool, Board, LCD Projector, Laptop/Computer</td></tr>
<tr><td>Literature:</td><td>

Halliday, D., et al (2008). Fundamental of Physics Extended. 8th edition, John Willey & Sons
Alonso, M. & Finn, E.J. Physics. Addison Wesley, 1992.
Fishbane, P.M., et al. Physics for Scientists and Engineers. Prentice Hall, 1996.
Resnick, R., et al. Physics, vol. I & II. John Wiley & Sons, 1992.
Serway, R.A.. Physics for Scientists and Engineers. Sander College, 1996.

</td></tr>
</table>

	6. Thomas A. Moore (2003). Six Idea That Shape Physics, 2nd edition, Mcgraw-Hill College. 7. Young, H.D. & Freedman, R.A. *University Physics*. Addison-Wesley, 2001.

PLO and CO mapping

	PLO											
	Attitude			Knowledge				Spesific SKill				
	PLO1	PLO2	PLO3	PLO1	PLO2	PLO3	PLO4	PLO1	PLO2	PLO3	PLO4	PLO5
CO1						✓	✓					
CO2				✓	✓	✓						
CO3				✓	✓							