



Module Handbook for Basic Physics

Module designation	Basic Physics
Module level, if applicable	Bachelor of science
Code, if applicable	22A42C104
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	Odd Semester (I)
Person responsible for the module	1. Dra. Aisyah Azis, M.Pd 2. Dr. Bunga Dara Amin, M.Ed 3. Herman, S.Pd., M.Pd
Lecturer	Dra. Aisyah Azis, M.Pd, Dr. Bunga Dara Amin, M.Ed, Herman, S.Pd., M.Pd, Vistarani, S.Si., M.Sc, Mutahharah Hasyim, S.Pd., M.Pd, Muh. Saleh, S.Si., M.Si
Language	Indonesia
Relation to curriculum	Compulsory course
Type of teaching, contact hours	Learning methods: lectures, and discussion. CSU = 3 3 x 50 minutes lecture = 150 minutes 3 x 60 minutes scheduled task = 180 minutes 3 x 60 minutes independent task = 180 minutes Total teaching format = 510 minutes = 8,5 hours
Workload	Total workload = (Total Teaching format x 16) = 8,5 x 16 = 136 hours
Credit points	3 CSU (4,5 ECTS) ECTS = Total workload : 30 hours = 136 : 30 = 4,5
Requirements according to the examination regulations	Student must have attended at least 80% of the lectures to sit in the exams.
Recommended prerequisites	-
Module objectives/intended learning outcomes	After taking this course the students have ability to: [1] using the principles of measurement and uncertainty in explaining a physical quantity. [2] analyzing quantities in one-dimensional motion to solve a problem [3] analyzing quantities in a two-dimensional graph to solve a problem [4] apply concepts in Newton's laws to solve cases in dynamics of motion [5] apply the concepts of work and energy to motion problems [6] apply the concepts of linear momentum and collision to solve a problem [7] analyzing quantities in rotational motion [8] analyze the quantities in the equilibrium system [9] apply Newton's laws of gravity and Kepler's laws to explain the motion of celestial bodies [10] analyzing quantities in static and dynamic fluids [11] analyze the magnitude of the event of vibration and waves [12] analyzing the magnitude of the sound wave [13] apply the concept of optics to optical instruments

	[14] apply the concept of heat and its transfer in solving a problem
Content	In this course, Students are expected to be able to master basic knowledge of mechanics, waves, sound, optics and heat and be able to develop and apply them to study higher physics knowledge, and can understand all physical phenomena from natural phenomena around
Study and examination requirements and forms of examination	Mid-Exam : Written Test (25%) Final Exam : Written Test (25%) Practice/Practice Exam : Practice (25%) Others : Individual Task (10%), Group Discussion (10%) and Quizz (5%).
Media employed	LMS-SYAM OK, PowerPoint Presentation, Books, Journal and Article, Student Worksheet, handout.
Reading list	1. David Halliday & Robert Resnick (Pantur Silaban Ph.D & Drs. Erwin Sucto). (1989). FISIKA, Erlangga-Jakarta. 2. Paul A. Tipler (Dr. Bambang Soegijono). (2001). FISIKA, Untuk Sains dan Teknik, Erlangga-Jakarta. 3. Douglas C. Giancoli. (2001). FISIKA, Erlangga-Jakarta 4. Herman, (2016). Penuntun Praktikum Fisika, Jurusan Fisika FMIPA UNM-Makassar