



UNIVERSITAS NEGERI PADANG
 FACULTY OF MATHEMATICS AND NATURAL SCIENCES
 MATHEMATICS DEPARTMENT, MATHEMATICS EDUCATION STUDY PROGRAM
 Main Campus Universitas Negeri Padang.
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Bachelor of Mathematics Education

MODULE HANDBOOK

Module name:	General Physics
Module level, if applicable:	Bachelor
Code:	FMA1.60.1303
Sub-heading, if applicable:	-
Classes, if applicable:	General Physics
Semester:	1 st (first)
Module coordinator:	Dr. Ramli, S.Pd., M.Si.
Lecturer(s):	Dr. Ramli, S.Pd., M.Si., and Team
Language:	Bahasa Indonesia
Classification within the curriculum:	Faculty Compulsory courses
Teaching format / class hours per week during the semester:	<p>Teaching format:</p> <ul style="list-style-type: none"> • Lectures (face to face activities): contextual learning, self-directed learning, discussion, and expository, • Structured assignment, • Independent activities, • Practice (simulations and demonstrations) <p>4 x 170 minutes = 680 minutes = 11.33 hours</p>
Workload:	<p>16 weeks per semester include Midterm Exam which consist of:</p> <ul style="list-style-type: none"> • 2.50 hours lectures (3 x 50 minutes) per week, • 3 hours structured assignments (3 x 60 minutes) per week, • 3 hours independent activities (3 x 60 minutes) per week • 2.83 hours Practice (1 x 170 minute) per week <p>16 x 170 x 4 = 10880 minute = 181.3 hours = 6.04 ECTS</p>
Credit points:	4 SKS (6.04 ECTS)
Prerequisites course(s):	-
Course outcomes:	<p>After taking this course, the students have ability to:</p> <p>CO 1 : Explain the concepts of quantities and units, basic operations thermodynamic law vectors 1 and 2, and kinematic particles for</p>

	<p>straight motion and curved motion.</p> <p>CO 2 : Apply the concepts of particle dynamics, work, energy, momentum, fluid statistics, fluid dynamics, temperature, and heat at simple physics problem</p> <p>CO3 : Show responsibility attitude towards independent activities and team works.</p>
Content:	<p>This course discusses:</p> <ol style="list-style-type: none"> 1. the basics of Mechanics, Fluid and Thermophilic 2. quantities and units 3. particle kinematics 4. particle dynamics 5. work and energy 6. static fluids 7. the concept of temperature and heat 8. the laws of thermodynamics
Study/exam achievements:	<p>Total Score = (30% x Midterm Exam Score) + (30% x Final Exam Score) + (20% x Assignment: Paper, Project, etc.) + (20% x practice)</p> <p>The initial cut - off points for grades A, A-, B+, B, B-, C+, C, C-, and D should not be less than 85, 80, 75, 70, 65, 60, 55, 50, and 40 out of 100 respectively.</p> <p>Explanation:</p> <ol style="list-style-type: none"> 1. Midterm Exam <ul style="list-style-type: none"> ✓ Midterm Exam will be conducted in the 9th meeting ✓ Midterm Exam is in the form of a written test (essay) and will be conducted in the classroom ✓ The time allocation is 120 minutes according to the module schedule 2. Final Exam <ul style="list-style-type: none"> ✓ Final Exam will be conducted in the 16th meeting. ✓ Final Exam is in the form of a written test (essay) and will be conducted in the classroom. ✓ The time allocation is 120 minutes which follows the Final Exam schedule provided by the Department. 3. Assignment <ul style="list-style-type: none"> ✓ Paper: Students are divided into several small groups and are required to discuss every topic before the face to face meeting and write a paper about it, so the students have a preparation before the lesson. ✓ Project: in the end of the semester, students are required to choose a topic and do a project related to the topic chosen. 4. Practice <ul style="list-style-type: none"> ✓ Students practice some experiments related to the learning content chosen by the lecturer.
Forms of media:	-

Literature:	<ol style="list-style-type: none"> 1. Tim Fisika Umum Fakultas MIPA Universitas Negeri Padang. (2016). Modul Fisika Umum FMIPA UNP. 2. Abdullah, M. (2016). Fisika Umum 1. Bandung: ITB Press, hlm. 1-1063. 3. Douglas C. Giancoli. (2014). General Physics: Principles with applications, USA, Pearson. 4. Young and Freedman. (2012). University Physics with Modern Physics (13th ed), Sears & Zeemansky, New York. 5. Satriawan, Mirza. (2012). Fisika Dasar, UGM, Yogyakarta.
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PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CO1					✓						
CO2					✓						
CO3										✓	