

Module Description

Module name	Course Module
Module level, if applicable	Bachelor of Electronics Engineering
Code, if applicable	5215-172-3
Subtitle, if applicable	-
Course, if applicable	Physics 1
Semester(s) in which the module is taught	I
Person responsible for the module	Lecturer of Course
Lecturer	Vina Oktaviani, S.Pd., M.T.
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 1 th semester.
Type of teaching, contact hours	<p>Teaching methods used in this course are:</p> <ul style="list-style-type: none"> - Lecture (i.e., group investigation, small group discussion, casestudy, and video based learning) - Structured assignments (i.e., essays and case study) - Practice (i.e., computer simulation and case study in laboratory) <p>The class size for lecture is 30 students. Contact hours for lecture is 40 hours, assignments is 48 hours</p>
Workload	<p>For this course, students are required to meet a minimum of 136 hours in one semester, which consist of:</p> <ul style="list-style-type: none"> - 40 hours for lecture, - 48 hours for structured assignments, - 48 hours for private study,
Credit points	3 credit points (equivalent with 4.32 ECTS)
Requirements according to the examination regulations	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.
Recommended prerequisites	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.

<p>PLO-ILO-CLO</p>	<p>After completing the course and given with this case:</p> <p>Course Learning Objectives (CLO1): Mahasiswa mampu memahami hukum-hukum alam pada Fisika (K1) (40)</p> <p>Course Learning Objectives (CLO2): Mahasiswa mampu menganalisis hukum-hukum alam untuk memecahkan persoalan-persoalan yang berhubungan dengan mekanika yang diperlukan dalam teknik elektro (K1, S3, C1) (60)</p> <p>Program Learning Outcomes (PLO2): Menerapkan ilmu-ilmu dasar untuk memecahkan masalah teknik elektronika</p> <p>Knowledge (K1): Menerapkan matematika, ilmu dasar dan teknik dasar untuk merancang dan menganalisis untuk memecahkan masalah di bidang teknik elektronika.</p> <p>Engineering and Education Skill (S3): Mampu mencari alternatif solusi dan pemecahan masalah di bidang teknik elektronika.</p> <p>Competence (C1): To apply new technology in the field of engineering by considering technical standards, aspects of performance, reliability, applicable and sustainability.</p>
<p>Content</p>	<p>Students will learn about: The purpose of this course is to recognize and understand the laws of nature and their reasoning as the basis for solving problems related to mechanics required in electrical engineering. This course examines lecture material covering basic systems of physical measurement, mechanics, kinematics and particle dynamics, work and energy, linear and collisional momentum, rotational dynamics, angular momentum, tangential velocity and acceleration, centripetal and centrifugal forces, vibrations, elasticity, mechanics. Fluids, laws of thermodynamics I & II and entropy and statistics.</p>
<p>Forms of Assessment</p>	<p>Assessment is carried out based on written examinations, assessment/evaluation of the learning process and performance with the following components: Structured tasks: 30% ; Mid Test : 35% Final Test: 35%</p>

Study and examination requirements and forms of examination	Study and examination requirements: <ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get final grade. Form of examination: Written exam: Essay
Media employed	Direct Whiteboard and Power Point Presentation.
Reading list	<ol style="list-style-type: none"> 1. Sears & Zemanky, "University Physics", Pearson Education, 14th ed, USA, 2016 2. Douglas C. Giancoli, 'Physics for Scientists and Engineers', Pearson Education, 4th ed, London, 2014 3. Halliday, Resnick, Jearl Walker; 'Fundamentals of Physics'. John Wiley and Sons, 10th ed, New York, 2014 4. Tipler, PA, 'Physics for Scientists and Engineers', 6th ed, W.H. Freeman and Co, New York, 2008