MODULE HANDBOOK DESCRIPTION

Module designation	*Physics I*	
Code	*FBS1103*	
Semester(s) in which the module is taught	*1/first year*	
Person responsible for the module	*Dr.rer.nat Teti Zubaidah, S.T., M.T.*	
Language	*Indonesian/English*	
Relation to curriculum	*Compulsory for all majors*	
Teaching methods	*lectures, small group discussion, case base method.*	
Workload (incl. contact hours, self-study hours)	Contact minutes every week, each week of the 16 weeks/semester: • Lectures: 3 x 50 minutes • Exercises and Assignments: 3 x 60 minutes • Self-study: 3 x 60 minutes. Total study hours = 8 hours 30 minutes/week.	
Credit points	*3 SKS (~ 4.8 ECTS)*	
Required and recommended prerequisites for joining the module	-	
Module objectives/intended learning outcomes	*1. Students are able to understand the basic concepts of measurements, quantities & units, mechanics, kinematics, thermodynamics, and energy conservations.*	*PLO2*
	2. Students are able to analyse physical problems related to mechanics and kinematics.	*PLO3*
	3. Students are able to solve daily life physical problems in teamwork.	*PLO7*
Content	*Introduction to College Physics, Physics & Measurements, Scalar & Vector, Motion in one-dimension with constant velocity, Motion in one-dimension with acceleration & fall free motion, Motion in two-dimension, Circular motion, Universal gravitation, Newton's Laws, Momentum & Collision, Work, Energy & Power, Laws of thermodynamics, Energy conservations.*	

Examination forms	- *Written case study* - *Midterm and final test*
Study and examination requirements	*The final grade in the module is composed of:* *a. Attendance: 10%* *b. Case assessment: 4 x 15% = 60%* *c. Midterm assessment: 15%* *d. Final assessment: 15%* *Students must have a final grade of 65% or higher to pass*
Reading list	1. *Giancoli D.C., 2014, Physics - Principle with Application Vol. 1 7th Ed., Pearson.* 2. *Serway R.A. & Jewett Jr. J.W., 2014, Physics for Scientists and Engineers with Modern Physics 9th Ed., BROOKS/COLE CENGAGE Learning.* 3. *Paul Peter Urone & Roger Hinrichs, 2020, College Physics, OpenStax.* 4. *Samuel J. Ling, Jeff Sanny, William Moebs, 2021, University Physics Volume 1, OpenStax.* 5. *Samuel J. Ling, Jeff Sanny, William Moebs, 2021, University Physics Volume 2, OpenStax.*