

## MODULE HANDBOOK

Module Name	General Physics	
Module Level	Bachelor	
Abbreviation, if applicable	3074213013	
Sub-heading, if applicable	-	
Course included in the module, if applicable	-	
Semester/term	1 <sup>st</sup> / First year	
Modul coordinator(s)	Dr. Z.A. Imam Supardi, M.Si.	
Lecturer(s)	Team	
Language	Bahasa Indonesia	
Classification within the curriculum	Compulsory course	
Teaching format/class hours per week during the semester	3 contact hours of lectures and lab activity (Indonesia credit semester or sks*)	
Workload	<p>a. Lecture:</p> <p style="padding-left: 40px;">2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester, 79.33 total hours per semester ~ 3.18 ECTS</p> <p>b. Lab activity:</p> <p style="padding-left: 40px;">1x170 minutes lab activity, 14 weeks per semester 39.67 total hours of lab activity per semester ~ 1.59 ECTS</p> <p>Total of lecture and lab activity= 119 total hours per semester ~ 4.77 ECTS**</p>	
Credit point	3 CU = 3 x 1.59 = 4.77 ECTS	
Prerequisite course(s)	-	
Targeted learning outcomes:	<p>CLO-1: Solve physics basic concepts such as vectors, particle kinematics, particle dynamics, fluids, thermophysics, optics, static and dynamics electricity.</p> <p>CLO-2: Implement mathematics to solve physics problems</p>	
Content:	The concepts and principles / laws of measurement, kinematics, dynamics, temperature, heat, and heat transfer	
Attribute Soft Skill	Active communication; Disiplin; Collaboration; Responsibility; and Argumentation in class and outdoor setting	
Study / exam achievements:	The final grade (NA) is calculated based on the following ratio:	
	Assessment Components	Percentage of contribution

	Participation	20%	
	Assignment	30%	
	Mid-semester test	20%	
	Final semester test	30%	
	Grade Conversion of 0-100 scale into 0-4 scale is set as below:		
	Letter	Number	Grade interval
	A	4.00	$85 \leq A \leq 100$
	A-	3.75	$80 \leq A- < 85$
	B+	3.50	$75 \leq B+ < 80$
	B	3.00	$70 \leq B < 75$
B-	2.75	$65 \leq B- < 70$	
C+	2.50	$60 \leq C+ < 65$	
C	2.00	$55 \leq C < 60$	
D	1.00	$40 \leq D < 55$	
E	0.00	$0 \leq E < 40$	
Media:	Handbook and PPT		
Learning Methods	Lecture and laboratory activity using: Student-centered approach; project-based learning; lab activity, and discussion; and presentations (structured activities)		
Literature:	<ol style="list-style-type: none"> <li>1. Giancoli, Douglas. 2016. Physics: Principles with Applications II Global Edition. California: Addison Wesley.</li> <li>2. Lewis, Albert. 2016. Sears and Zemansky's University Physics: With Modern Physics. Pearson.</li> <li>3. Walker, Jearl. 2014. Principles of Physics, 10<sup>th</sup> ed. Singapore: John Wiley &amp; Sons</li> </ol>		

	<p>4. Halliday &amp; Resnick. 2013. Fundamental of Physics, 10<sup>th</sup> Edition. John Wiley &amp; Sons Inc. Young, Hugh D., Freedman, Roger A., Ford</p> <p>5. Serway, R.A., and Jewett, J.W., 2010, Physics for Scientists and Engineers with Modern Physics, Salemba Teknika</p> <p>6. Bueche, F.J. 2000. Schaum's Outline of College Physics, McGraw-Hill.</p>
Notes:	<p>*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.</p> <p>**1 CU = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019</p>