



MINISTRY OF EDUCATION AND CULTURE
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF PHYSICS

Ketintang Campus, Jalan Ketintang, C3 Building, Surabaya 60231
Website: <http://s1-fisika.fmipa.unesa.ac.id/>, email: s1-fisika@unesa.ac.id

Undergraduate Programme In Physics

Module Handbook

Module Name :	<i>Fisika Dasar II</i> Basic Physics II
Module level :	Bachelor degree/Undergraduate Programme
Course Code :	4520104057
Abbreviation, if applicable:	-
Courses included in the module, if applicable:	Not Applicable
Semester/Term	2/First Year
Module coordinator(s)	Dr. Rohim Aminullah Firdaus,
Lecturer(s):	1. Nugrahani Primary Putri, S.Si., M.Si. 2. Dr. Titin Sunarti, M.Si. 3. Prof. Tjipto Prastowo, Ph.D. 4. Dr. Z.A. Drs. Imam Supardi, M.Si. 5. Woro Setyarsih, S.Pd., M.Si. 6. Diah Hari Kusumawati, S.Si., M.Si. 7. Dr. Frida Ulfah Ermawati, M.Sc. 8. Lydia Rohmawati, S.Si., M.Si. 9. Dr. Binar Kurnia Prahani, M.Pd. 10. Muhammad Habibulloh, M.Pd. 11. Muhammad Nurul Fahmi, S.Si.M.Si. 12. Arie Realita, S.Si., M.Si. 13. Dr. Muhimmatul Khoiro, S.Si. 14. Utama Alan Deta, S.Pd., M.Pd., M.Si.
Language:	<i>Bahasa Indonesia</i>
Classification within the curriculum:	Compulsory/ Elective
Teaching format/class hours per week during the semester:	4 contact hours of lectures (Indonesia credit semester or sks*)



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Workload :	a. Lecture: 3 x 50 minutes lectures, 3 x 60 minutes structured activity, 3 x 60 minutes individual activity, 14 weeks per semester, 119 total hours per semester ~ 4.77 ECTS b. Lab activity: 1x170 minutes lab activity, 14 weeks per semester 39.67 total hours of lab activity per semester ~ 1.59 ECTS Total of lecture and lab activity= 158.67 total hours per semester ~ 6.36 ECTS**								
Credit Point:	4 sks (6.36 ECTS)								
Requirements:	Basic Physics 1								
Learning goals/competencies:	1. Be able to explain basic concepts and principles of static/dynamic magnetic electricity, wave and optics and modern physics 2. Mastering the material, structure, and concepts of physical science and its application in technology 3. Using basic physics concepts and proper mathematical methods to get solutions to quantitative problems in physics. 4. Able to work in groups in the discussion process related to the mechanics and thermodynamics concepts that are being discussed during the lesson								
Content	The study of Electric field, Gauss law, electric potential, capacitance and dielectric, current and resistance, direct current circuit, magnetic field source magnetic field, Faraday law, inductance, alternating current circuit, electromagnetic waves, geometric optics, light wave interference, diffraction and polarized waves								
Attribute Soft skill:	Scientific report, public speaking, and team work								
Study/exam achievements:	Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio: <table border="1"> <thead> <tr> <th>Assessment Components</th><th>Percentage of contribution</th></tr> </thead> <tbody> <tr> <td>Participation</td><td>20%</td></tr> <tr> <td>Assignment</td><td>30%</td></tr> <tr> <td>Mid-semester test</td><td>20%</td></tr> </tbody> </table>	Assessment Components	Percentage of contribution	Participation	20%	Assignment	30%	Mid-semester test	20%
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Final semester test	30%		
Learning Methods :	1. Student-centered approach, 2. Lecture and discussion, 3. Laboratorium activity 4. Presentations		
Form of Media:	<i>Power Point</i> slides, e-book file, and multimedia.		
Literature references): (primary	1. Halliday & Resnick, 2007, Fisika Jilid 1, Erlangga 2. Serway, R.A., and Jewett, J.W., 2010, Physics for Scientists and Engineers with Modern Physics, Salemba Teknika 3. Bueche, F.J., 2000, Schaum's Outline of College Physics, McGraw-Hill.		
Notes:	*1 sks 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. **1 sks = 1,59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/Un38/Hk/Ak/2019		