MODULE HANDBOOK DESCRIPTION

Module designation	*Physics II*	
Code	*FBS1211*	
Semester(s) in which the module is taught	*2 / first year*	
Person responsible for the module	*I Made Sutha Yadnya, 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	- FBS1103 Physics I	
Module objectives/intended learning outcomes	1. Students are able to understand the electric charge and electric field, Gauss's law, electric potential, capacitance, dielectrics, electric energy storage, electric currents and resistance, DC circuits, magnetism, sources of magnetic field, electromagnetic induction and faraday's law, Inductance, electromagnetic oscillations, and AC Circuits, Maxwell's Equations and electromagnetic waves, Light: reflection and refraction, Lenses and optical instruments, the wave nature of light; interference, diffraction and polarization.	PLO2
	2. Students are able to analyse physical problems related to electromagnetics, the properties of light and optical.	PLO 3

	3. Students are able to reconstruct physics problems about electromagnetic, the properties of light and optical.	PLO4
Content	Electric charge and electric field, Gauss's law, electric potential, capacitance, dielectrics, electric energy storage, electric currents and resistance, DC circuits, magnetism, sources of magnetic field, electromagnetic induction and faraday's law, Inductance, electromagnetic oscillations, and AC Circuits, Maxwell's Equations and electromagnetic waves, Light: reflection and refraction, lenses and optical instruments, the wave nature of light; interference, diffraction and polarization.	
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. 17th 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. 6. Abdullah, M., 2017, Fisika Dasar II, Diktat Fisika II, ITB, Bandung.	