Module designation	CE131 Physics
Semester(s) in which the module is taught	2
Person responsible for the module	Agie Maliki
Language	English & Indonesian
Relation to curriculum	Compulsory
Teaching methods	Lecture
Workload (incl. contact hours, self-study hours)	Total workload: 136.08 hours - 35.01 hours of synchronous lecture. - 84.06 hours of self-study and assignments in the form of essays. - 17.01 hours related to exam and self study
Credit points	3 SKS (5.04 ECTS)
Required and recommended prerequisites for joining the module	-

Module objectives/intended learning outcomes	Course Learning outcome	Related ELOs	
		ELO	Performance Indicator
	Able to apply knowledge in the fields of physics and engineering in accordance with computer engineering disciplines in a broad scope.	J	Understand the principles of computer system elements and their inner workings to solve engineering problems.

Content	This course covers the concept of basic physics related to computer engineering. It includes electrostatics (electric field and force), Gauss Law, Electric potential energy, Electric potential, capacitor, magnetostatic, magnetic induction EMF, alternating current, electromagnetic waves, diffraction, interference, solid matter, and semiconductor. Specifically, this course contain these topics: 1. Capacitor and Dielectric 2. Electric current and resistance 3. Magnetic field 4. Magnet induction 5. Electromagnetic waves 6. Optical geometry 7. Optical devices 8. Interference 9. Diffraction 10. Solid matter

	11. Semiconductor
Examination forms	Written test
Study and examination requirements	Total score ≥ 55 must be satisfied. The total score is the weighted average of the assignments (30%), the midterm exam (30%), and the final exam (40%).
Reading list	1. Douglas C. Giancoli (2013) Physics: Principles with Applications, 7th Ed, Pearson