FI460 Wave and Electromagnetism Experiment

Module name:	Wave and Electromagnetism Expe	riment					
Module level, if applicable:	Undergraduate						
Code:	FI460						
Sub-heading, if applicable:	-						
Classes, if applicable:	-						
Semester:	5 th						
Module coordinator:	Andhy Setiawan						
Lecturer(s):	Andhy Setiawan, Wiendartun, Mohammad Arifin						
Language:	Bahasa Indonesia						
Classification within the curriculum:	Compulsory course						
Type of Teaching	Contact hours per week during the semester	Class Size					
 Lecture (experiment and presentation) Structured activities for practice preparation and making report Self-study (reading literature) 	2 hours 30 minutes	15					
Workload:	Total workload is 90 hours 40 minutes (3.2 ECTS) which consist of 40 hours of laboratory activities (1.41 ECTS) and 50 hours 40 minutes of practice preparation, making report and self-study (1.75 ECTS)						
Credit points:	points: 3.2 ECTS						
Pre-requisites course(s):	FI345 Wave						
Course Learning Outcomes (CLO):	After taking this course the students have ability to: CLO1. Apply concepts of electromagnetic and waves in planning the experiment. CLO2. Conduct experiment in electromagnetic and waves. CLO3. Analyze experimental data as result of experiment in electromagnetic and waves. CLO4. Apply concepts of electromagnetic and waves in discussing the experiment result. CLO5. Make reports and present the results of electromagnetic and wave experiments.						
Content:	Thomson Experiment, Millikan Oil Drop Experiment, Experiment of Light Propagation Speed, Michelson linterferometer Experiment, Hall Effect Experiment, Experiment of Diffraction by Rreflection Grid, Experiment of Sound Propagation Speed.						

	No	CLO	Assessment Object	Assessment Weigh			
	1	CLO1	Subject specific competences: - Assignment - Written test	Written Written test			
Study/exam achievements:	2	CLO2, CLO3, CLO4, CLO5	Subject specific competences: - Experiment Report Presentation	Written Performance	45% 35%		
	Total		100%	1			
	The final mark will be weight as follow:						
Forms of media:	Board, LCD projector, laptop/computer, Experimental tools, LMS, internet line.						
Literature:	 Pergament, M. I. (2019). Methods Of Experimental Physics. CRC Press. Fleisch, D. A., & Kinnaman, L. (2015). A student's guide to waves. Cambridge University Press. Melissinos, A. C., & Napolitano, J. (2011). Experiments in modern physics. Academic Press. Elmore, W. C., & Heald, M. A. (2012). Physics of waves. Dover Publications. 						

PLO and CLO mapping

	PLO1	PLO 2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO1		V										
CLO ₂				V								
CLO3				V								
CLO4		$\sqrt{}$										
CLO5												