UNIVERSITAS GADJAH MADA
Faculty of Mathematics and Natural Sciences
Department of Computer Science and Electronics
Sekip Utara Bulaksumur Yogyakarta 55281 Telp: +62 274 546194 Email: dep-ike.mipa@ugm.ac.id Website: dcse.fmipa.ugm.ac.id

Bachelor in Electronics and Instrumentation
Telp : +62 274 546194
Email : kaprodi-s1-elins.mipa@ugm.ac.id
Website : dcse.fmipa.ugm.ac.id

MODULE HANDBOOK

Module name	**Experiment on Physics 1**
Module level	Undergraduate
Code	MFF-1013
Courses (if applicable)	Experiment on Physics 1
Semester	Odd
Contact person	Teaching Staff of Basic Physics Laboratory
Lecturer	Teaching Staff of Basic Physics Laboratory
Language	Bahasa Indonesia
Relation to curriculum	Compulsory Courses for undergraduate program in Bachelor of Electronics and Instrumentation
Type of teaching, contact hours	CBL (Case-based Learning): Pretest, Presentation of material and some display material, Hands-on experiments using available set-ups, Making reports
Workload	1. Lectures: 1 x 50 = 50 minutes per week. 2. Exercises and Assignments: 1 x 60 = 60 minutes per week. 3. Self-Learning: 1 x 60 = 60 minutes per week.
Credit points	1 credit point
Requirements according to the Examination regulations	A student must have attended at least 75% of the lectures to sit in the exams.
Recommended prerequisites	-
Learning outcomes (course outcomes) and their corresponding PLOs	After completing this module, a student is expected to: CO1 be able to explain the concepts that underlie optical phenomena and relate them to the basic concepts [PLO 2 PLO 4 PLO 5]. CO2 be able to explain the concepts of electrical phenomena and relate them to the basic concepts obtained. [PLO 2 PLO 4 PLO 5]. CO3 be able to explain the concepts of mechanical phenomena and relate them to the basic concepts obtained [PLO 2 PLO 4 PLO 5]. CO4 be able to convey their experiments' results in a written report [PLO 3]. CO5 be able to work individually or in groups in experiments [PLO 3].

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<table>
<tr><th colspan="2">PLO</th><th>CO 1</th><th>CO 2</th><th>CO 3</th><th>CO 4</th><th>CO 5</th></tr>
<tr><td rowspan="5">Program Learning Outcome (PLO)</td><td>PLO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PLO2</td><td>√</td><td>√</td><td>√</td><td></td><td></td></tr>
<tr><td>PLO3</td><td></td><td></td><td></td><td>√</td><td>√</td></tr>
<tr><td>PLO4</td><td>√</td><td>√</td><td>√</td><td></td><td></td></tr>
<tr><td>PLO5</td><td>√</td><td>√</td><td>√</td><td></td><td></td></tr>
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</td></tr>
<tr><td>Contents</td><td>1. Gravity acceleration
2. Coefficient of long expansion
3. Boyle's Law
4. Water Cooling
5. Muffled vibration
6. Spring constant
7. The flow of water in the capillary tub
8. Stem oscillation
9. Equivalence of Heat-Electricity</td></tr>
<tr><td>Media employed</td><td>Offline (Experimental tool) and Online (Zoom Meeting, Google Meet, Google Classroom)</td></tr>
<tr><td>Assessments and Evaluation</td><td>Cognitive: Pretest, Final test
Psychomotor: Experiment
Affective: Experiment Report</td></tr>
<tr><td>Reading List</td><td>[1] Buku Panduan Praktikum Fisika Dasar II</td></tr>
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