

Electronics Practicum

Module Name :	Electronics Practicum	
Module Level :	Undergraduate	
Code :	32253021	
Sub-heading, if applicable :		
Classes, if applicable :		
Semester :	3 rd	
Module coordinator :	Upik Rahma Fitri, M.Pd.	
Lecturer(s) :	Upik Rahma Fitri, M.Pd.	
Language :	Indonesian	
Classification within the curriculum :	Compulsory course	
Type of Teaching	Contact hours per week during the semester	Class Size
Lecture (Expository, discussion, exercise)	50 minutes	40
Workload	Total workload of this course 45,3 hours (1,5 ECTS) per semester which consist of 13,34 hours (0,44 ECTS) classroom activity, 16 hours (0,53 ECTS) structured task, and 16 hours (0,53 ECTS) per semester.	
Credit points :	1,5 ECTS	
Prerequisite course(s) :	-	
Course Outcomes :	<p>After taking this course the student have ability to :</p> <p>CLO88. Mastering and skilled in operate measuring instruments in the field of electronics.</p> <p>CLO89. Mastering and skillful in analyzing RC differential and integrating circuits.</p> <p>CLO90. Mastering and skilled in analyzing low pass filter circuit and high pass filter high pass filter.</p> <p>CLO91. Master and skillful in analyzing diode circuits.</p> <p>CLO92. Mastering and skilled in analyzing transistor circuit. Able to plan advanced physics experiments.</p>	
Content :	<ol style="list-style-type: none"> 1. Data Processing <ul style="list-style-type: none"> • Data Processing • Regression 2. Introduction to Electric Circuit <ul style="list-style-type: none"> • Installing Multisim • Electric Circuit • Devices 3. Module 1 Operation of Measuring Instruments <ul style="list-style-type: none"> • Multimeter • Oscilloscope • Signal Generator 4. Module 2 Differential and RC Integrators <ul style="list-style-type: none"> • RC Differential Circuit 	

	<ul style="list-style-type: none"> • RC Integral circuit <ol style="list-style-type: none"> 5. Module 3 Low pass filter <ul style="list-style-type: none"> • Low pass filter 6. Module 4 High pass filter <ul style="list-style-type: none"> • High pass filter 7. Module 5 Diode Characteristics <ul style="list-style-type: none"> • Diode Characteristics 8. Module 6 Wave Rectifiers <ul style="list-style-type: none"> • Half Wave Rectifier • Full Wave Rectifier 9. Module 7 Transistor Circuits: Grounded Base <ul style="list-style-type: none"> • Base Transistor Circuit 10. Grounded Module 8 Transistor Circuit: Emitter Grounded <ul style="list-style-type: none"> • Emitter Transistor Circuit Published Planck's constant measurement 																				
Study/exam achievements:	<p>Examination are conducted as unit test, as following</p> <table border="1"> <thead> <tr> <th>No</th> <th>Assesment Object</th> <th>Assesment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Individual Assignment</td> <td>Written test</td> <td>15%</td> </tr> <tr> <td>2</td> <td>Practicum Report</td> <td>Written test</td> <td>40%</td> </tr> <tr> <td>3</td> <td>Group Presentation</td> <td>Discussion</td> <td>15%</td> </tr> <tr> <td>4</td> <td>Final Practicum Exam</td> <td>Practicum and written test</td> <td>30%</td> </tr> </tbody> </table>	No	Assesment Object	Assesment Technique	Weight	1	Individual Assignment	Written test	15%	2	Practicum Report	Written test	40%	3	Group Presentation	Discussion	15%	4	Final Practicum Exam	Practicum and written test	30%
No	Assesment Object	Assesment Technique	Weight																		
1	Individual Assignment	Written test	15%																		
2	Practicum Report	Written test	40%																		
3	Group Presentation	Discussion	15%																		
4	Final Practicum Exam	Practicum and written test	30%																		
Media :	Laptop/Computer, Epsilon Laptop/Computer (E-Learning Study Program), Project Board / Circuit Board / Board PCB Board, Video Conference Software: Zoom Meeting and Ms Team, Multisim 13, Office, Gitlab repository, Git Bash Terminal																				
Literatures :	<ol style="list-style-type: none"> 1. Alexander, Charles K. & Sadiku, Mathew N.O., 2013, Fundamental of Electric Ciscuits, 5th Edition, New York: McGraw-Hill. 2. Dorf, Richard C. & Svoboda, James A., 2014, Introduction to Electric Circuits, 9th Edition, United States: Wiley. 3. Schultz, Mitchel E., 2011, Grob's Basic Electronics, 11th Edition, New York: McGraw-Hill. 4. Malvino, Albert Paul & Bates, David J., 2016, Electronic Principles, 8th Edition, New York: McGraw-Hill. 																				