

Course Code	TKEE161204P					
Course Name	Fundamental of Electronics Lab Work					
Course Instructors	Wahyu Dewanto, Prapto Nugroho					
Course Type	Required					
Course Classification	Engineering Topics					
Credit / Contact Hour per Week	1 / 150 minutes per Week					
Course Description	This course complement the basic electronic course by demonstrating the working principle of basic electronic devices. The students will also be introduced to basic measurement instruments in electrical engineering such as osiloscope or NI Elvis.					
Prerequisites Courses	Basic Electronics (TKEE161204)					
Covered Student Outcome	Engineering Design (c) Data and Experiment (d) Multidisciplinary Teamwork (h)					
Learning Outcome	<ol style="list-style-type: none"> 1. Students are able to test basic discrete electronics component and able to gather data regarding their performance 2. Students are able to work in a team to realize a simple electronic engineering projects 3. Students are able to design a given circuit (analog mobile robot) 					
Topic	<ol style="list-style-type: none"> 1. Pengenalan NI ELVIS II dan Pengujian Komponen Elektronis 2. Pengujian Diode, Zener dan LED 3. Merangkai dan Menguji Sistem Penyearah Gelombang 4. Merangkai dan Menguji Transistor 5. Merangkai dan Menguji JFET 6. Merangkai dan Menguji MOSFET 7. Merangkai dan Menguji SCR 8. Praktikum Mandiri <ol style="list-style-type: none"> a. Line Following Robot b. Light Seeking Robot <p>(pilih salah satu, berkelompok 3 s/d 5 Mhs.)</p>					
Direct Assessment	<table border="1"> <thead> <tr> <th>Direct Assessment Plan</th> <th>Measured Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Labwork Report</td> <td>LO1, LO2, LO3</td> </tr> </tbody> </table>		Direct Assessment Plan	Measured Learning Outcome	Labwork Report	LO1, LO2, LO3
Direct Assessment Plan	Measured Learning Outcome					
Labwork Report	LO1, LO2, LO3					
Indirect Assesment	Questionnaire and direct communication					
References	<p>[1] Boylestad, R.L., <i>Electronic Devices and Circuit Theory</i>, 1999, Prentice Hall Int'l Inc, New Jersey.</p> <p>[2] Malvino, <i>Prinsip-prinsip Elektronik</i>, 1996, Erlangga.</p> <p>[3] Sedra, A. S. & Smith, K. C. <i>Microelectronics Circuits</i>, 2011, 6th edition, Oxford Series in Electrical and Computer Engineering.</p> <p>[4] Behzad Razavi, B. <i>Fundamental of Microelectronics</i>, 2001, McGraw-Hill International Edition.</p>					