

Course Code	TKEE161104P							
Course Name	Fundamental of Electrical Engineering Lab Work							
Course Instructors	Bondhan Winduratna, Eka Firmansyah, Suharyanto, Priyatmadi, Harry Prabowo							
Course Type	Required							
Course Classification	Engineering Topics							
Credit / Contact Hour per Week	1 / 150 minutes per Week							
Course Description	This course aims to introduce students to electrical measurement devices and to demonstrate the basic phenomena in electrical circuits							
Prerequisites Courses	Fundamentals of Electrical Engineering (TKEE161104)							
<b>Covered Student Outcome</b>	<b>Data and Experiment (d)</b> <b>Multidisciplinary Teamwork (h)</b>							
Learning Outcome	<ol style="list-style-type: none"> <li>1. Students are able to demonstrate and empirically verify basic electrical law and phenomena.</li> <li>2. Students are able to conduct measurement of electrical quantities.</li> <li>3. Students are able to perform measurement in groups and divide work appropriately</li> </ol>							
Topic	<ol style="list-style-type: none"> <li>1. Oscilloscope Measurement</li> <li>2. DC Circuit (Ohm's Law and Kirchoff's Law)</li> <li>3. AC Circuits</li> <li>4. Voltage Regulator (Zener Diode and Clipping)</li> <li>5. Transient Response</li> </ol>							
<b>Direct Assessment</b>	<table border="1"> <thead> <tr> <th><b>Direct Assessment Plan</b></th> <th><b>Measured Learning Outcome</b></th> </tr> </thead> <tbody> <tr> <td>Pretest</td> <td>LO1, LO2, LO3</td> </tr> <tr> <td>Labwork Report</td> <td>LO1, LO2, LO3</td> </tr> </tbody> </table>		<b>Direct Assessment Plan</b>	<b>Measured Learning Outcome</b>	Pretest	LO1, LO2, LO3	Labwork Report	LO1, LO2, LO3
<b>Direct Assessment Plan</b>	<b>Measured Learning Outcome</b>							
Pretest	LO1, LO2, LO3							
Labwork Report	LO1, LO2, LO3							
Indirect Assesment	Questionnaire and direct communication							
References	<p>[1] Robertson, L. Anne, 2012, Simple Program Design, Thomson Course Technology, United States of America.</p> <p>[2] B. Tucker, 1995, Fundamentals of Computing I, McGraw-Hill, Inc., United States of America.</p> <p>[3] L. Wear, 1991, "Computers", McGraw-Hill, Inc., United States of America.</p> <p>[4] Hanly, Jeri R., et.al., 1993, Problem Solving and Program Design in C, Addison Wesley Publishing Company.</p>							