

Course Code	TKEE162203											
Course Name	Basic Electric Machines											
Course Instructors	Harnoko, Bambang Sugiyantoro, Yusuf Susilo Wijoyo, T. Haryono, Harry Prabowo											
Course Type	Required											
Course Classification	Engineering Topics											
Credit / Contact Hour per Week	3 / 150 minutes per Week											
Course Description	Understanding the concept and character of each type of Electrical Machine and its real implementation.											
Prerequisites Courses												
Covered Student Outcome	<b>Fundamental and Engineering Knowledge (a) Development of Engineering Solution (b)</b>											
Learning Outcome	<ol style="list-style-type: none"> <li>1. Students are able to understand the working principles of each kind of electric machine</li> <li>2. Students are able to perform calculations for mathematical formulations on any type of electric machine</li> <li>3. Students are able to understand the physical construction of each type of electric machine</li> <li>4. Students are able to understand the real implementation of each type of electric machine</li> </ol>											
Topic	<ol style="list-style-type: none"> <li>1. Electromagnetic Basis</li> <li>2. Transformer</li> <li>3. Alternating-Current Electric Machine</li> <li>4. Synchronous Generator</li> <li>5. Synchronous Motor</li> <li>6. Induction Motor</li> <li>7. Induction Generator</li> <li>8. Direct-Current Electric Machine</li> <li>9. Direct-Current Motor</li> <li>10. Direct Current Generator</li> </ol>											
Direct Assessment	<table border="1"> <thead> <tr> <th>Direct Assessment Plan</th> <th>Measured Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Assignments</td> <td>LO1, LO2, LO3, LO4</td> </tr> <tr> <td>Mid Exam</td> <td>LO1, LO2</td> </tr> <tr> <td>Final Exam</td> <td>LO3, LO4</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		Direct Assessment Plan	Measured Learning Outcome	Assignments	LO1, LO2, LO3, LO4	Mid Exam	LO1, LO2	Final Exam	LO3, LO4		
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Assignments	LO1, LO2, LO3, LO4											
Mid Exam	LO1, LO2											
Final Exam	LO3, LO4											
Indirect Assesment	Questionnaire (EDOM)											
References	<p>[1] Chapman, Stephen J., 2005, Electric Machinery Fundamentals, 4th., McGraw-Hill</p> <p>[2] Wildi, Theodore. 2002. Electrical Machines, Drives, and Power Systems, 5th., Prentice Hall</p>											