

Course code	Course name	L-T-P-Credits	Year of Introduction
EE337	ELECTRICAL ENGINEERING LAB	0-0-3-1	2016
<b>Prerequisite :</b> EE216 Electrical Engineering			
<b>Course objectives</b>			
<ul style="list-style-type: none"> <li>To study the performance characteristics of dc and ac machines and transformers.</li> <li>To familiarize various electrical measurement methods</li> </ul>			
<b>Experiments</b>			
<ol style="list-style-type: none"> <li>Plot open circuit characteristics of DC shunt generator for rated speed - Predetermine O.C.C. for other speeds - Determine critical field resistance for different speeds</li> <li>Load test on DC shunt generator - Plot external characteristics - Deduce internal Characteristics</li> <li>Load test on DC series motor - Plot the performance characteristics</li> <li>OC and SC tests on single phase transformer - Determine equivalent circuit parameters - Predetermine efficiency and regulation at various loads and different power factors - verify for unity power factor with a load test</li> <li>Load test on 3 phase cage induction motor - Plot performance curves</li> <li>Resistance measurement using (a) Wheatstone's bridge (b) Kelvin's double bridge</li> <li>Measurement of self-inductance, mutual inductance and coupling coefficient of (a) Transformer windings (b) air cored coil</li> <li>Power measurement in 3 phase circuit - Two wattmeter method</li> <li>Extension of ranges of ammeter and voltmeter using shunt and series resistances</li> <li>Calibration of Single phase energy meter by direct loading</li> </ol>			
<b>Expected outcomes</b>			
<ul style="list-style-type: none"> <li>At the end of the semester students are expected to be familiar with the working and characteristics of DC and AC machines.etc</li> </ul>			