

Course Code	Course name	L-T-P-Credits	Year of Introduction
AE232	TRANSDUCERS AND INSTRUMENTATION LAB	0-0-3-1	2016
<b>Prerequisite :</b> AE204 Sensors and transducers			
<b>Course objective</b>			
<ul style="list-style-type: none"> <li>To give a hands on experience to students in various transducers and instrumentation.</li> </ul>			
<b>Experiments :-</b> ( Minimum 12 experiments are mandatory)			
<ol style="list-style-type: none"> <li>Determination of the characteristics of LVDT.</li> <li>Determination of characteristics of temperature sensor (AD590).</li> <li>Determination of the characteristics of thermocouple.</li> <li>Determination of the characteristics of RTD</li> <li>Determination of the characteristics of optical transducers using LDR.</li> <li>Determination of the characteristics of capacitive displacement transducer.</li> <li>Measurement of displacement using inductive transducer.</li> <li>Calibration of force transducer signal conditioner plot force/voltage characteristics curve.</li> <li>Measurement of torque and pressure using strain gauges.</li> <li>Determination of the characteristics of Micro pressure and Micro accelerometer sensing device.</li> <li>Measurement of pressure using piezoelectric pick up.</li> <li>Measurement of strain and load using strain gauges.</li> <li>Determination of the characteristics of Hall Effect sensor.</li> <li>Calibration using dead weight tester.</li> <li>Level measurement using capacitive transducer.</li> <li>Pressure measurement using U-tube manometer.</li> <li>Measurement of speed using photo electric pickup transducers.</li> <li>Measurement of position using synchro Transmitter and receiver.</li> </ol>			
<b>Expected outcome</b>			
<ul style="list-style-type: none"> <li>At the end of the semester students are expected to be familiar with various transducers and its application.</li> </ul>			