

COURSE CODE	COURSE NAME	L-T-P-C	YEAR OF INTRODUCTION
EC335	Power Electronics & Instrumentation Lab	0-0-3-1	2016
Prerequisite: NIL			
Course objectives:			
<ul style="list-style-type: none"> • To design and implement basic power electronic circuits • To study the working of transducers • To train the usage of Digital Instruments 			
List of Experiments (8 experiments mandatory):			
<p>Cycle I (Four mandatory)</p> <ol style="list-style-type: none"> 1. Design and Set up DC-DC converter 2. Design and Set up Push pull DC- DC Converter 3. Design and Set up Buck DC-DC Converters 4. Design and Set up Simple SMPS 5. Design and Set up Half bridge and full bridge converters 6. Design and Set up basic Inverter Circuits <p>Cycle II (Four mandatory)</p> <ol style="list-style-type: none"> 7. Transducer measurements using diode thermometer 8. Transducer measurements using LVDT 9. Transducer measurements using Strain gauge. 10. Transducer measurements using Pressure transducer. 11. Transducer measurements using Thermocouple & RTDS 12. Transducer measurements using Photocells <p>Desired Experiment</p> <ol style="list-style-type: none"> 13. Study of Digital LCR meter, Frequency synthesizer, Spectrum analyzer and Logic State analyzer application. 			
Expected outcome:			
<p>The students will be able to:</p> <ol style="list-style-type: none"> 1. Design and demonstrate basic power electronic circuits. 2. Use transducers for application. 3. Function effectively as an individual and in a team to accomplish the given task. 			