

<b>18PEC23</b>	<b>ADVANCED POWER ELECTRONICS LABORATORY II</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>

**Course Objectives:**

1. To provide an insight on the switching behaviours of power electronic switches
2. To make the students familiar with the digital tools used in generation of gate pulses for the power electronic switches
3. To make the students capable of implementing analog interfacing as well as control circuits used in a closed-loop control for power electronic system
4. To make the students acquire knowledge on mathematical modelling of power electronic circuits and implementing the same using simulation tools

**LIST OF EXPERIMENTS:**

1. Dynamic characteristics of SCR and TRIAC
2. Dynamic characteristics of MOSFET, BJT and IGBT
3. Single phase ac voltage controller using SCR and TRIAC
4. Three phase half and fully controlled bridge converter
5. Single phase series inverter
6. IGBT based three phase PWM Inverter
7. MOSFET based buck boost converter
8. DC-DC forward converter
9. DC-DC flyback converter
10. Single phase dual converter
11. DC series resonant converter

**Total (60+0)= 60 Periods**

**Course Outcomes:**

*Upon completion of this course, the students will be able to:*

- |     |   |   |
|-----|---|---|
| CO1 | : | <i>Implement ac voltage controller</i>                                  |
| CO2 | : | <i>Obtain the performance of any type of converter</i>                  |
| CO3 | : | <i>Analyse the performance of single phase and three phase inverter</i> |
| CO4 | : | <i>Implement DC-DC converter</i>  |
| CO5 | : | <i>Analyse the performance of resonant converter</i>                    |

PO CO	CO Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	<i>Implement ac voltage controller</i>	2	1	3	3	3	1	2	3	2	1	2
CO2	<i>Obtain the performance of any type of converter</i>	2	3	3	1	3	1	2	3	1	1	1
CO3	<i>Analyse the performance of single phase and three phase inverter</i>	2	3	1	1	2	1	1	1	1	1	1
CO4	<i>Implement DC-DC converter</i>	1	1	3	3	3	1	2	3	1	1	1
CO5	<i>Analyse the performance of resonant converter</i>	2	3	3	1	3	1	2	3	1	1	1