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<th>Course No.</th>
<th>Course Name</th>
<th>L-T-P - Credits</th>
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<td>EE231</td>
<td>ELECTRONIC CIRCUITS LAB</td>
<td>0-0-3-1</td>
<td>2016</td>
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**Course Objectives**

To design and develop various electronic circuits using discrete components and OPAMPs.

**List of Exercises/Experiments:** (Out of 18 experiments listed, 12 experiments are mandatory.
2. Half wave and Full wave (Centre-tapped and bridge) Rectifiers with and without filters.
   Calculation of Ripple factor, Rectification efficiency, and % regulation.
3. Clipping circuits using diodes.
5. RC coupled amplifier using BJT in CE configuration - Measurement of gain, input and output impedance and frequency response.
6. JFET amplifier - Measurement of voltage gain, current gain, input and output impedance.
7. Design and testing of simple zener voltage regulators.
8. OPAMP circuits – Design and set up of inverting and non-inverting amplifier, scale changer, adder, integrator, differentiator.
10. Phase shift oscillator using OPAMPs.
11. Wein’s Bridge oscillator using OPAMPs.
12. Waveform generation – Square, triangular and sawtooth wave form generation using OPAMPs.
15. Astable and monostable circuit using 555 IC.
16. RC phase shift oscillator using BJT.
17. Introduction to circuit simulation using any circuit simulation software.
18. Introduction to PCB layout software.

**Expected outcome.**

The student should be able to design and implement various electronic circuits using BJTs and OPAMPs.

**Text Book/References:**