

**SE Electronics Engineering
Semester IV
Syllabus of Laboratory**

Subject Code	Subject Name	Teaching Scheme			Credits Assigned			
		Theory	Practical	Tutorial	Theory	TW	Tutorial	Total
EXL 401	Discrete Electronics Laboratory	--	02	--	--	01	--	01

Subject Code	Subject Name	Examination Scheme								
		Theory Marks					Term Work	Practical and Oral	Oral	Total
		Internal assessment			End Sem. Exam					
		Test 1	Test 2	Ave. Of Test 1 and Test 2						
EXL 401	Discrete Electronics Laboratory	--	--	--	--	25	50	-	75	

Syllabus: Same as **EXC402 (Discrete Electronics)**

Term Work:

At least 10 experiments based on the entire syllabus of Subject **EXC402 (Discrete Electronics)** should be set to have well predefined inference and conclusion. Computation/simulation based experiments are encouraged. Therefore, minimum of 05 simulation experiments be carried out (out of total 10 Expts.) The experiments should be students' centric and attempt should be made to make experiments more meaningful, interesting and innovative. Term work assessment must be based on the **overall performance** of the student with **every experiment graded from time to time**. The grades should be converted into marks as per the **Credit and Grading System** manual and should be **added and averaged**. The grading and term work assessment should be done based on this scheme.

The final certification and acceptance of term work ensures satisfactory performance of laboratory work and minimum passing marks in term work. Practical and Oral exam will be based on the entire syllabus.

Suggested Experiments on Simulation:

1. One SPICE simulations and implementation for BJT and FET DC biasing (Design and Testing)
2. One SPICE simulation and implementation for an Amplifier Design and Testing with measurement of input and output impedance.
3. One SPICE simulation and implementation for Frequency response of cascaded and single stage amplifiers.
4. One SPICE simulation and implementation for Oscillators.
5. One SPICE simulation and implementation for Negative feedback amplifiers.
6. One SPICE simulation for Differential amplifier with active load.
7. One SPICE simulation for power amplifier.
8. One SPICE simulation for Darlington/cascode amplifier.