

<b>EC308</b>	<b>Integrated Circuit Applications Lab</b>	<b>PCC</b>	<b>0-1-2</b>	<b>2 Credits</b>
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**Prerequisites:** None

**Course Outcomes:** After the completion of the course the student will be able to:

CO1	Measure the parameters of IC 741 Op-amp.
CO2	Realize analog filters using Op-amp.
CO3	Plot the characteristics of TTL NAND Gate.
CO4	Design monostable and astable multivibrators using 555 IC.
CO5	Design modulo-N counters using TTL ICs.

**Mapping of course outcomes with program outcomes:**

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	2	-	-	-	-	-	-	-	-	-	-	2	-
CO2	2	3	-	-	-	-	-	-	-	-	-	-	2	2
CO3	-	2	-	-	-	-	-	-	-	-	-	-	2	-
CO4	-	3	-	-	-	-	-	-	-	-	-	-	2	2
CO5	-	3	-	-	-	-	-	-	-	-	-	-	2	2

**List of Experiments:**

- 1: Study and Operation of IC testers, pulse generator and digital trainer.
- 2: Study of logic gate ICs and their applications
- 3: Frequency response of inverting and non-inverting amplifier.
- 4: Measurement of Op.amp parameters: (i) Offset voltage (ii) Offset current  
(iii) CMRR and (iv) Slew rate
- 5: Characteristics of TTL NAND gate: (i) Sourcing (ii) Sinking (iii) Transfer
- 6: Verify the functionality of Mux and Decoder ICs and their application.
- 7: Op.amp monostable and astable multivibrators.
- 8: Design 2's complement adder/subtractor using IC74283 and verify experimentally.
- 9: Verify the functionality of Flip-Flop ICs and its application.
- 10: Mod-N counter using 7490 and 74190.
- 11: 555 timer: Monostable and astable multivibrators.
- 12: Mod-N counter using 7492 and 74192.
- 13: Shift register IC 7495.
- 14: Low voltage regulator IC 723.