EC 205 - Analog Electronics Lab - Course Plan

Electronics and Communication Engineering

Course Instructor: Dr. Nikhil K. S. Credits: 2 (0-0-3)

Modules	Experiments	No of weeks
Basic Electronic Circuits	1. To design OR and AND logic gates using diodes and resistors. 2. To study clipping and clamping circuits. 3. To design full-wave Bridge rectifier, Unregulated and regulated power supply. 4. To study the behavior of RC circuit for sinusoidal and square wave excitation. 5. To study the effect of negative feedback.	5
Linear and non-linear applications of opamps	6 Non-inverting amplifier. 7. Inverting Adder. 8. All-pass filter. 9.Second order filter. 10. Study of Comparator, Inverting Schmitt trigger and non-inverting Schmitt trigger circuits. 11. Astable multivibrator.	6

Course outcomes:

1) Student should be able to design and simulate various basic electronic circuits and systems.
2) Student should be able to design and simulate op-amp based circuits.
3) Student should be able to analysis the circuit performance from the simulated results.

Tentative Course Evaluation plan :
Continuous Evaluation / Assignment – 60 marks
Midsem – 15 marks
Endsem – 25 marks

References:

[1] Behzad Razavi, “Fundamentals of Microelectronics”, Second edition, Wiley, 2013.
[2] A. Sedra, K. Smith, “Microelectronic Circuits: Theory and Applications” Oxford University Press, 2004.
[3] Sergio Franco, “Design with OPAMPS and Linear Integrated circuits”, Tata McGraw Hill, 2002.