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| **Course Code** | **Course Name** | **L-T-P - Credits** |
| **EE 251** | **ANALOG ELECTRONICS LAB** |  **0-1-2 : 2** |
| **Prerequisite: NIL Corequisite: Analog Electronics** |
| **Course Objective:** To learn analog circuit design based on opamp for various applications |
| **Syllabus (List of Experiments)** |
| 1. | Design of differential, inverting and non-inverting amplifiers based on open-loop op-amp configurations. |
| 2. | Design of Voltage follower, Current to voltage Converter, inverter, and differential amplifier with two op-amps. |
| 3. | Design of Offset compensation network CMMR configuration with and without feedback, Peak amplifier  |
| 4. | Design of Summing, subtractor, Scaling and averaging amplifiers, Integrator and Differentiator.  |
| 5. | Design of Active Filters; High pass, Low pass, Band pass, Band Reject and All pass Filters.  |
| 6. | Design of Phase shift oscillator, Wien Bridge Oscillator, Quadrature Oscillator. |
| 7.8. 9.10. | Design of Square wave generator, Triangular wave generator, Sawtooth Wave generator, comparator .Zero-crossing detector, Schmitt Trigger, Voltage limitersDesign of Analog-to-Digital converterDesign of clipper, clamper, half wave and full wave rectifiers |
| **Supplementary Readings:**1. Gayakwad Ramakant, “Op-Amps and Linear Integrated Circuits”, PHI, 4th Edition, 2002.
2. Jacob Millman and C. C. Halkias, “Integrated Electronics: Analog and Digital Circuits and Systems,” McGraw-Hill Kogakusha, 2nd Edition, 2011
3. P. Gray, P. Hurst, S. Lewis, and R. Meyer, “Analysis & Design of Analog Integrated Circuits,” Wiley, 4th Edition, , 2001
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