ANALOG INTEGRATED CIRCUITS

EET 222 Analog Integrated Circuits 4.0 UNITS

Introduces the characterization and operation of integrated circuits in analog systems. Follows the sequence of courses in active electronic devices and their applications. This covers descriptions and applications of operational amplifiers and linear integrated circuits, as well as their use as building-blocks for linear and nonlinear analog systems. Topics included are inverting and noninverting amplifiers, buffer amplifiers, signal generators, timers, voltage regulators, active filters, function generators, multipliers, and D/A conversion. Limitations of op-amps are discussed, as well as other topics dictated by student and instructor interest. The laboratory component complements the course material. Proper breadboarding techniques are introduced and integrated circuit testing and evaluation are performed. The laboratory supports the theory with experiments in linear application of op-amps, nonlinear application of op-amps, signal generators and timers, data presentation-differentiator, integrator and triangular wave generator, and active filters. The student selects a project from the text or other literature.