PULSE AND DIGITAL CIRCUITS

EET 216   **Pulse and Digital Circuits**   **4.0 UNITS**
Examines the characteristics, analyses and design of wave-shaping, switching, and digital circuits. Emphasis is on circuits and systems which use discrete semiconductor devices. Integrated circuit fundamentals and applications are present in succeeding courses. Topics include switching operation and characteristics of semiconductor devices; clipping, clamping, and limiting circuits; pulse nomenclature; logic circuit fundamentals; binary arithmetic and truth tables; triggered devices, and multivibrator circuits and counter circuits. The laboratory component of the course is intended to analyze circuit components, breadboarding of basic logic circuits, experimental analysis of pulse switching, and triggering circuits. In addition, proper testing techniques for these systems are developed. Experiments cover pulse fundamentals, pulsed response of RC circuits, diode clippers and clampers, BJT and FET switches, logic inverters and gates, discrete logic gates, Schmitt- trigger circuits, the unijunction transistor, the monostable and astable multivibrator, and the bistable multivibrator.