

ELECTRICITY/ELECTRONICS (EET)

EET 251. Electricity and Electronics. (3 Credits)

I, II. Prerequisite: Grade of at least "C" in MAT 095 or a minimum math ACT score of 18 or a minimum SAT math score of 490. Principles of basic electricity, circuit operation, and electronics. Topics include electrical components, measurements, power, characteristics of AC-DC, basic circuit laws, circuit simulation, magnetism, energy conversion, and sources. 2 Lec/2 Lab.

EET 252. Digital Electronics. (3 Credits)

I, II. Prerequisite: grade of at least "C" in MAT 090 or equivalent. A survey of digital electronics fundamentals and applications. Topics include number systems, digital mathematics, logic families, logic gates, multiplexers, demultiplexers, comparators, counters, decoders, displays, and converters. 2 Lec/2 Lab.

EET 253. Microprocessor Control Systems. (3 Credits)

A. Prerequisite: EET 251 and 252. The operation and application of microprocessor-based control systems in electro-mechanical project environments. Topics include data, address, and control signals; memory software; interfacing digital and analog devices; ports; and data communications. 2 Lec/2 Lab.

EET 254. Machine Language/Microcontrol. (3 Credits)

A. Prerequisite/Corequisite: EET 252. Machine language programming for ROM based microprocessor based industrial controllers. Emphasis on software manipulation of I/O control devices in real-time, interrupt driven, process control environments. 2 Lec/2 Lab.

EET 257. Electronic Devices and Circuits. (3 Credits)

A. Prerequisite: EET 251. An analysis of the characteristics of solid state devices and the common circuits that utilize these devices. Emphasis on problem solving supplemented by laboratory activities and demonstration of electronic circuits and devices. 2 Lec/2 Lab.

EET 349. Co-op or Appl Lrn: CET/CEN. (1-8 Credits)

II. Prerequisite: departmental approval, sophomore (30-59 hours) or higher standing and minimum of 2.0 GPA. Work under faculty and field supervisors in placements related to academic studies in Computer Electronics Technology (CET) or Computer Electronic Networking (CEN). Transfer students must have completed at least 12 hours of coursework at EKU. A minimum of 80 hours work required for each academic credit.

EET 350. Industrial Electronics I. (3 Credits)

A. Prerequisite: EET 257. Principles of timing, power control circuitry, transducers, and programmable controllers in commercial and industrial applications. 2 Lec/2 Lab.

EET 351. Programmable Logic Controllers. (3 Credits)

A. Prerequisite: EET 251 or 252. The study of programmable logic controllers (PLCs). PLC functioning theory, selection, wiring, and programming. 2 Lec/2 Lab.

EET 452. Electrical Power & Drives. (3 Credits)

A. Prerequisites: EET 257; MAT 120 or higher and PHY 101. Principles of electromagnetic induction as applied to the generation, distribution, conversion, control, and measurement of electrical power. Analysis of the electronics used for electrical drives. Installation, programming and maintenance of digital drives. 2 Lec/2 Lab.