Electrical Engineering Technology (EET)

Courses

EET 2240 Introduction to Electrical Circuits: 3 semester hours.
DC circuits, passive circuit elements, independent and controlled sources. Circuit
laws, theorems and methods of analysis. Transients to RLC circuits. Computer-
 aided circuit analysis. PREREQ: MATH 1170. F

EET 2274 Introduction to Digital Systems: 3 semester hours.
Number systems, Boolean algebra fundamentals, system reduction, design and
analysis of combinational and sequential logic circuits. PRE-or-COREQ: EET 2275. F

EET 2275 Introduction to Digital Systems Laboratory: 1 semester hour.
Number systems, Boolean algebra fundamentals, system reduction, design
and analysis of combinational and sequential logic circuits. PRE-or-COREQ: EET 2274. F

EET 3329 Introduction to Electronics: 3 semester hours.
Introduction to semiconductor materials and device theory. Diodes, bipolar
junction transistors and metal-oxide-semiconductor field effect transistors.
Amplifiers and frequency response. PRE-or-COREQ: EET 3340. S

EET 3340 Fundamentals of Electrical Devices: 3 semester hours.
AC circuits. Design and analysis of passive and active filters. Three-phase
circuits. Computer-aided circuit analysis. PREREQ: EET 2240. PRE-or-COREQ: EET 3342 and MATH 1175. S

EET 3342 Fundamentals of Electrical Devices Laboratory: 1 semester hour.
Laboratory experience emphasizing basic electrical measurements and methods.
CO-or-PREREQ: EET 3340. S

EET 3345 Signals and Systems: 3 semester hours.
Linear time-invariant systems, continuous and discrete. Fourier series, Fourier
transforms, Laplace transforms, z-transforms; state-space analysis, discrete
Fourier transforms and the FFT. PREREQ: EET 3340. PRE-or-COREQ: MATH 3360. F

EET 4400 Senior Seminar: 1 semester hour.
Current topics in Electrical Engineering Technology. Selection of senior design
projects. PREREQ: Permission of instructor. F

EET 4418 Communication Systems: 3 semester hours.
Basic analysis and design principles for modern analog and digital
communication systems. PREREQ: EET 3329 and EET 3345. S

EET 4426 Computer Architecture and Organization: 3 semester hours.
Design, implementation, and performance evaluation of computer systems.
Instruction sets, datapath and control optimizations. Single-cycle, multiple-cycle,
and pipelined processors. Hazard detection and resolution, memory hierarchies,
peripheral devices. PREREQ: EET 2274 and EET 2275. F

EET 4427 Embedded Systems Engineering: 2 semester hours.
Design of real-time and embedded systems for signal processing and control
through integration of algorithms, software and hardware. PREREQ: EET 4426
or CS 1337. PRE-or-COREQ: EET 4427L. S

EET 4427L Embedded Systems Laboratory: 1 semester hour.
Laboratory experience in design and implementation of embedded signal
processing and control systems through the integration of algorithms, software
and hardware. PRE-or-COREQ: EET 4427. S

EET 4429 Advanced Electronics: 3 semester hours.
Introduction to operational amplifiers and their applications, current mirrors,
active loads, differential amplifiers, filters, oscillators, Schmitt triggers, power
amplifiers and voltage regulators. Feedback and stability. PREREQ: EET 3329. F

EET 4472 Electrical Machines and Power: 3 semester hours.
Theory and application of electrical machines and transformers. Power and
energy relationships. PREREQ: EET 3340 and EET 3342. PRE-or-COREQ: EET 4472L. F

EET 4472L Electrical Machines and Power Laboratory: 1 semester hour.
Laboratory experience in the study of fundamental physical phenomena and
characteristics of transformers, induction motors, synchronous and DC machines.
PRE-or-COREQ: EET 4472. F

EET 4473 Automatic Control Systems: 3 semester hours.
Continuous-time control systems using both frequency-domain and state-space
techniques. Topics include design methodology, performance specifications,
analysis and design techniques. PREREQ: EET 3345. S

EET 4475 Digital Signal Processing: 3 semester hours.
Discrete, fast Fourier and Z-transforms, correlation, convolution, finite and
infinite impulse response digital filter design, spectral analysis and adaptive
digital filters. Includes projects. PREREQ: EET 3345. S

EET 4496 Senior Project: 3 semester hours.
Conceptual design of multidisciplinary projects. Design, analysis, and
implementation of senior projects proposed and defined in EET 4400. PREREQ:
EET 4400. S

EET 4499 Experimental Course: 1-6 semester hours.
The content of this course is not described in the catalog. Title and number of
credits are announced in the Class Schedule. Experimental courses may
be offered no more than three times with the same title and content. May be
repeated.