

EET-Electronic Eng Technology

EET110 - Electrical Circuits I

Circuits I is an introductory course into DC and AC circuit analysis suitable for entry level engineering technology students and technology students. The course focus is developing a basic understanding of voltage, current resistance and reactance in basic circuits. Topics include resistance, voltage, current, series, parallel and series-parallel circuits.

EET160 - Electrical Circuits II

An introduction to the study of electrical circuits in the sinusoidal steady state. Topics include capacitors, inductors, complex numbers, AC mesh analysis AC nodal analysis, and network theorems pertaining to AC sources.

EET210 - Linear Electronics I

A study of solid state semiconductor devices including diodes and transistors, and their application in electronic circuits. Topics include diode and transistor structure and characteristics, design parameters for electronic circuit application, typical power conditioning circuits, and typical amplifier circuits. The laboratory component reinforces course content by applying scientific calculator and circuit analysis/simulation software skills to the derivation and analysis of circuit experiments.

EET215 - Introduction to Instrumentation

An introduction to the techniques of designing electronic instruments to measure physical quantities with the aid of transducers. Topics include analog and digital signal conditioning circuits, electronic filters, and various electronic sensors. Circuits will be designed and tested from mathematical models in order to transfer signals to either an analog or a digital format.

EET310 - Methods in Engineering Analysis

Introduction to matrix theory, classical first and second order transient analysis, active filter design and basic Z- and Fourier-transforms.

EET320 - Network Analysis

A calculus-based circuit theory course. Topics include the introduction to Laplace transforms and the use of Laplace transforms in the study of circuit analysis, transfer functions and frequency response. Circuit analysis programming is used to compare computer solutions with analytic solutions.

EET325 - Introduction to Electric Power

A study of three-phase circuits, transformers, DC machines, polyphase AC machines and single-phase AC machines.

EET365 - Linear Electronics II

This course is an introduction to the function of solid state devices. The emphasis is placed on the internal structure, function and limitations of linear devices such as diodes, transistors, power amplifiers, operational amplifiers and oscillators.

EET370 - Instrumentation Design I

A computer-based graphical programming environment for instrumentation design, control and testing. Mathematical models will be developed to design applications. The course offers students concepts of current industry trends in instrumentation, testing and control. A course project is developed to implement a practical instrumentation system.

EET400 - Senior Project Proposal

This senior course provides the student with an opportunity to integrate several concepts of different areas of the program and it allows him/her to pursue specialized interests. The student will submit a written proposal for a project. After approval of the project the student will be assigned a faculty advisor. Minimum requirements for the proposal are submission of a functional specification and time schedule for completion.

EET410 - Automatic Control Systems

This course covers theory and practice of control systems with emphasis on classical control theory and an introduction to the fundamentals of modern control. Students will analyze, design and synthesize continuous feedback control systems based on root locus, frequency response and state space methods. Students will become familiar with the analytical techniques and will be exposed extensively to the use of computers for analysis and design of control systems. Various control strategies will be discussed.

EET425 - Power System Analysis

A concise study of classic and modern topics related to the operation of power systems. Subjects covered in this course include analysis of steady state balanced 3-phase systems, transmission lines, power flow, system protection and controls. The laboratory component is mostly software based. Simulations of basic to advanced configurations will help the students investigate all the basic theoretical concepts.

EET426 - Power System Management

A study of various topics related to generation, transmission, distribution, and use of electric energy. The course references traditional (fossil fuels, hydro, nuclear) as well as renewable energy sources and covers subjects in power station management and electric energy market structure.

EET430 - RF Communications

Communication systems principles, including AM/FM modulation, AM/FM demodulation, transmitters, receivers, antennas, transmission lines, digital techniques and protocols.

EET450 - Senior Project

Employs the design, construction and analysis of an electronic device or instrument. Depending on the complexity of the project, total construction may not be required. With approval from the adviser, group projects may also be involved.

EET460 - Digital Signal Processing

Introduction to linear systems, digital filters and the Z-Transforms, and the Fast Fourier Transform. Fundamentals of Shannon's sampling theory and the interfacing of analog signals to microprocessor based systems for digital signal processing.

EET485 - Special Topics in EET

This course allows current topics in electrical engineering technology to be offered in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic; however, they are appropriate to a senior-level course. The course topic depends upon current trends in electrical engineering technology, interests of the student, and the instructor. This course is repeatable.

EET495 - EET Internship

Upon acceptance to an internship site, the student will work with an electrical engineer and/or an electronic technician inspecting, maintaining, calibrating, testing, analyzing, assembling, modifying or designing various types of electronic devices. Programs of instruction will vary, but the student will be provided with practical work

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experience in a dynamic environment in which they will be dealing with actual problems requiring practical solutions.