ELECTRONICS ENGINEERING TECHNOLOGY (EET)

EET 1003 Introduction to Microcomputer Programming
Prerequisites: Concurrent enrollment in MATH 1513.
Description: Programming a microcomputer using a spreadsheet and in BASIC. Application of algorithms to solve defined problems and an introduction to the numerical limitations of small machines. Previously offered as ECT 1003.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 1104 Fundamentals of Electricity
Prerequisites: MATH 1513 and consent of department.
Description: Elementary principles of electricity covering basic electric units. Ohm’s law, Kirchhoff’s law, circuit solutions, network solutions, magnetism, inductance and capacitance. Course previously offered as ECT 1104.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 1244 Circuit Analysis I
Prerequisites: MATH 1513.
Description: Analysis of AC electric circuits. The use of network theorems and phasors, coupled circuits, resonance, filters, and power. Course previously offered as ECT 1244.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 2303 Technical Programming
Prerequisites: EET 1104, MATH 1513 or completion of comparable engineering science courses.
Description: Introduction to machine programming using industrial standard languages, emphasis on problems from science and technology. Course previously offered as ECT 2303.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 2544 Pulse and Digital Techniques
Prerequisites: EET 1104.
Description: Electronic circuits used in digital control and computation. Pulse generation, Boolean algebra and logic circuits. Course previously offered as ECT 2544.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 2635 Solid State Devices and Circuits
Prerequisites: EET 1244, MATH 1613.
Description: Diodes, transistors, LSI linear devices; their operation and applications in electronic circuits. Course previously offered as ECT 2635.
Credit hours: 5
Contact hours: Lecture: 4 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3005 Electronics Analysis I
Prerequisites: EET 1104, EET 2544, EET 2635, MATH 1513, MATH 1613, or evaluated equivalent. Corequisite(s): MATH 2123
Description: Extensive use of mathematics in analyzing discrete, linear device, linear systems and non-linear circuits. Development of the analytic skills necessary for upper-division work. The use of basic calculus in circuit analysis. Must obtain a "C" or better before admission to other 3000 level EET courses. Intended for transfer and returning students. Enrollment by adviser consent.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3014 Elements of Electricity and Electronics
Prerequisites: MATH 1513.
Description: Essentials of electricity, controls, and electronics for non-majors. No credit for EET majors. Course previously offered as ECT 3104.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3113 Circuit Analysis II
Prerequisites: EET 2635 and MATH 2133.
Description: Application of elementary switching functions and LaPlace transforms to electronic circuit analysis. Circuit analysis in the S-plane, transfer functions and the application of circuit analysis software. Course previously offered as ECT 3113.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

EET 3124 Project Design and Fabrication
Prerequisites: EET 1244, EET 2544, EET 2635
Description: Methods of designing, analyzing and fabricating electronic circuits using standard software packages. Heat transfer characteristics and problem solutions are included. Course previously offered as ECT 3124.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology
EET 3254 Microprocessors I
Prerequisites: EET 2544.
Description: An introduction to microcontrollers and their uses in embedded applications. Topics include system architecture, assembly language, structured programming, memory systems, user I/O, timers, peripherals, etc. Course previously offered as ECT 3254.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3264 Microprocessors II
Prerequisites: EET 2544, EET 3254.
Description: A continuation of EET 3254. Programming and interfacing of microcontrollers in embedded application, including interrupts, EEPROM, serial programming, interfacing, power management, algorithms, stepper motor control. Course previously offered as ECT 3264.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3354 Communication and Signal Processing
Prerequisites: EET 1244, EET 2635, MATH 2133, GENT 3123.
Description: Bandpass signaling principles and circuits. The Fourier transform; AM, SSB, FM, and PM signaling; binary modulated bandpass signaling (FSK and PSK); superheterodyne receiver; phase locked loop (PLL); modulators and mixers; frequency multiplication; special purpose IC's. Course previously offered as ECT 3354.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3363 Data Acquisition
Prerequisites: EET 2544 and EET 2635.
Description: Methods used to convert physical variables to digital signals and vice versa. Signal conditioning, digital-to-analog converters, analog-to-digital converters, sample-and-hold circuits, sensors, and transducers. The use of computers in data acquisition and signal processing. Course previously offered as ECT 3363.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3423 Applied Analysis for Technology
Prerequisites: MATH 2133 or equivalent.
Description: Applications of elements of matrix algebra, ordinary differential equations, Fourier series, and infinite series to problems in engineering technology. Previously offered as GENT 3123.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

EET 3524 Advanced Logic Circuits
Prerequisites: EET 2544.
Description: Computer-based design, simulation and implementation of digital/mixed-signal systems using programmable logic, field programmable gate arrays, ASICs and system-on-chip technology.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3533 Introduction to Telecommunications
Prerequisites: EET 2544, EET 2635, EET 3254.
Description: Introductory course to the field of telecommunications. Study of the various technologies and how the application of these technologies work together to form functioning systems and networks.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3713 Introduction to Electric Power Technology I
Prerequisites: EET 1244 or EET 3104, PHYS 1214, MATH 2123 and MATH 2133.
Description: Concurrent enrollment in MATH 2133 or equivalent coursework is acceptable. Physical principles of electromagnetic and electromechanical energy conversion devices and their application to conventional transformers and rotating machines.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3723 Introduction to Electric Power Technology II
Prerequisites: EET 1244 or EET 3104, PHYS 1214, MATH 2123 and MATH 2133.
Description: Concurrent enrollment in MATH 2133 or equivalent coursework is acceptable. Physical principles of electromagnetic and electromechanical energy conversion devices and their application to conventional transformers and rotating machines.
Credit hours: 3
Contact hours: Lecture: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 3800 Advanced Electronic Problems
Prerequisites: Junior standing and consent of head of department.
Description: Junior standing and consent of head of department. Special problems in the electronic area. Course previously offered as ECT 4050. Offered for variable credit, 1-4 credit hours, maximum of 4 credit hours.
Credit hours: 1-4
Contact hours: Other: 1
Levels: Undergraduate
Schedule types: Independent Study
Department/School: Engineering Technology
EET 4314 Elements of Control
Prerequisites: EET 3113, EET 3123, EET 3363, GENT 3123.
Description: Principles of analog and digital control, with emphasis on
the analysis of feedback control systems in their various conceptual
configurations. Application of feedback control theory to the analysis
and design of present day circuits and systems. Use of circuit analysis
software. Course previously offered as ECT 4314.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 4363 Digital Signal Processing
Prerequisites: EET 3354, EET 3363.
Description: Introduction to Digital Signal Process. Theoretical
development of Fourier transforms, IIR and FIR filters. Significant Design
and programming projects.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

EET 4514 Advanced Telecommunication Topics
Prerequisites: EET 3533.
Description: Study of data transmission techniques between digital
electronic devices.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 4523 Introduction to Telecommunications
Prerequisites: EET 4514.
Description: Study of the effective management of telecom systems.
Topics such as traffic engineering, quality of service and associated
design costs are examined.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 4654 Microwave Techniques
Prerequisites: EET 2635, EET 3354.
Description: Study of topics pertaining to VHF behavior of circuits and
systems. Transmission line theory: wave equations, SWR, impedance
calculations and transformations, and lossy lines. Extensive use of
the Smith chart to solve transmission line problems. Introduction to
Maxwell’s equations, with emphasis on steady state. Wave propagation
in rectangular waveguides. Introduction to antennas. Modeling of
transistors at VHF, UHF, and microwave frequencies. Design and analysis
of transistor amplifiers at VHF using y and s parameters. Designing LC
impedance matching networks. Previously offered as ECT 4654.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 4833 Industrial Project Design I
Prerequisites: 20 credit hours of upper-division electronics courses or
consent of instructor.
Description: Course mirrors the design process in industry. Topics
covered are Design Team formation, Identify Objectives, define design
specifications, write specifications, create a state of work and Gantt
chart, create a project budget, perform a Preliminary Design Review,
Design Prototype. Previously offered as EET 4832 and ECT 4832.
Credit hours: 3
Contact hours: Lecture: 1 Lab: 4
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 4843 Industrial Project Design II
Prerequisites: EET 4833.
Description: Student continues in the project steps of Change Board
Review, Critical Design Review, Developing & Writing Test Specs., Product
Fabrication and Testing, Formal Technical Report Submission and
Outcomes Assessment Exam.
Credit hours: 3
Contact hours: Lecture: 1 Lab: 6
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology