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 Contact: 4
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 1101 Fundamentals of DC Circuits Lab
Prerequisites: MATH 1513 or equivalent.
Description: Elementary principles of dc electricity laboratory for Non-EET students who have taken a dc circuits course without a lab component. This is the same curriculum and lab experience that students would experience taking EET 1114. May not be used for degree credit with EET 1134 or EET 1104.
Credit hours: 1
Contact hours: Lab: 3 Contact: 3
Levels: Undergraduate
Schedule types: Lab
Department/School: Engineering Technology

EET 1104 Fundamentals of Electricity
Prerequisites: Concurrent enrollment in MATH 2123 or MATH 2144 or Consent of Instructor.
Description: Elementary principles of electricity covering basic electric units. Ohm's law, Kirchoff's law, circuit solutions, network solutions, magnetism, inductance and capacitance. Previously offered as ECT 1104. May not be used for degree credit with EET 1134 or EET 1101.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3 Contact: 6
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 1134 Fundamentals of DC Circuits
Prerequisites: MATH 1513 or equivalent.
Description: Elementary principles of dc electricity laboratory for Non-EET students covering basic electrical units, Ohm's Law, Kirchoff's Law, circuit solutions, network solutions, magnetism, inductance and capacitance. May be substituted for EET 1104 and grade of "B" or better and consent of the department. May not be used for degree credit with EET 1101.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3 Contact: 6
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 1201 Fundamentals of AC Circuits Lab
Prerequisites: MATH 1613 or equivalent.
Description: Elementary principles of ac electricity laboratory for Non-EET students who have taken an ac circuits course without a lab component. This is the same curriculum and lab experience that students would experience taking EET 1214. May not be used for degree credit with EET 1214 or EET 1244.
Credit hours: 1
Contact hours: Lab: 3 Contact: 3
Levels: Undergraduate
Schedule types: Lab
Department/School: Engineering Technology

EET 1214 Fundamentals of AC Circuits
Prerequisites: MATH 1613 or equivalent.
Description: Elementary principles of ac electricity laboratory for Non-EET students covering basic electrical units. The use of network theorems and phasors, coupled circuits, resonance, filters and power will be studied. May be substituted for EET 1244 with grade of "B" or better and consent of the department. May not be used for degree credit with EET 1201.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3 Contact: 6
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 1244 Circuit Analysis I
Prerequisites: EET 1104 and ECT 1244 and MATH 1613 or equivalent may be taken concurrently.
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. May not be used for degree credit with EET 1214 or EET 1201.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 3 Contact: 6
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 2303 Technical Programming
Prerequisites: MATH 1513 or concurrent enrollment.
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: 3 Contact: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

EET 2304 Pulse and Digital Techniques
Prerequisites: EET 1104 or equivalent may be taken concurrently.
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 Contact: 5
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology
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<td>Solid State Devices and Circuits</td>
<td>EET 1244 and MATH 2123 or equivalent which may be taken concurrently.</td>
<td>Contact hours: Lecture: 4 Lab: 3</td>
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<td>EET 3005</td>
<td>Electronics Analysis</td>
<td>EET 1104, EET 1244, EET 2544, EET 2635, MATH 1513, MATH 1613, or evaluated equivalent. Corequisite(s): MATH 2123</td>
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<td>EET 3104</td>
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<td>EET 3124</td>
<td>Project Design and Fabrication</td>
<td>EET 1244 and EET 2544 and EET 2635 or Instructor Approval.</td>
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<td>EET 3264</td>
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<td>Data Acquisition</td>
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<td>Applied Analysis for Technology</td>
<td>MATH 2133 or equivalent.</td>
<td>Credit hours: 3</td>
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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 Contact: 6  
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: 2 Lab: 3 Contact: 5  
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 and PHYS 1214 or equivalent and MATH 2133 or equivalent.  
Description: 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 Contact: 3  
Levels: Undergraduate  
Schedule types: Lecture  
Department/School: Engineering Technology  

EET 3723 Introduction to Electric Power Technology II  
Prerequisites: EET 3713.  
Description: 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 Contact: 3  
Levels: Undergraduate  
Schedule types: Lecture  
Department/School: Engineering Technology  

EET 3803 Fundamentals of Mechatronics  
Prerequisites: Grade of "C" or better in EET 2635.  
Description: Fundamentals of mechatronic systems and components. Different modelling approaches used for mechatronics systems, sensors and actuators, data acquisition and interfacing, signal conditioning, and PLC's. Previously offered as GENT 3503. Same course as MET 3803.  
Credit hours: 3  
Contact hours: Lecture: 2 Lab: 2 Contact: 4  
Levels: Undergraduate  
Schedule types: Lab, Lecture, Combined lecture and lab  
Department/School: Engineering Technology  

EET 4050 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: Contact: 1-4 Other: 1-4  
Levels: Undergraduate  
Schedule types: Independent Study  
Department/School: Engineering Technology  

EET 4314 Elements of Control  
Prerequisites: EET 3113 and EET 3363 and EET 3423.  
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: 3 Contact: 6  
Levels: Undergraduate  
Schedule types: Lab, Lecture, Combined lecture and lab  
Department/School: Engineering Technology  

EET 4363 Digital Signal Processing  
Prerequisites: EET 3354, EET 3363.  
Credit hours: 3  
Contact hours: Lecture: 3 Contact: 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 Contact: 5  
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 Contact: 4  
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 Contact: 6
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

EET 4803 Mechatronics System Design
Prerequisites: Grade of "C" or better in GENT 3123 and EET 3803 (can be concurrent enrollment in GENT 3123).
Description: Modelling of mechanical, electrical, and hydraulic components. Feedback control systems, electro-hydraulic drives, electrical drives, and microcontroller programming. Previously offered as GENT 4503. Same course as MET 4803.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 2 Contact: 4
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 EET 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: 3 Contact: 3
Levels: Undergraduate
Schedule types: Lecture
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: 3 Contact: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology