

Central Ohio Technical College
Course Description Listing – Electronic Engineering Technology Courses
2009-2010 Academic Year

EET-3018 PC Hardware: Troubleshooting and Maintenance

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-E.

This course offers a detailed study of microcomputer systems hardware modules. Combining theory and practice the course will cover module level maintenance, repair, replace, and retrofit and upgrading trade-off decision parameters; and introductory troubleshooting, with a focus on software troubleshooting. Students will remove and replace defective modules, perform hardware upgrades, and install software with attendant hardware boards. Students will gain experience in the assembly and disassembly of microcomputer stems.

EET-3028 Circuits I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: MTH-1210 or a score of at least 71 on the COMPASS Algebra test. Course is graded A-E.

This introductory course presents the terminology and concepts necessary for understanding electrical units and laws and circuit analysis. Topics of study include direct current sources, series and parallel circuits, Ohm's law, Kirchoff's Laws, resistance, power, mesh analyses, capacitance, and inductance. Laboratory sessions include experiments, both simulated and bread boarded, verifying the lecture material through the proper use of voltmeters, ammeters, ohmmeters, and DC power supplies.

EET-3029 Circuits II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: MTH-1226 and EET-3028. Course is graded A-E.

The concepts introduced in Circuits I are reviewed and applied to AC circuits. AC phasers, AC series and parallel networks, impedance, resonance, transformers and three phase power are new topics covered in this course. Laboratory experience includes use of function generators and oscilloscope, both simulated and real.

EET-3132 Communications Electronics I

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: EET-3133. Course is graded A-E.

Includes the theory and operation of power supplies, oscillators, AF and RF amplifiers, AM Transmitters and Receivers, SSB, Testing and Alignment, and Troubleshooting of Communication Systems. Laboratory experiences consist of construction of basic circuits, test and repair of commercial units, and the use of specialized test equipment.

EET-3133 Electronics I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3029. Course is graded A-E.

The student will pursue the study of the theory and operation of semiconductor diode and transistor circuits. Equivalent circuits, large and small signal analysis, and biasing circuits are also discussed. Laboratory sessions, both bread boarded and simulated, emphasize transistor in audio amplifiers.

EET-3144 Linear Integrated Circuits

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: MTH-1232 and EET-3133. Course is graded A-E.

Includes semi-conductor devices and circuits, junction field effect transistors, MOSFET, linear integrated circuits, operational amplifiers and optoelectronic devices.

EET-3152 Communications Electronics II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: EET-3132. Course is graded A-E.

Continues the concepts presented in 3132 and introduces AM-FM broadcasting, stereo, wave propagation, antennas, directional antennas, transmission lines and special communication techniques, satellite, fiber optic, microwave and data communications. The laboratory work consists of testing and troubleshooting existing equipment and systems.

**COTC Course Description Listing – Electronic Engineering Technology Courses
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4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: CMP-1601 (or concurrent enrollment in COM-1601). Course is graded A-E.

Students pursue the study of digital logic elements such as logic gates, flip-flops, counters and shift registers. The study of math as used in digital circuits is covered in laboratory and lecture.

EET-3164 Digital Electronics II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: CMP-2596 and EET-3154 or equivalent. Course is graded A-E.

The architecture of a microprocessor is studied in this course. The buss architecture of several common busses will be discussed. The programming of a microprocessor in both machine and assembly language will be introduced.

EET-3167 Digital Electronics III

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3164. Course is graded A-E.

The study of circuit elements used in microprocessor systems. Includes the study of microprocessor busses, memory devices, series and parallel output devices and programmable peripheral interface devices. Laboratory projects focus on the application of these devices and the associated control software.

EET-3185 EET Capstone Design Course

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: EET-3132, EET-3144, EET-3167, EET-3306 and concurrent enrollment in EET-3326. Course is graded A-E.

The student will work in small groups to design and build an operational electronic project that demonstrates the knowledge acquired during the completion of their EET degree. During these projects, the student is expected to contribute to each aspect of the project, to participate in group planning, to participate in the final demonstration, and to use the lab time efficiently.

EET-3306 Local Area Networks

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: CMP-1601 (or equivalent computer operation experience). Course is graded A-E

This course is an introduction to local area networking with personal computers in small environments such as offices. Subjects covered include planning a LAN, selecting hardware and software, net management, installation, troubleshooting, and Internet working. Laboratory exercises involve constructing and operating a LAN. No knowledge of electronics is necessary, but familiarity with personal computer operation would be helpful, particularly the IBM PC and DOS.

EET-3320 Data Communications

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3167 and EET-3306. Course is graded A-E

This course introduces basic fundamentals related to data communication: analog and digital communication, multiplexing telephone systems, codes and formats, and error detection and correction.

EET-3326 Local Area Networks - Microsoft

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: EET-3306. Course is graded A-E.

This course teaches the student to set up and maintain Microsoft networks. The student will install a Microsoft network and set up the working environment. The student will also learn how to detect and correct software and hardware errors associated with the network components and applications.