

**EET COURSE DESCRIPTIONS**  
**2009-2010 General Catalog**

**COURSE    DESCRIPTION**

- EET 1300    ELECTRICAL PRINCIPLES I. (3-3-0). Principles governing current, voltage, resistance, and power in DC circuits. Series, parallel, and series-parallel circuits. Network theorems. Prerequisite: credit for or registration in 1301 and Mathematics 1810 or equivalent.
- EET 1301    ELECTRICAL PRINCIPLES I LABORATORY. (1-0-2). Prerequisite: credit for or registration in 1300, 1311.
- EET 1311    ELECTRONIC FABRICATION LABORATORY. (1-0-2). Fabrication techniques for analog and digital circuits. Device symbols and markings, soldering, antistatic techniques, measurement, testing and troubleshooting. Prerequisite: None.
- EET 1320    ELECTRICAL PRINCIPLES II. (3-3-0). Alternating current. Capacitors, inductors, and impedance. AC circuit analysis theorems and techniques. Prerequisite: 1300-1301, Mathematics 1810, credit for or registration in 1321.
- EET 1321    ELECTRICAL PRINCIPLES II LABORATORY. (1-0-2). Prerequisite: credit for or registration in 1320.
- EET 1330    DIGITAL ELECTRONICS I. (3-3-0). Logic functions, logic gates, number systems and conversions, Boolean algebra, logic simplification, combinational circuits, programmable logic devices, and flip-flops. Analysis and design of basic digital logic circuits. Prerequisites: 1300-1301, credit for or registration in 1331.
- EET 1331    DIGITAL ELECTRONICS I LABORATORY. (1-0-2). Prerequisite: credit for or registration in 1330.
- EET 2320    BASIC ELECTRONICS. (3-3-0). Principles of semiconductor devices and circuits. Design and analysis of diode and bipolar junction transistor in switching and amplifier circuits. Prerequisite: 1320-1321, credit for or registration in 2321.
- EET 2321    BASIC ELECTRONICS LABORATORY. (1-0-2). Prerequisite: credit for or registration in 2320.
- EET 2340    MICROCOMPUTERS. (3-3-0). Computer overview with emphasis on hardware. The basic components of a microcomputer system, microprocessor basics, memory, secondary storage, input and output devices, operating systems, networks, and security. Prerequisite: COMP 1020 or permission of the instructor.
- EET 2360    ELECTRIC GENERATORS, MOTORS, AND TRANSFORMERS. (3-3-0). Principles of magnetism and electromagnetic circuits. Transformer principles. AC and DC generators and motors—single phase, three phase, and synchronous machines. Prerequisite: 1320-1321, credit for or registration in 2361.
- EET 2361    ELECTRIC GENERATORS, MOTORS, AND TRANSFORMERS LABORATORY. (1-0-2). Prerequisite: credit for or registration in 2360.
- EET 2920    SPECIAL PROBLEMS. (1 to 3-0-0). Selection of special problems in engineering technology. Individual or small group work. Prerequisite: credit for or registration in 2320-2321 and consent of instructor.

**COURSE    DESCRIPTION**

- EET 3310 DIGITAL ELECTRONICS II. (3-3-0). Programming and applications of programmable logic devices, sequential networks, state machine analysis and design, memories, integrated circuit technologies. Introduction to microprocessors and interfacing. Prerequisite: 1330-1331, 2320-2321, credit for or registration in 3311.
- EET 3311 DIGITAL ELECTRONICS II LABORATORY. (1-0-2). Prerequisite: credit for or registration in 3310.
- EET 3340 ADVANCED ELECTRONICS. (3-3-0). Advanced semiconductor devices. Power amplifiers, Class A, B, and C amps, and the emitter follower. JFET and MOSFET devices and circuits, differential and operational amplifiers. Prerequisite: 2320-2321 credit for or registration in 3341.
- EET 3341 ADVANCED ELECTRONICS LABORATORY. (1-0-2). Prerequisite: credit for or registration in 3340.
- EET 3360 INSTRUMENTATION AND CONTROL. (3-3-0). Transducers, signal conditioning, open and closed loop control. Proportional, derivative, and integral control modes. Analog-to-digital and digital-to-analog conversion. Analysis and design of control systems. Prerequisite: 1320-1321, Mathematics 2010 or 2020, and credit for or registration in 3361.
- EET 3361 INSTRUMENTATION AND CONTROL LABORATORY. (1-0-2). Prerequisite: credit for or registration in 3360.
- EET 4300 MICROPROCESSOR FUNDAMENTALS. (3-3-0). Microprocessor architecture, programming, and interfacing. Topics include addressing modes, instruction set, I/O operations, interrupts, timing, memory, peripheral interface devices, microprocessor system design, and an overview of advanced microprocessors. Prerequisite: 3310-3311, Computer Science 1060, and credit for or registration in 4301.
- EET 4301 MICROPROCESSOR FUNDAMENTALS LABORATORY. (1-0-2). Prerequisite: credit for or registration in 4300.
- EET 4310 COMMUNICATION ELECTRONICS. (3-3-0). Principles of filters and oscillation. Active and passive filters and oscillator circuits. Principles of AM, FM, and PM transmitters, and receivers. Phase Locked Loops. Prerequisites: 3340-3341, Physics 2040, credit for or registration in 4311.
- EET 4311 COMMUNICATION ELECTRONICS LABORATORY. (1-0-2). Prerequisite: credit for or registration in 4310.
- EET 4350 AUTOMATION AND CONTROL. (3-3-0). Programmable logic controllers, microcontrollers, and robots. Prerequisite: 3360-3361, credit for or registration in 4351.
- EET 4351 AUTOMATION AND CONTROL LABORATORY. (1-0-2). Prerequisite: credit for or registration in 4350.
- EET 4360 WIRELESS COMMUNICATIONS SYSTEMS. (3-3-0). Overview of communications with emphasis on wireless communications. Cellular and PCS communication systems, microwave and satellite systems, LMDS, wireless LAN, antennas and advanced topics in fiber-optic communications systems. Prerequisites: credit for 4310-4311, 4390, credit for or registration in 4361.
- EET 4361 WIRELESS COMMUNICATIONS SYSTEMS LABORATORY. (1-0-2). Prerequisite: credit for or registration in 4360.

**COURSE   DESCRIPTION**

- EET 4390   DIGITAL COMMUNICATIONS. (3-3-0). Digital and data communications and transmission, protocols and standards, local and wide area networks, multiplexing, satellite and fiber optic communications. Prerequisites: 3310-3311, 4310-4311.
- EET 4920   ADVANCED SPECIAL PROBLEMS. (1 to 3-0-0). Selection of advanced special problems in engineering technology. Individual or small group work. Prerequisite: credit for or registration in 3340-3341 and consent of instructor.
- EET 4940   PROJECT DESIGN I. (2-2-0). Principles of project management and engineering economics. Development of proposals for senior design project. Prerequisites: Industrial Engineering Technology 3720 or English 3230, and senior status or consent of instructor.
- EET 4950   PROJECT DESIGN II. (2-0-0). This is a capstone course. Students will independently design (including specifications), construct, and test an approved electronics project within budget and on schedule. Students will prepare a written project report and give an oral presentation. Prerequisites: 4940.