

ELECTRONICS (ELEC)

ELEC 10A MICROCOMPUTER REPAIR AND SERVICE 2 UNITS

Pass/No Pass or Grade is Allowed

Fee: \$10

Recommended Preparation: RDG 56 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 1.50 hour, laboratory 1.50 hour

Offered: ALL

Provides instruction on microcomputer maintenance and service. Includes training in safety, hardware, software, computer assembly, customer relations, testing, troubleshooting, and replacing computer components. Includes operating system, applications, command line for technicians, and software diagnostics. [D] (Same as: CIS 10A)

ELEC 10B MICROCOMPUTER HARDWARE AND SOFTWARE UPGRADE 2 UNITS

Pass/No Pass or Grade is Allowed

Fee: \$10

Recommended Preparation: CIS 10A or ELEC 10A or equivalent; RDG 56 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 1.50 hour, laboratory 1.50 hour

Offered: ALL

Covers microcomputer hardware and software installation, upgrades, maintenance, and troubleshooting. Includes monitors, hard disk, internal and external tape backup, printers, memory, Compact Disk Read-Only Memory (CD-ROM), and sound cards. Covers Disk Operating System (DOS) and Windows. [D] (Same as: CIS 10B)

ELEC 100 INTRODUCTION TO ELECTRONICS 3 UNITS

Grade Only

Fee: \$3

Lecture 3 hours

Offered: ALL

Survey course covering the basic electrical and electronic concepts and the modern electronic systems in daily use. Includes DC circuits, magnetics, AC circuits, audio and radio, digital electronics and computers, small appliances, and introduction to automotive electronics. Designed to supply essential knowledge in this area in a basic mathematical manner and can be taken by both electronics and non-electronics majors. [D; CSU]

ELEC 109 OFFICE SUPPORT AND NETWORK TECHNICIAN 6 UNITS

Pass/No Pass or Grade is Allowed

Recommended Preparation: RDG 56 or equivalent or through the Southwestern College multiple measures placement processes.

Lecture 5 hours, laboratory 5 hours

Offered: ALL

Introduces students to entry-level and upgrade training in computer maintenance and support; hardware upgrade and expansion; office equipment maintenance and service; data, voice, and video cabling installation; and customer relations. [D; CSU] (Same as: CIS 119)

ELEC 142 NETWORKING ACADEMY FUNDAMENTALS (CISCO CERTIFICATION PREPARATION) 3 UNITS

Pass/No Pass or Grade is Allowed

Fee: \$1

Recommended Preparation: CIS 130 or CIS 139 or equivalent.

Lecture 2 hours, laboratory 3 hours

Offered: ALL

Introduces network terminology, standards and protocols, Local Area Networks (LANs), Wide Area Networks (WANs), Open System Interconnection (OSI) models, cabling, routers, router programming, topologies, and Internet Protocol (IP). Emphasizes the use of decision-making and problem-solving techniques in applying science, mathematics, communication, and social studies concepts to solve networking problems. [D; CSU] (Same as: CIS 142)

ELEC 260 MICROCOMPUTER SYSTEMS AND A+ CERTIFICATION 4 UNITS

Grade Only

Fee: \$11

Recommended Preparation: ELEC 10A and ELEC 10B, or equivalent.

Lecture 4 hours, laboratory 2 hours

Offered: FALL, SPRING

Covers the main hardware and software (operating system) aspects of IBM comparable personal computers to prepare students for occupations in this field and to pass the National A+ Certification Examination of Proficiency. [D; CSU]

ELEC 265 COMPUTER NETWORKING FOR N+ CERTIFICATION 4 UNITS

Grade Only

Fee: \$2

Recommended Preparation: ELEC 260 or equivalent.

Lecture 3 hours, laboratory 3 hours

Offered: ALL

Includes the main hardware and software aspects of setting up and maintaining a computer network to prepare students for occupations in this field and to pass the National Network Certification Examination of Proficiency. [D; CSU]

ELEC 276 INTRODUCTION TO SECURITY + 4 UNITS

Grade Only

Recommended Preparation: ELEC 260 and ELEC 265, or equivalent.

Lecture 3 hours, laboratory 3 hours

Offered: ALL

Surveys important foundational principles for securing a network and managing risk in preparation for the Security+ Exam. Covers topics such as access control, identity management, SCADA, cloud computing, cryptography, mitigation, and deterrent techniques. [D; CSU]

ELEC 290

ELECTRONICS COOPERATIVE WORK EXPERIENCE I

2-4 UNITS

Grade Only

Recommended Concurrent Enrollment: BUS 136.

Limitation on Enrollment: Declared Electronics major.

Laboratory 12 hours

Offered: ALL

Introduces principles and skills acquired in the Electronics majors to on-the-job assignments. One unit of credit is granted for every 54 hours of work experience. Credit may be accrued at the rate of 2 to 4 units per semester for a maximum of fourteen units. The job supervisor and instructor will evaluate each student's job performance. [D; CSU]

ELEC 291

ELECTRONICS COOPERATIVE WORK EXPERIENCE II

2-4 UNITS

Grade Only

Recommended Concurrent Enrollment: Enrollment in one other class directly related to the Electronics major in order to apply learned theory in a practical hands-on setting through an internship class.

Prerequisite: ELEC 290 or equivalent.

Limitation on Enrollment: Declared Electronics major.

Laboratory 12 hours

Offered: ALL

Applies beginning-level principles and skills acquired in the Electronics majors to on-the-job assignments. One unit of credit is granted for every 54 hours of work experience. Credit may be accrued at the rate of 2 to 4 units per semester for a maximum of fourteen units. The job supervisor and instructor will evaluate each student's job performance. [D; CSU]

ELEC 292

ELECTRONICS COOPERATIVE WORK EXPERIENCE III

2-4 UNITS

Grade Only

Recommended Concurrent Enrollment: Enrollment in one other class directly related to the Electronics major in order to apply learned theory in a practical hands-on setting through an internship class.

Prerequisite: ELEC 291 or equivalent.

Limitation on Enrollment: Declared Electronics major.

Laboratory 12 hours

Offered: ALL

Provides intermediate-level principles and skills acquired in the Electronics majors to on-the-job assignments. One unit of credit is granted for every 54 hours of work experience. Credit may be accrued at the rate of 2 to 4 units per semester for a maximum of fourteen units. The job supervisor and instructor will evaluate each student's job performance. [D; CSU]

ELEC 293

ELECTRONICS COOPERATIVE WORK EXPERIENCE IV

2-4 UNITS

Grade Only

Recommended Concurrent Enrollment: Enrollment in one other class directly related to the Electronics major in order to apply learned theory in a practical hands-on setting through an internship class.

Prerequisite: ELEC 292 or equivalent.

Limitation on Enrollment: Declared Electronics major.

Laboratory 12 hours

Offered: ALL

Covers advanced-level principles and skills acquired in the Electronics majors to on-the-job assignments. One unit of credit is granted for every 54 hours of work experience. Credit may be accrued at the rate of 2 to 4 units per semester for a maximum of fourteen units. The job supervisor and instructor will evaluate each student's job performance. [D; CSU]

ELEC 299

INDEPENDENT STUDY

1-3 UNITS

Pass/No Pass or Grade is Allowed

Limitation on Enrollment: Eligibility for independent study.

Lecture 3 hours

Offered: ALL

Individual study or research in some area of electronics of particular interest to the student and not included in regular courses of the college. (May be taken twice for credit.) [D; CSU]