

Engineering Technology – Telecommunications

ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)

REQUIRED CREDITS: 63

DEGREE CODE: ETELCOAAS

DESCRIPTION

The Associate of Applied Science Degree in Engineering Technology - Telecommunications Emphasis prepares students with the necessary skills required by today's high-tech, high-wage telecommunications industry. Instruction includes; telecommunications and advanced telecommunications and advanced telecommunications topics; IP network installation, configuration, and maintenance; electronics and digital circuits; copper and fiber optic cabling installation. Accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

This two-year program provides the students with the methods and procedures used by technicians in the telecommunications industry. Instruction takes place in a hands-on, state-of-the-art environment.

Educational Objectives - Within a few years of graduation: Graduates from CSN's Telecommunication Engineering Technology Program will demonstrate the ability to apply technical, managerial, design and application skills necessary to install, manage, operate, and maintain telecommunication systems. Graduates will have effective technical communication skills necessary to function on professional teams. Graduates are prepared to enter the working force with professional work ethics, with the commitment to lifelong learning, quality and continuous improvement through the clear ability to assume increasing levels of responsibility in both industry and community.

STUDENT LEARNING OUTCOMES

- Construct, test, and verify the operation of voice and data cables, various analog, digital and microprocessor/microcontroller circuits, demonstrate a working knowledge of filter circuits, fiber optics, electronics/telecommunications laboratory test equipment.
- Perform IP network installation, maintenance, configuration, analysis, and management, while utilizing devices such as Routers and PCs.
- Explain the signaling and system structure of the various types of telephones, such as the mobile, IP based, and traditional.
- Distinguish between the various modulation and multiplexing techniques commonly employed in the telecommunication transmission systems.
- Demonstrate commitment to quality, timeliness, and continuous improvement, while showing an understanding of the need for and an ability to engage in self-directed continuing professional development.
- Support positive work ethics and interpersonal skills in a group environment and deliver written and oral reports on projects.

PLEASE NOTE - The courses listed below may require a prerequisite or corequisite. Read course descriptions before registering for classes. All MATH and ENG courses numbered 01-99 must be completed before reaching 30 total college-level credits. No course under 100-level counts toward degree completion.

GENERAL EDUCATION REQUIREMENTS (27 CREDITS)**MATHEMATICS (3 credits)**

Choices: ET 111B or MATH 127

Recommended: ET 111B Mathematics for Electronics Applications

ENGLISH COMPOSITION (3-5 credits)

Choices: ENG 100 or 101 or 113

COMMUNICATIONS (3 credits)

Choices: COM 115 or ENG 107

Recommended: COM 115 Applied Communication

HUMAN RELATIONS (3 credits)

Choices: See AAS policy p. 48 for courses

Recommended: HIST 106 European Civilization Since 1648

NATURAL SCIENCE (8 credits)

Required: EGG 131 and 131L and ET 131B

FINE ARTS/HUMANITIES/SOCIAL SCIENCE (3 credits)

Choices: See AAS policy p. 49 for courses

Recommended: MUS 231 Recording Techniques I

U.S. AND NEVADA CONSTITUTIONS (4-6 credits)

Choices: See AAS policy p. 49 for courses

Recommended: PSC 101 Introduction to American Politics

SPECIAL PROGRAM REQUIREMENTS (36 CREDITS)**CORE REQUIREMENTS (33 credits)**

CIT 112B	Network+	3
CSCO 105B	Fundamentals of Voice and Data Cabling	3
CSCO 120	CCNA Internetworking Fundamentals	4
ET 108B	Telecommunications and the Information Age	3
ET 132B	AC for Electronics	4
ET 212B	Digital Logic I	4
ET 228B	Data Acquisition	3
ET 282B	Microprocessors I	3
ET 293B	Telecommunication Transmission Methods	3
ET 294B	EET Capstone	3

Digital Literacy Requirement (0-3 credits)

IS 100B	Core Computing Competency	0
IS 101	Introduction to Information Systems	3

ELECTIVES (choose 3 credits)

CIT 114B	IT Essentials	4
CSCO 121	CCNA Routing and Switching Essentials (or higher)	3-4
ET 106B	Test Equipment Operation	3
ET 205B	Power Supply Theory and Repair (or higher)	3-4
IS 115	Introduction to Programming	3

See Degree Plan on next page.

- NOTE**
- Course numbers with the "B" suffix may be non-transferable for a NSHE baccalaureate degree.
 - Course numbers with the "H" suffix are designated Honors-level courses and can be used to fulfill equivalent general education requirements. For more information visit www.csn.edu/honors.
 - In no case, may one course be used to meet more than one requirement except for the Values and Diversity general education requirement (only AA, AS, and AB degrees) which may be used to fulfill the corresponding general education or emphasis requirement.
 - Students may elect to graduate using the degree requirements in effect at the time of matriculation, or when they declared or changed major or the current catalog. If a program is official after a student has matriculated, the student may choose the degree requirements of the new program. In no case may a student use a catalog which is more than six years old at the time of graduation.



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FULL-TIME STUDENT DEGREE PLAN*Add more semesters to modify this plan to fit part-time student needs.*

FIRST SEMESTER	Credits
ET 111B Mathematics for Electronics Applications	3
COM 115 Applied Communication	3
ET 131B DC for Electronics	4
CSCO 105B Fundamentals of Voice and Data Cabling	3
ET 108B Telecommunications and the Information Age	3
TOTAL CREDITS	16

SECOND SEMESTER	Credits
ENG 100 or 101 or 113	3-5
CIT 112B Network+	3
ET 132B AC for Electronics	4
ET 212B Digital Logic I	4
IS 100B or IS 101	0-3
TOTAL CREDITS	14-19

THIRD SEMESTER	Credits
HIST 106 European Civilization Since 1648	3
PSC 101 Introduction to American Politics	4
TOTAL CREDITS	7

FOURTH SEMESTER	Credits
MUS 231 Recording Techniques I	3
CSCO 120 CCNA Internetworking Fundamentals	4
ET 228B Data Acquisition	3
ET 282B Microprocessors I	3
TOTAL CREDITS	13

FIFTH SEMESTER	Credits
EGG 131 Technical Physics I	3
EGG 131L Technical Physics I – Lab	1
ET 293B Telecommunication Transmission Methods	3
ET 294B EET Capstone	3
Complete Electives (see courses previous page)	3
TOTAL CREDITS	13

DEGREE PLAN TOTAL CREDITS.....**63-68**