

CURRICULUM STANDARD

Effective Term
Fall 2007
[2007*03]

Curriculum Program Title	Telecommunications and Network Engineering Technology	Code	A40400
Concentration	(not applicable)		

Curriculum Description

The Telecommunications and Network Engineering Technology curriculum prepares individuals for positions in the telecommunication networking industry. This curriculum develops the knowledge to design, build, install, test, troubleshoot, repair, and modify telecommunication and network systems.

Course work includes basic electricity, solid-state fundamentals, digital concepts, microprocessors, telecommunications and network systems to ensure students develop skills to perform entry-level tasks. Emphasis is placed on developing the student's ability to analyze and troubleshoot telecommunications and network systems.

Graduates should qualify for employment as engineering assistants or electronic technicians with job titles such as electronic engineering technician, field service technician, maintenance technician, network system technician, network specialist, network systems integrator, and network administrator.

*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit (SHC)	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** *(if applicable)*. A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

Telecommunications and Network Engineering Technology A40400

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE Required Courses: TNE 111 Campus Networks I 3 SHC CET 130 Operating System Prin 3 SHC Required Subject Areas: Circuits. Select 4-6 SHC: ELC 110 Telecom Circuits/Devices 4 SHC <i>or</i> ELC 131 DC/AC Circuit Analysis 5 SHC <i>or</i> ELC 138 DC Circuit Analysis 3 SHC <i>and</i> ELC 139 AC Circuit Analysis 3 SHC Digital. Select one: ELN 116 Telecom Digital Logic 4 SHC ELN 133 Digital Electronics 4 SHC	14-16 SHC	NR	
B. CONCENTRATION <i>(Not applicable)</i>			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> ATR, BIO, CET, CHM, CIS, COE, CSC, CTS, DFT, EGR, ELC, ELN, HYD, ISC, LEO, MAT, MEC, NET, NOS, OMT, PCI, PHY, SEC, TNE, and WEB <i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i>			