

CERTIFICATE OF ACHIEVEMENT

Upon successful completion of this program, students will be prepared for an entry-level position in the telecommunications industry. Students will acquire the necessary skills required by the high-tech, high-wage telecommunications industry. This program integrates classroom experience with hands-on lab exercises. Computers and networks used to support modern telecommunications are also covered.

STUDENT LEARNING OUTCOMES - Graduates of this program will have the opportunity to:

- Construct, test, and verify the operation of various AC, DC, analog and digital circuits, demonstrate a working knowledge, fiber optics, electronics/telecommunications laboratory test equipment and perform a mechanical and fusion splice to specification.
- Explain the signaling specifications of the telephone set, subscriber loop interface and central office and distinguish between the various circuit and trunking types commonly employed in the Public Switched Telephone Network (PSTN).
- Develop positive work ethics and interpersonal skills in a group environment.
- Develop a hands-on understanding of the installation and operation of networks that support devices such as Voice over IP telephones and computers.
- Demonstrate a working knowledge of personal computers and the embedded computers found in telecommunications devices such as switches and routers.

GENERAL EDUCATION REQUIREMENTS (3 Credits):

	CR	SEMESTER
COMMUNICATIONS: COM 115, ENG 100, 101,107, 113	3-5	_____

SPECIAL PROGRAM REQUIREMENTS (30 Credits):

	CR	SEMESTER
CIT 110 A+ Hardware	3	_____
CSCO 105B Fundamentals of Voice and Data Cabling	3	_____
CSCO 120 CCNA Internetworking Fundamentals	4	_____
CSCO 205B Fiber Optic Cabling	3	_____
ET 106B Test Equipment Operation	3	_____
ET 108B Telecommunications and the Information Age	3	_____
ET 131B DC for Electronics	4	_____
ET 132B AC for Electronics	4	_____
MATH 111B Mathematics for Electronics Applications	3	_____

Computation included in MATH 111B
Human Relations included in CSCO 105B, ET 132B

NOTE: Courses with a B suffix (example - XYZ 123B) may be non-transferable for a NSHE baccalaureate degree.

ETTELCO-CT

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Total Credits

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.

**Guided Pathway
Certificate of Achievement
Engineering Technology – Telecommunications Emphasis
Total Credits – 33 credits**

First Semester	Requirement	Credit Hours	Term
Fundamentals of Voice and Data Cabling	CSCO105B	3	
Test Equipment Operation	ET 106B	3	
Telecommunications and the Information Age	ET 108B	3	
DC for Electronics	ET 131B	4	
Mathematics	MATH 111B	3	
	TOTAL	16	
Second Semester	Requirement	Credit Hours	Term
A+ Hardware	CIT 110	3	
CCNA Internetworking Fundamentals	CSCO 120	4	
Fiber Optic Cabling	CSCO 205B	3	
AC for Electronics	ET 132B	4	
	TOTAL	14	
Summer Session	Requirement	Credit Hours	Term
Communications	COM 115, ENG 100, 101,107, 113	3	
	TOTAL	3	
	CA TOTAL	33	

More detailed information can be found on the ET Web page at <http://www.csn.edu/et>