

**Engineering Technology – Electronics**

CERTIFICATE OF ACHIEVEMENT (CoA)

REQUIRED CREDITS: 33

DEGREE CODE: ETELEC-CT

**DESCRIPTION**

Upon successful completion of this certificate program, students will be prepared for an entry-level position providing support in industry. Instruction includes both analog and digital design and testing of electronic circuits, devices and systems, telecommunications and data-communications.

**STUDENT LEARNING OUTCOMES**

- Develop a working knowledge of safety procedures, use of common hand tools, and proper fabrication techniques associated with the electronics environments, identify passive components, construct, and test various DC and AC circuits.
- Construct, analyze and test various types of digital circuits using Boolean expressions, Karanaugh maps and general purpose test equipment.
- Develop a working knowledge of microcomputers and microprocessors to include writing an assembly language program to output a sinusoidal wave, square wave, and triangular wave to an output port.
- Identify active analog components, design, construct, and test various DC and AC circuits using operational amplifiers construct a Bode Plot of an amplifier’s frequency and phase response.
- Show positive work ethics and interpersonal skills in a group environment.

**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 (6 CREDITS)**

**MATHEMATICS (3 credits)**

Required: ET 111B Mathematics for Electronics Applications

**COMMUNICATIONS (3-5 credits)**

Recommended: COM 115 Applied Communication

**SPECIAL PROGRAM REQUIREMENTS (27 CREDITS)**

ET 104B	Fabrication and Soldering Techniques	2
ET 106B	Test Equipment Operation	3
ET 131B	DC for Electronics	4
ET 132B	AC for Electronics	4
ET 212B	Digital Logic I	4
ET 220B	Solid State Devices and Circuits I	4
ET 228B	Data Acquisition	3
ET 282B	Microprocessors I	3

Computation included in ET 111B

Human Relations included in ET 131B

**FULL-TIME STUDENT DEGREE PLAN**

*Plan can be modified to fit the needs of part-time students by adding more semesters.*

<b>FIRST SEMESTER</b>	<b>Credits</b>
ET 111B Mathematics for Electronics Applications	3
ET 106B Test Equipment Operation	3
ET 131B DC for Electronics	4
ET 104B Fabrication and Soldering Techniques	2
<b>TOTAL CREDITS</b> .....	<b>12</b>
<b>SECOND SEMESTER</b>	<b>Credits</b>
COM 115 Applied Communication	3
ET 132B AC for Electronics	4
ET 212B Digital Logic I	4
<b>TOTAL CREDITS</b> .....	<b>11</b>
<b>THIRD SEMESTER</b>	<b>Credits</b>
ET 220B Solid State Devices and Circuits I	4
ET 228B Data Acquisition	3
ET 282B Microprocessors I	3
<b>TOTAL CREDITS</b> .....	<b>10</b>
<b>DEGREE PLAN TOTAL CREDITS</b> .....	<b>33</b>

- 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](http://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.

