The Associate of Applied Science Degree in Engineering Technology with Electronics emphasis prepares students to assist in providing support for engineering functions or to function as an Electronics Technician. Instruction includes analog and digital circuit design, implementation and testing, fabrication techniques, telecommunications, microprocessor programming and interface. Specialize concentration instruction includes topics critical to the concentration, such as in-depth analysis of analog and digital circuits, electrical and power supply troubleshooting, systems such as radar and microwaves, computer and network fundamentals, medical terminology, healthcare organizational dynamics, and fluid dynamics.

This two-year program provides students with the methods and procedures used in engineering organizations and by electronics technicians in a bench repair, defense contractor, and biomedical equipment repair functions. Instruction takes place in a hands-on, state-of-the-art environment.

Educational Objectives - Within a few years of graduation: Graduates from CSN’s Engineering Technology with Electronics emphasis program will demonstrate the ability to apply circuit analysis and design, computer programming, analog and digital electronics, and microprocessor/microcontroller principles to install, test, troubleshoot and maintain electrical and electronic systems as bench, defense contractor, and biomedical equipment technicians. Graduates will have effective technical communication skills necessary to function on professional teams as technicians or managers. Graduates are prepared to enter the working force with professional work ethic 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 – Graduates of this program will have the opportunity to:

• Demonstrate knowledge of safety procedures and proper electronics fabrication techniques.

• Identify active and passive components, design, construct, and test various DC and AC circuits to include filters as well as constructing a Bode Plot of an amplifier’s frequency and phase response.

• Construct, analyze and test various types of digital circuits and microprocessor/microcontroller circuits. For the microprocessor/controller based circuits demonstrate a working knowledge to include writing programs to control other devices.

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• Demonstrate commitment to quality, timeliness, continuous improvement, while showing an understanding of the need for and an ability to engage in self-directed continuing professional development.

• For Bench and Defense Contractor concentrations, demonstrate a working knowledge of common modulation and transmission methods to include such as AM, FM and Pulse modulation. The Bench concentration will also focus upon more advanced analog/digital circuits. The Defense Contractor will focus upon electrical/electronics troubleshooting/repair along with systems such as radar.

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.