

# Job One - High-Priority Occupations in Electronics Technology

To compete in today's global economy, America's business and industry needs a skilled and knowledgeable workforce. In the past, too many career & technical school curricula were not aligned with the economic needs and career opportunities – thus creating a shortage of workers in critical areas. In Pennsylvania, however, leaders in technical education, business & industry, and government have partnered to construct a new workforce development strategy that focuses training and education around the job categories most in demand. These categories are known as High-Priority Occupations (HPO).

Northern Westmoreland Career & Technology Center's Electronics Technology program prepares students for careers in rewarding occupations including:

- **Fiber Optics Technicians**
- **Electro-Optics Technicians**
- **Mechatronic Technicians**
- **Robotics Technicians**
- **Biomedical Technicians**
- **Avionics Technicians**
- **Electrical Engineers**
- **Industrial Electronics Technicians**
- **Mechanical Engineering Technicians**
- **Nanofabrication Technicians**



## What is SOAR?

Students Occupationally and Academically Ready (SOAR) is the career and technical Program of Study (POS). This educational plan articulates the secondary career and technical programs to postsecondary degrees, or diploma or certificate programs. These career and technical Programs of Study include a statewide articulation agreement partnership between secondary schools and postsecondary institutions.



Northern Westmoreland Career & Technology Center provides career education and training for students in grades 10-12 residing in the following school districts:

- **Burrell School District**
- **Franklin Regional School District**
- **Kiski Area School District**
- **New Kensington-Arnold School District**

For more information contact:

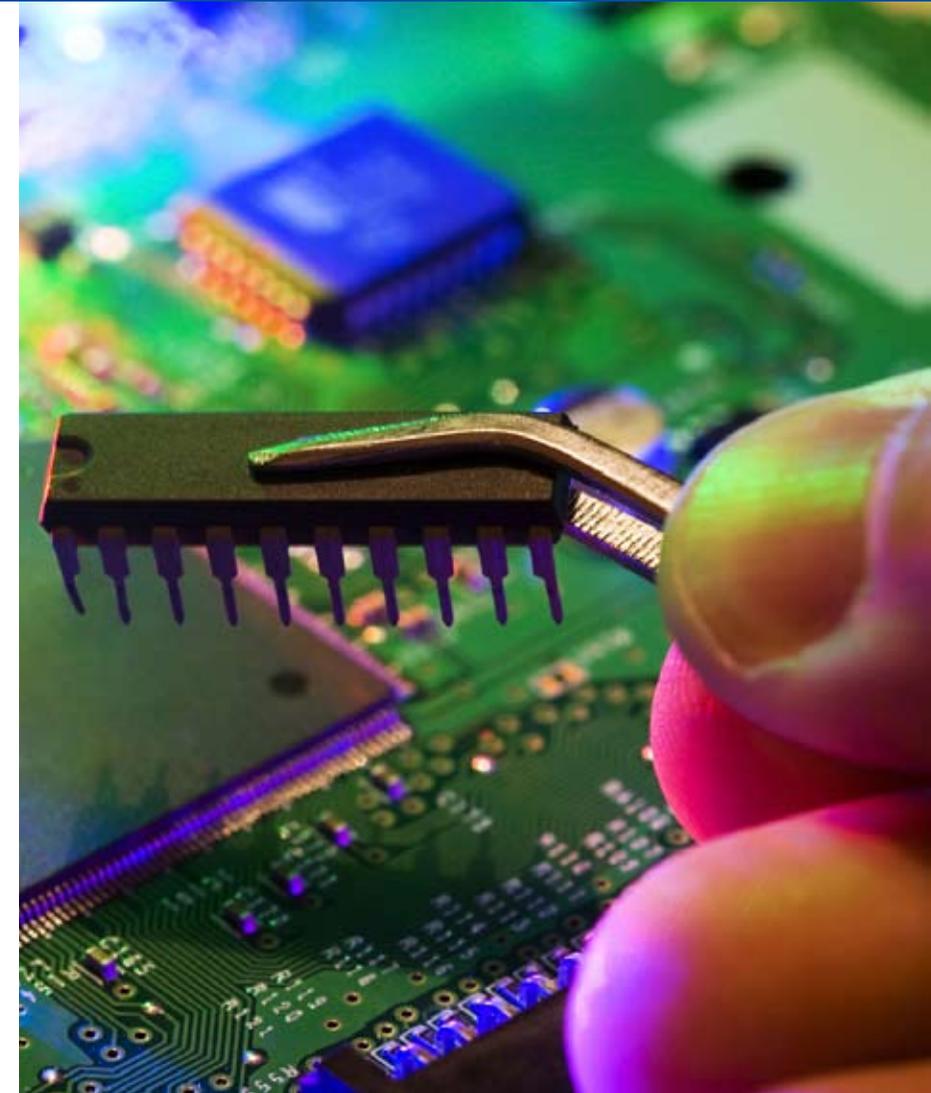


Northern Westmoreland  
Career & Technology Center

705 Stevenson Blvd. • New Kensington, PA 15068

724.335.9389 • [www.nwctc.k12.pa.us](http://www.nwctc.k12.pa.us)

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Northern Westmoreland  
Career & Technology Center

Electronics  
Technology

# Electronics Technology

at Northern Westmoreland Career & Technology Center



NWCTC's Electronics Technology program provides students with a solid foundation of skill-sets that can be used in a number of different career fields, including high-growth industries like robotics and biomedical technology.

## Main Curricular Components:

- AC & DC Circuit Analysis
- Fundamental Electrical Principles
- Electronic Test Equipment
- Electronic Device Analysis & Applications
- Digital Electronic Circuits & Applications
- Prototyping and Fabrication Techniques
- Microcontrollers Theory & Applications
- Basic Robotics

## Academic Requirements:

- Algebra I & II
- Geometry
- College Prep English
- Science



## Postsecondary Education:

Many graduates of Electronics Technology enroll in 2-year associate degree programs. Some pursue a 2+2+2 postsecondary path and earn 4-year bachelor degree. Through articulation agreements, students often receive advanced standing in postsecondary schools.

## Certifications Available:

- NOCTI
- Electronics Technicians Association International
  - Student Electronics Technician (SET)
- Electronics Technicians Association International
  - Associate Certified Electronics Technician (CETa)

Most children simply enjoy playing with toys. Then there are those who just can't resist taking them apart to see how they work! If this best describes your childhood, Northern Westmoreland Career & Technology Center has a program for you as a teen! Electronics Technology is an instructional program that prepares students to apply basic electronic principles and technical skills to the production, calibration, estimation, testing, assembly, installation and maintenance of electronic equipment. The program emphasizes passive components and solid-state devices; digital circuits; optoelectronic devices; operational amplifiers; audio and RF amplifiers; oscillators;

power supplies; and AM, FM, and PCM modulators. Electronics Technology students learn through theoretical instruction, experimentation, and hands-on activities. The program of study focuses on developing a basic level of knowledge and associated skills essential for entry-level employment in communications, industrial electronics, digital processing, robotics, avionics, biomedical technology, and other industries directly related to the field of electronics. Co-op opportunities are also available to students who qualify.

Modern robotics is a \$500 billion emerging industry. NWCTC has in place an articulation agreement with Westmoreland County Community College (WCCC) that allows students who successfully complete Electronics Technology program requirements to receive advanced standing toward a 2-year degree from WCCC, whose Robotics Technology program was developed in collaboration with Carnegie Mellon University and others. Electronics Technology students also have the opportunity to compete in Vex Robotics Competitions.

## FACT CHECK ✓

- ✓ **Electrical and electronic engineering technicians make up 33 percent of all engineering technicians. About 34 percent of all engineering technicians work in manufacturing.**
- ✓ **Prospective mechanical engineering technicians may take courses in fluid mechanics, thermodynamics, and mechanical design; prospective electrical engineering technicians may need classes in electrical circuits, microprocessors, and digital electronics.**
- ✓ **Median annual wages of wage and salary electrical and electronic engineering technicians were \$53,240 in May 2008. The middle 50 percent earned between \$41,550 and \$64,120.**
- ✓ **Most employers prefer to hire engineering technicians with an associate degree or other postsecondary training in engineering technology.**

Source: Bureau of Labor Statistics, Career Guide To Industries, 2010-11 Edition.

