



The Electronics program at the Erie County Technical School emphasizes electrical and electronic fundamentals and prepares students for a variety of entry-level positions in the electronics field. Basic theories of electronics, circuitry, communications, instrumentation and electronic automated techniques are part of this extensive curriculum. The Electronics student learns in detail the workings of alternating current, direct current, solid state components and digital electronics. Students also learn how to assemble, install, repair, maintain and modify electronic systems. Prospective students for this program should have a solid understanding of Algebra, a mechanical inclination and good communication skills.

Upon successful completion of the program, many ECTS students will continue their education and training at a post-secondary institution. Others, however, will be prepared for entry-level positions involving installation, calibration, troubleshooting, repair and replacement of electronic and electrical devices and components in nearly any field imaginable.

Tim Mientkiewicz has been the Electronics instructor at ECTS since fall 2001. He received his electronics training in the nuclear power field while serving with the US Navy. Following his military service, Tim worked with Erie Press Systems, Sharon Steel and International Paper before his current position with ECTS.

One of Tim's greatest accomplishments since joining ECTS, has been to upgrade, improve and streamline the equipment to make the lab more efficient and make training more effective. A new lab trainer board, developed by the same company that provides the textbook series, allows for a more closely aligned curriculum encompassing the latest technology. The textbooks used in the Electronics program are the same as those currently being used at premier vocational high schools, community colleges and trade schools.

In an effort to make the high school programs more relevant to today's business and industry standards, the Erie County Technical School is currently adopting national skill standards for all of its technical training programs. These standards have been developed by the National Skills Standard Board (NSSB), who works with national trade associations to develop these skill standards. The Electronics program is certified by the Electronics Technicians Association, International and is one thirteen programs that has obtained National Skill Certification.

In addition to National Skill Certification, each of the nineteen technology labs at the ECTS has an Occupational Advisory Committee made up of a variety of representatives from business and industry. The Advisory Committee for Electronics includes an instrumentation technician from the Millennium Chemical Group in Ashtabula; an electrical engineer from Siemens, an electrical/electronic maintenance manager from a local manufacturing facility and a local business owner just to name a few.

"These individuals advise the school and program instructors on the theory and skills that should be taught to prepare students for local jobs in industry," notes Mientkiewicz. "Most vocational/technical instructors leave the trade in order to teach so the



Instructor Tim Mientkiewicz is demonstrating proper application of solder to a solder joint to Union City tenth grader Brian Manross. Brian is building a telephone by soldering its components.



James Morales is pictured as he re-solders a variable message sign.

Occupational Advisory Committee serves as the life-line and communication link between the field and the educational process."

As with many of the technical programs at ECTS, students in their senior year have the opportunity to participate in cooperative experiences in their related fields. Co-op students apply lab-learned skills to the actual workplace and learn new skills while on the job. Currently there are three Electronics students serving in co-op positions at Signal-Tech in Erie. Signal-Tech, who is also represented on the Occupational Advisory Committee, manufactures a large variety of LED, neon, incandescent and illuminated signage primarily for the banking and parking industries. ECTS students do everything from soldering components and building prototypes to designing the actual boards.

"We've been very happy with the level of technical competency from these students. They are able to use the various pieces of equipment to troubleshoot and diagnose common manufacturing errors," said Phil Glass, Signal-Tech engineering. "In addition to frequently exercising independent thought on how we can do things better, they ask a lot of inquisitive questions. They are very concerned with the quality of their work and the method in which it's done," added Glass. "Having co-op students has proved to be beneficial to Signal-Tech and it's a great learning experience for the students. They experience real world problems and applications while gaining a stronger sense of accomplishment by seeing a finished product."

James Morales, a senior from Harbor Creek High School, said he really enjoys his work at Signal-Tech and hopes to make it a career. He also expressed an

interest in continuing his education in engineering so that he can design boards.

Joe VanDamia is a senior at McDowell High School adds that his co-op experience at Signal-Tech has been extremely beneficial and a great learning experience. He is also considering further training in the electronics field.

North East High School senior, Kayln Lindemuth has worked at Signal-Tech for a year and said she enjoys the variety of work both complicated and simple. She plans on continuing her education at ECTS to study Networking.

Many students who graduate from the Electronics program do continue their education and training to some degree and do so while working in the field. To encourage and help students who have the desire to continue their training, ECTS has articulation agreements in Electronics with the Erie Institute of Technology, Pennsylvania College of Technology, Pittsburgh Institute of Aeronautics and Triangle Tech. These agreements have been developed to allow students to enroll in colleges or technical institutions and receive college credits for the training they received while enrolled at ECTS.

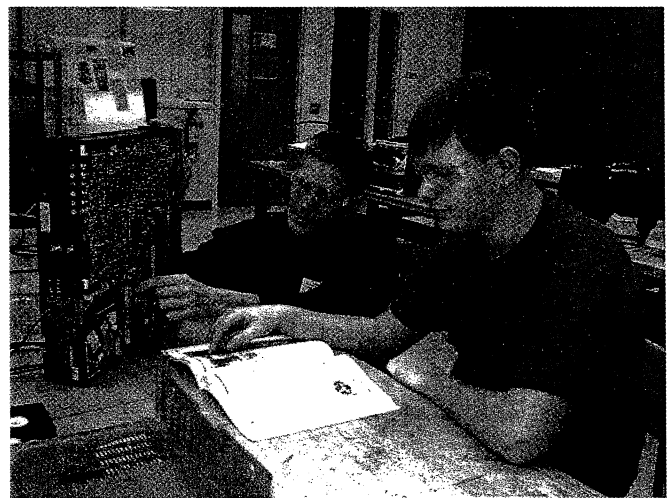
Any Erie County ninth grader wishing to enroll in a program such as Electronics may contact their guidance counselor for further information about the Erie County Technical School.



Joe VanDamia is shown working on a seven-segment board.



Kalyn Lindemuth is pictured as she performs light testing on an LED sign.



Tim Mientkiewicz is working with Wes Romba, a first level student from General McLane. They are identifying the working parts of a VCR through use of a repair manual.