Electronics Technician (EST/CET/ESA-4-Digital)

Electronics technicians cover a wide variety of positions in several industries, determined by their training.
In service/technology industries, electronics technicians may install, set-up, arrange , remove, distribute, route, repair, or replace a variety of electronics at telecommunications and various other businesses. They may service or repair telephone, cable television, internet and other equipment on customers' property, or they may install communications equipment or communications wiring in buildings.

In the manufacturing industry, electronics technicians may build or solder equipment. Some may work on complex pieces of electronics; because of this, technicians may use software programs and testing equipment to help diagnose malfunctions.

Electronics technicians who repair things like electric motors, power tools, and transportation equipment have a higer likelihood of getting a work-related injury or illness than those working in other occupations. Many work on factory floors, where they are subject to noise, dirt, and heat. Installers and repairers may have to lift heavy equipment and work in awkward positions.

Because of the nature of their job, it is important that electronics technicians follow safety guidelines. Some safety procedures include wearing protective goggles and hardhats as well as wearing a harness when working on ladders or elevated equipment. Most of these workers work full-time.

Indiana Wage Information

	Entry	Median
Hourly Wage	$20.93	$25.88

Job Outlook in Indiana

	Long Term	Short Term
Service Technicians	5.55 %	3.42 %
Home Theater Installer	10.7 %	1.6 %

Job Duties

- Install, replace or repair telecommunication lines
- Refer to service guides, schematics, and manufacturer
- Repair or replace defective parts, such as motors, fuses and gaskets
- Maintain records of parts used, labor time, and final charges
- Disassemble entertainment equipment & repair or replace defective components & wiring
- Install, service & repair electronic equipment or instruments
- Do preventative maintenance and calibration

Important Qualities

Color vision – must be able to identify color-coded components often used in electronic equipment

Communication skills – must be able to listen to customers' problems and then explain solutions in a clear and simple manner

Technical skills – must be able to use a variety of tools for installing and repairing

Troubleshooting skills – must be able to identify malfunctions and make repairs to equipment and systems that oftentimes contain intricate parts

Skills and Knowledge

Technical	English Language Arts
− Disassemble equipment and repair/replace − Knowledge of computers and electronics − Knowldedge of quality control analysis − Knowldedge of engineering and technology − Knowledge of telecommunications − Complex problem solving	− Must have proficient communication and reading comprehension skills
	Mechanical
	− Knowledge of machines and tools, including their designs, uses, and repairs

Certification and Advancement

There are currently three certification paths approved by WorkIndiana. There are no age or education requirements for these certifications, though an interest in electronics and a high school diploma or equivalency are preferred. The certifications are:

- ESPA, the Electronic Systems Professional Alliance, offers an entry-level certification pathway. The training to become a ESPA Certified Electronics Systems Technician (EST) applies to many technology careers including residential and commercial A/V, lighting, automation, security, alarm, telecom, cable, and satellite sectors. Receiving this professional certification allows the candidate to enter the electronics field as an apprentice or helper. An examination on low-voltage wiring technology must be passed before receiving the ESPA-EST.
- ISCET (International Society of Certified Electronics Technician) offers the Electronic Systems Associate, which is made up of 4 parts: DC, AC, Semi, and Digital. The Digital Circuits (ESA 4) exam covers basic digital concepts and numbering systems, logic functions, combination digital, and advanced digital which includes introduction to microprocessors and programmable logic devices. Once all four certificates are earned the Associate CET is awarded.
- The International Society of Certified Electronics Technicians (ISCET) offers an Associate Level Electronics CET certificate. The CET provides an entry-level pathway to apprenticeship in numerous electronic fields.

Both certifying agencies provide journeyman and master certifications for candidates seeking more experience.

Apprenticeship training programs are available at many vocational schools, and there also are classes that are combined with paid hands-on training. Many apprenticeship programs have three levels of education: apprentice, journeyman and master. Certified electronic technicians, with continued training, can eventually become electronic service technicians, system technicians, telecom technicians, maintenance workers, home entertainment installers, engineers, or electricians.

How can YOU get involved?

The world of work relies on the foundational skills students acquire in your classrooms and/or programs!

- Know your students'clients' interests and career goals
- Affirm the value of the skills/hobbies students demonstrate both in and outside of the classroom
- Infuse your classroom culture and/or meetings with career-minded activities
- Provide time to make connections between the material learned in adult education or workshops and students' daily lives/career aspirations
- Know the basic job descriptions and training requirements of in-demand occupations in your area
- Know which WorkINdiana programs are available in your region
- Know the processes for referring students to postsecondary or on-the-job training
- Post resources where students can find more information about further education/training and careers