BROADBAND TECHNOLOGY

The Broadband Technology program provides training through three distinct tracks –Broadband Technician, Broadband Telecommunications Equipment Installer Track, and Broadband Design and Applications Track. The program includes instruction in telecommunications, outside plant operations, computer networking, communications networks and systems, signals, circuits, fiber optics, and wireless systems and technology.

Progression in the Broadband Technology program is contingent upon achievement of a grade of "C" or higher in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Broadband Technician Track

The track provides course work, competencies and experiences to prepare the students for success as Broadband Technicians. Areas of study as related to this track include HFC (Hybrid Fiber Cable), Fiber Optics Systems, Basic Telephony Installations and Maintenance, Outside Plant Pole Climbing and Construction Safety, and Electrical Construction (specifically Fiber Optic and Data Cable Installations).

Broadband Telecommunications Equipment Installer Track

This track provides course work, competencies and experiences to prepare the students for success as Broadband Telecommunications Equipment Installers. Areas of study as related to this track include Computer Hardware and Software, Introduction to GIS (Graphical Information Systems), Functions and Operation of PBX Systems, Fiber Optics Systems Splicing and Maintenance, Basic Telephony Installations and Maintenance, Outside Plant Pole Climbing and Construction Safety.

Broadband Design and Applications Track

The track provides course work, competencies and experiences to prepare the students for success in Broadband Design and Applications. Areas of study as related to this track include GIS (Graphical Information Systems), Security Systems and Regulations, HFC (Hybrid Fiber Cable), Satellite Dishes, Fiber Optics Systems, NEC (National Electrical Code) outlining the standards for proper installation of communication cables and systems according to the NFPA70 (National Fire Protection Association), and Electrical Construction (specifically Fiber Optic and Data Cable Installations).

Broadband Basic Installer

The Broadband Basic Installer certificate provides an overview of concepts needed to complete the duties of a broadband technician relating to telecommunications service and installation. The certificate also provides the foundational basic skills and knowledge required to effectively perform the installation and maintenance job duties and functions. Students are introduced to HFC Cables and fiber optic transmissions and cable repair.

Broadband Support Technician

The Broadband Support Technician certificate provides training on first level support via telephone or field service to minimize interruptions in inside wire for residential/business broadband (DSL/Video) service, Central Office junctions as required for broadband continuity, digital subscriber carriers and associated broadband equipment, Residential Gateways and DSL business class routers, along with the array of wireless home networking equipment. The certificate prepares technicians to follow documented call handling procedures to manage inbound contacts and document relevant information in a Service Management tool, while providing excellent customer service and technical support services.

Broadband Telecommunications Equipment Installer

The Broadband Telecommunications Equipment Installer certificate introduces the set-up, installation, rearrangement, and/or removing switching and dialing equipment used in telecommunications central offices and end user broadband consumers. Training also includes an introduction to routing broadband information to destination and troubleshooting central problems at the end user customer premises.

Broadband Cyber Security Technician

The Broadband Cyber Security Technician certificate introduces the setup, configuration, and support of internal and/or external networks. Training includes the development and maintenance of all systems, applications, security, and network configurations. Also included are troubleshooting network performance issues and creating and maintaining a disaster recovery plan. The certificate prepares the technician to recommend upgrades, patches, and new applications and equipment and to provide technical support and guidance to users.

Broadband Technician Specialist

The Broadband Specialists I (Field Technicians) certificate primarily focus on new installations of cable television and broadband services. Students learn a variety of duties including installation, changes of service, additional outlet installation, disconnection of service, payment collection, and any special requests customers may have in regard to installation.

Degrees

- Broadband Technology - AAS (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-technology-aas/)
  - Broadband Design and Applications Track (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-technology-aas/#broadbanddesignandapplicationstrack)
  - Broadband Technician Track (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-technology-aas/#broadbandtechniciantrack)
  - Broadband Telecommunications Equipment Installer Track (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-technology-aas/#broadbandtelecommunicationsequipmentinstallertrack)

Certificates

- Broadband Basic Installer - Certificate (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-basic-installer-certificate/)
- Broadband Cyber Security Technician - Certificate (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-cyber-security-technician-certificate/)

- Broadband Support Technician - Certificate (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-support-technician-certificate/)
- Broadband Technician Specialist - Certificate (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-technician-specialist-certificate/)
- Broadband Telecommunications Equipment Installer - Certificate (https://catalog.kctcs.edu/programs-of-study/aas/broadband-technology/broadband-telecommunications-equipment-installer-certificate/)