

COMMUNICATION TECHNICIAN APPRENTICESHIP COURSE SUMMARIES

COURSE CTA3400: ELECTRICITY FUNDAMENTALS

Students are introduced to the fundamentals of electricity and basic theory and to components of introductory circuits.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3405: AC/DC

Students develop an understanding of the fundamentals of direct current (DC) and alternating current (AC) power sources and their effect on a circuit.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3410: BASIC ELECTRICITY

Students are introduced to safe work habits in the lab and complete basic electricity lab exercises using common tools, materials and equipment found in the lab setting.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3415: MATHEMATICS

Students develop the mathematical skills required to understand, calculate and isolate the characteristics of series and parallel circuits found in the communication technician trade.

Prerequisite: CTA3400: Electricity Fundamentals

COURSE CTA3420: OUTSIDE CABLING

Students develop the ability and skills to create cabling systems outside plant architecture according to appropriate cabling standards.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3425: INSIDE CABLING

Students develop the ability and skills to create structured cabling systems inside plant architecture.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3430: TELEPHONE BASICS

Students are introduced to the telecommunications industry and learn that the industry encompasses any communication over a distance—telephone, television, radio, wireless network, computer network, telemetry or other means. Students also explore how these technologies and others continue to converge so that the lines between telecommunications and other industries, such as computer hardware and consumer electronics, are getting blurrier all the time.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3435: SWITCHING & EQUIPMENT

Students are introduced to switching systems and learn that the systems generally perform these three basic functions: transmit signals over the connection and alert (ring) the called station; establish connections through a switching network for conversational use during the entire call; and process the signal information to control and supervise the establishment and disconnection of the switching network connection.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3440: NETWORK FUNDAMENTALS

Students are introduced to the concept of networking and the codes and regulations applied to the various types of networks commonly used in the communication industry.

Prerequisite: CTA3900: Apprenticeship Safety

COURSE CTA3445: NETWORK DEVICES & IP

Students understand how most common network devices operate and learn about the protocols, which are crucial to the success of building reliable, high-performance networks.

Prerequisite: CTA3440: Network Fundamentals, CTA3900: Apprenticeship Safety

COURSE CTA3450: CTA PRACTICUM A

Students, on the work site, continue to develop and refine those competencies developed in related Career and Technology Studies (CTS) occupational areas, previous practicums and other experiences.

Prerequisite: None

COURSE CTA3455: CTA PRACTICUM B

Students, on the work site, continue to develop and refine those competencies developed in related career and technology studies (CTS) occupational areas, previous practicums and other experiences.

Prerequisite: None

COURSE CTA3460: CTA PRACTICUM C

Students, on the work site, continue to develop and refine those competencies developed in related career and technology studies (CTS) occupational areas, previous practicums and other experiences.

Prerequisite: None

COURSE CTA3465: CTA PRACTICUM D

Students, on the work site, continue to develop and refine those competencies developed in related career and technology studies (CTS) occupational areas, previous practicums and other experiences.

Prerequisite: None

COURSE CTA3900: APPRENTICESHIP SAFETY

Students develop knowledge, skills and attitudes in the practice of workshop health and safety, communication and career planning.

Prerequisite: None