ATCW-2050: AUDIO VISUAL

Cuyahoga Community College

Viewing: ATCW-2050 : Audio Visual

Academic Term:
Spring 2019

Subject Code
ATCW - AIT-Communication Workers

Course Number:
2050

Title:
Audio Visual

Catalog Description:
Course covers the types, purpose and functions of audio visual communication systems and discusses transmission fundamentals, including required skills and site preparations. In addition, legal consequences and ramifications with respect to security issues is discussed.

Credit Hour(s):
1

Lecture Hour(s):
1

Requisites

Prerequisite and Corequisite
Departmental approval: admission into the CWA apprenticeship program.

Outcomes

Course Outcome(s):
I. Evaluate the different types, purpose and functions related to Audio Visual (A/V) systems.

Objective(s):
1. Define the terms related to A/V communications systems.
2. Compare the different types of A/V systems.
3. Examine the process of integrating audio/Visual to service end users.
4. Categorize the end users according to capacity and requirements.
5. Appraise the basic requirements of identified A/V systems.
6. Differentiate between Audio/ Visual purpose and function.

Course Outcome(s):
II. Examine the skills, preparations and transmission fundamentals used when installing A/V systems.

Objective(s):
1. Describe the specialty tools required for specific mediums.
2. Evaluate the testing tools and equipment used for signal strength and continuity.
3. Measure the skill sets that are related to A/V transmission.
4. Review the preparations, including signal reception and mediums used in the planning process.
5. Compare the different mediums used in signal transmission.

Course Outcome(s):
III. Consider the legal consequences involving A/V systems including security and fire protection and required notifications.

Objective(s):

1. Consider the consequences and ramifications of systems performance.
2. Classify the Codes associated with fire, elevator and panic stations.
3. Assess the consequences of a false sense of security.
4. Describe the bonding and insurance requirements related to A/V installation and performance.

Methods of Evaluation:

1. Quizzes
2. Tests
3. Class participation

Course Content Outline:

1. A/V Systems
    a. Terminology
        i. Coax
        ii. Bio metrics
        iii. Access control
        iv. Software
        v. Antenna
        vi. Mass notification
        vii. Card swipe
    b. Types
        i. Videos
            1. Community antenna television CATV
            2. Closed circuit television CCTV
            3. Video conferencing
            4. Entertainment
        ii. Audio
            1. Loud
            2. Page
            3. Stereo
            4. Audio conferencing
            5. Mass notifications
            6. Entertainment
        iii. Access control
            1. Card readers
            2. Bio metric
            3. Facial recognition
        iv. Security
            1. Fire
            2. Burglary
        v. Evacuation
    c. Audio/Visual integration
        i. Process
            1. Specification
            2. Scope of work
            3. Outcomes
        ii. End users
    d. End User
        i. Capacity
        ii. Requirements
2. Audio/visual system design
    a. Skill sets
        i. Mechanical
        ii. Electrical/low voltage
        iii. Installation
        iv. Safety

b. Preparations
    i. Planning
    ii. Mediums
    iii. Signal reception
c. Mediums
    i. Glass
    ii. Copper
    iii. Air
d. Tools
    i. Fusion splicer
    ii. Time domain reflectometer
    iii. Signal strength meter
    iv. Sound pressure meter
    v. Light loss meter
e. Testing tools
    i. Signal strength
    ii. Continuity

3. Legal
a. Consequences
    i. Criminal charges
    ii. Job loss
    iii. Injury
    iv. Civil
b. Ramifications
    i. Loss of life
    ii. Financial
c. Codes and standards
    i. National Fire Protection Association
    ii. National Electrical Code
    iii. Local, State and Federal
    iv. Panic stations
    v. Elevator
    vi. Americans with Disabilities Act (ADA)
d. False security
    i. Camera
    ii. Surveillance
e. Installation and performance
    i. Bonding
    ii. Insurance

Resources

Amy DiPaola, Samuel DiPaola. *Introduction to Low Voltage Systems.* 2nd. Cengage Stamford, CT, 2013.

BICSI. *Information Technology Systems Installation.* 6th Edition. BICSI Tampa, Florida, 2012.

National Fires Association (NFPA). *National Electric Code 2011 (NEC).* 2011 Edition. 2011 Edition Quincy, Massachusetts, 2010.

Resources Other

www.lowvoltage+Electrical+Wire (http://www.lowvoltage+Electrical+Wire)
www.**cablinginstall**.com

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