Course Competency

EEV 0166 Low Voltage Technician 5

Course Description

This course is an overview of intrusion detection, fire alarm systems, fiber optics, nurse call, CCTV, and access control systems.

Course Competency	Learning Outcomes
Competency 1: The student will be able to identify the role and responsibilities of the system designer by:	1. Communication 2. Critical thinking 3. Numbers / Data 4. Information Literacy 5. Environmental Responsibility 6. Computer / Technology Usage
1. Explaining the steps in the design process. Explaining the role of the designer.	
Competency 2: The student will be able to apply the basics of project management by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Computer / Technology Usage 6. Environmental Responsibility
1. Explaining the life cycle of a project. Explaining the role of the project manager. Explaining and define standard project management terms. Developing a project scope statement.	
Competency 3: The student will be able to connect and configure basic network infrastructure as it relates to electronics integration and automation by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Computer / Technology Usage

	6. Environmental Responsibility
1. Installing communications cabling using industry standards and recommended practices in order to create a robust, reliable network infrastructure. Performing the required level of cabling test procedures in order to ensure system performance meets or exceeds design specifications and client expectations. Securing the infrastructure by evaluating and fortifying all network cabling locations (patch panels, wiring drops, network interface devices, etc.) in order to ensure client privacy and information security. Designing a wired network infrastructure using appropriate communications cabling that meets the performance requirements of the client in order to ensure long-term operation and reliability. Performing basic configuration (e.g. IP settings, SSID, basic security, etc.) for common network devices such as switches, routers, and access points to support the performance requirements of all client devices in order to ensure proper functionality and long-term reliability.	
Competency 4: The student will be able to connect and configure wireless networks for electronics integration and automation by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Environmental Responsibility 6. Computer / Technology Usage
1. Surveying and analyzing the RF spectrum using available wireless networking tools in order to ensure performance and troubleshooting problems in a commercial environment. Applying knowledge of existing wireless communication protocols (802.11a/b/g/n/ac) in order to specify the proper hardware in a commercial wireless	

networking application. Ensuring reliability, security, and consistent performance of the wireless portion of a commercial network by proper configuration of the service set identifier (SSID), channel, encryption standards, and security settings. Explaining important considerations such as throughput, coverage areas, and client roaming when installing multiple access points.	
Competency 5: The student will be able to describe the commercial applications of electronics integration and automation by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Computer / Technology Usage 6. Environmental Responsibility
1. Describing common integrated system applications deployed in commercial environments. Explaining common considerations for various types of conference room applications (e.g. huddle spaces, small meeting rooms, training facilities, large event spaces, boardroom spaces, etc.). Identifying upcoming trends and technology in the electronics systems integration and automation industry. Explaining the basic functionality of commercial security and alarm applications. Explaining the different types of access control, including user-level administration/management for commercial applications. Explaining the different types of large-scale video distribution technologies	
Competency 6: The student will be able to demonstrate how to install a commercial fire alarm system by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Computer / Technology Usage 6. Aesthetic / Creative Activities

	7. Environmental Responsibility
1. Installing properly and addressing initiating devices (e.g. detectors, sensors, pull stations etc.). Installing properly and addressing signaling devices (e.g. horns, strobes, speakers, etc.). Installing properly and configuring fire alarm panels. Describing and explaining fire suppression systems and common methods used. (Optional) Performing testing of the fire alarm system. Integrating the fire alarm system with other commercial applications.	

Updated: SPRING TERM 2023