****

**Perimeter Security Detection Level One Course Outline**

**Course Time: 1 Hour**

**Course Description**

This course provides an overview of perimeter detection systems, which form the first line of defense in an intrusion detection system. The material presented in this course is basic, intended for individuals with fundamental understanding of electricity and the function of alarm circuits.

When you complete this course, you should be able to do the following:

* Comprehend the physical barriers the constitute a building perimeter
* Understand the role of intrusion detection systems in protecting these perimeter barriers
* Acquire knowledge of perimeter sensor technology
* Discover the advantages and limitations of each type of perimeter sensor technology (pros and cons)
* Learn to choose the right combination of technologies for a particular building type and end-user application (residential and commercial)

**Course Outline**

* Program Description
* Learning Objectives
* Defining the Building Perimeter
* The Concept of Defense in Depth
* Property Perimeter
* Building Perimeter Protection
* Interior Protection
* Spot Protection
* High Value Assets
* Defense in Depth – Layers of Electronic Security
* Layer 1 – Perimeter Protection
* Layer 2 – Interior Protection
* Layer 3 – Spot Protection
* Knowledge Check
* A Short History of Perimeter Alarms
* How Pope’s Alarm System Worked
* The Importance of Supervised Closed Circuit Alarms
* Closed Circuit Essentials
* Motion Detector
* Vibrations Sensor
* Control Panel
* Magnetic Contacts
* Today’s Perimeter Security Technology
* Photo Electric Beams
* Proximity Sensor
* Motion Sensors
* Vibration and Shock Sensors
* A Note About Wired and Wireless Technology
* Knowledge Check
* A Note Regarding “False Positive” and “False Negatives”
* Photoelectric Beams: Technology
* Tech Tip: Aligning Photoelectric Beams
* Step 1
* Step 2
* Step 3
* Step 4
* Step 5
* Photoelectric Beams: Pros and Cons
* Inertial Vibration Sensors: Technology
* Inertial Vibration Sensors: Pros and Cons
* Contact Shock Sensors: Technology
* Contact Shock Sensors: Pros and Cons
* Volumetric/non-contact Shock Sensors: Technology
* Volumetric/non-contact Shock Sensors: Pros and Cons
* Proximity Switches (Magnetic Contacts): Technology
* Door or Window Contact
* Recessed Magnetic Contact
* Overhead Door Contact
* Proximity Switches: Pros and Cons
* Motion Detection: Technology
* Passive Infrared Detectors
* Microwave Detectors
* Motion Detection: Pros and Cons
* Perimeter Sensors: Mini Exam
* Mini Exam: Question 1
* Mini Exam: Question 2
* Mini Exam: Question 3
* Applying Sensor Technology to Building Perimeters
* Building Types
* Residential Structures
* Stand-alone Commercial
* Multi-unit Commercial Shared Occupancy
* Note Regarding Residential Perimeter Detection
* A Note About Perimeter Vulnerabilities
* Residential Structures
* Windows and Doors
* Construction Materials
* Levels
* Budgetary Limitations
* Doors
* Solid
* Single Glass Pane
* Several Glass Panels
* Garage Door
* Windows
* Double hung
* Transom
* Sliding
* Stationary
* Bay or Bow
* Typical Residential – Exercise
* High-End Residential – Exercise
* A Note Regarding Commercial Perimeter Detection
* Small Retail Establishment – Exercise
* Large Retail Establishment – Exercise
* Large Commercial/Industrial Buildings – Exercise
* Multi-Tenant Commercial Buildings – Exercise
* Summary