Telerob USA Inc.
8206 Edinboro Rd.
Erie, PA 16509 USA
T:+1 (814) 528-5259

Region V Breakout Session:

- As society becomes more technologically advanced and microelectronics are readily available it is critical that bomb technicians understand their unique characteristics. Microcontrollers are now taught in most primary schools and can be purchased inexpensively from stores. The array of sensors that can be easily integrated into microcontrollers is quickly expanding, giving bomb makers more choices to build complex devices. Bomb technicians have not been exposed to microcontrollers, making it difficult for them to identify when inspecting a device. Since microcontrollers rely on software instead of identifiable components to create things such as timing sequences, bomb technicians need to understand their unique nature. This session is designed to give an introduction to microcontrollers, how they can be programmed and the ease of sensor integration. Students will walk through microcontroller theory and design while building more and more complex systems. After the course students will be able to use the kits in training and testing new circuits.

Session Objectives:

- Microcontroller functionality
- Programming a microcontroller
- How microcontrollers can be used in complex devices
- Sensor integration
- Identification of a microcontroller in a circuit

Requirements:

- Laptop
- Basic Computer Skills
- Preload the Arduino IDE software onto your computer
  - https://www.arduino.cc/en/Main/Software
- Purchase a basic starter kit from Amazon for $35
  - https://www.amazon.com/ELEGOO-Project-Starter-Tutorial-Arduino/dp/B01D8KOZF4/ref=sr_1_2_sspa?keywords=arduino&qid=1555343664&s=gateway&sr=8-2-spons&psc=1