COURSE DESCRIPTION

This is a 5 day (40 hour) course. Students will learn how to document, preserve, and interpret Gunshot Residue patterns on a variety of materials. The course will be broken up into lecture, practical exercises, mock case scenarios - which they will process and write reports detailing their findings and opinions.

The following topics will be covered:

- **History of processing items for distance determination**
- **Current literature relating to distance determination and GSR pattern testing**
- **Documentation techniques (traditional and digital) for processing evidence items**
- **Preparation of chemicals and reagents to be used in analyzing items for GSR patterns**
- **Evaluation of different paper types available for the Modified Griess Test**
- **Cleaning techniques for removing blood from materials**
- **Variability in patterns based on type of firearm used, material the pattern is on, angles of the firearm and material when the firearm discharged**
- **Examining the variability in ammunition styles including Lead-Free ammunition**
- **Evaluation of possible scenarios based on the examination and analysis of the evidence**
- **Report writing styles and range of conclusions**

E440: Gunshot Residue and Distance Determination

California Criminalistics Institute

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- **Incorporating uncertainty into Distance Determination to meet ANAB standards**

Students will process items of mock evidence and document their findings using: Modified Griess test Sodium Rhodizonate test Dithiooxamide test Conventional photography Infrared photography Microscopy and worksheets and notes.