

Forensic Science (2014)

Explore Foundations of Forensic Science FS.1

1 Examine the History of Forensic Science FS.1.1

- 1 Define forensic science FS.1.1.1
 - 2 Identify the major disciplines it encompasses FS.1.1.2
 - 3 Construct a timeline of significant contributions in forensic science FS.1.1.3
 - 4 Research major contributors to the field of forensic science FS.1.1.4
 - 5 Recognize and implement Locard's Exchange Principle FS.1.1.5
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2 Understand the Role of Forensic Science in the Criminal Justice System FS.1.2

- 1 Differentiate between local, state, and federal agencies FS.1.2.1
 - 2 Summarize roles of the law enforcement organizations FS.1.2.2
 - 3 Research duties and responsibilities of forensic science personnel FS.1.2.3
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3 Examine Different Types of Evidence FS.1.3

- 1 Compare and contrast physical and testimonial evidence FS.1.3.1
 - 2 Identify legal and proper evidence collection techniques FS.1.3.2
 - 3 Categorize physical evidence FS.1.3.3
 - 4 Evaluate evidence for its probative value in criminal proceedings FS.1.3.4
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4 Explore Careers in Forensic Science FS.1.4

- 1 Investigate the variety of careers in the forensic science field FS.1.4.1
 - 2 Research educational requirements for forensic careers FS.1.4.2
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Examining Legal and Ethical Issues in Forensic Science FS.2

1 Examine Legal Issues FS.2.1

- 1 Explore the Fourth Amendment and recognize legal search and seizures FS.2.1.1
 - 2 Model procedures to ensure chain of custody when collecting evidence FS.2.1.2
 - 3 Research Frye, Miranda, and Daubert court cases FS.2.1.3
 - 4 Understand how landmark court cases have determined admissibility of evidence in courtrooms FS.2.1.4
 - 5 Employ good practices of confidentiality FS.2.1.5
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2 Examine Ethical Issues FS.2.2

- 1 Define ethics, integrity, and bias FS.2.2.1

- 2 Research case studies to illustrate proper guidelines [FS.2.2.2](#)
- 3 Practice unbiased evidence collection, forensic analysis, and testimony [FS.2.2.3](#)

3 Model Professionalism [FS.2.3](#)

- 1 Recognize and implement a proper code of conduct for a career in the forensic field [FS.2.3.1](#)
- 2 Recognize and implement proper etiquette for crime scene investigations [FS.2.3.2](#)
- 3 Apply good communication through verbal, written and testimonial skills [FS.2.3.3](#)

Explore Crime Scene Investigations [FS.3](#)

1 Identify and Utilize Crime Scene Procedures [FS.3.1](#)

- 1 Demonstrate proper procedures to secure a crime scene [FS.3.1.1](#)
- 2 Identify the scope of a crime scene [FS.3.1.2](#)
- 3 Identify safety hazards in crime scene investigation [FS.3.1.3](#)
- 4 Implement proper safety protocols [FS.3.1.4](#)
- 5 Describe and implement searching techniques [FS.3.1.5](#)
- 6 Examine constitutional/legal protections in crime scene investigations [FS.3.1.6](#)
- 7 Identify and utilize information sources during an investigation [FS.3.1.7](#)

2 Utilize Scene Documentation [FS.3.2](#)

- 1 Recognize and implement appropriate measurement technique [FS.3.2.1](#)
- 2 Utilize note taking techniques [FS.3.2.2](#)
- 3 Explain procedures in crime scene photography [FS.3.2.3](#)
- 4 Implement sketching/diagramming techniques [FS.3.2.4](#)
- 5 Prepare evidence logs [FS.3.2.5](#)
- 6 Explain scene reconstruction [FS.3.2.6](#)
- 7 Prepare crime scene investigation reports [FS.3.2.7](#)

3 Examine Evidence Colleciton [FS.3.3](#)

- 1 Recognize potential evidence sources [FS.3.3.1](#)
- 2 Identify sources of potential contamination [FS.3.3.2](#)
- 3 Apply appropriate crime scene and evidence processing techniques [FS.3.3.3](#)
- 4 Recognize and implement chain of custody procedure [FS.3.3.4](#)
- 5 Demonstrate packaging and sealing techniques [FS.3.3.5](#)

Recognize and Implement Laboratory Fundamentals [FS.4](#)

1 Explore Safety [FS.4.1](#)

- 1 Explain general lab safety [FS.4.1.1](#)
- 2 Identify and utilize personal protective equipment (PPE) [FS.4.1.2](#)
- 3 Identify biological hazards [FS.4.1.3](#)

- 4 Identify chemical hazards FS.4.1.4
- 5 Understand proper disposal procedures FS.4.1.5

2 Recognize and Utilize Lab Skills FS.4.2

- 1 Distinguish appropriate measurement devices for tasks FS.4.2.1
- 2 Identify and utilize appropriate lab equipment FS.4.2.2
- 3 Understand contamination control procedures FS.4.2.3

3 Understand Quality Assurance FS.4.3

- 1 Explore individual certification requirements FS.4.3.1
- 2 Explore laboratory accreditation requirements FS.4.3.2
- 3 Understand quality control analysis procedures FS.4.3.3

Explore Forensic Disciplines FS.5

1 Examine Biological Evidence FS.5.1

- 1 Recognize types of biological evidence FS.5.1.1
- 2 Describe methodology for current biological evidence analysis techniques FS.5.1.2
- 3 Compare and contrast presumptive and confirmatory results in biological analysis FS.5.1.3
- 4 Critique the combined DNA index system (CODIS) FS.5.1.4
- 5 Summarize interpretation and conclusions for biological evidence analysis FS.5.1.5.
- 6 Compose report for biological evidence analysis FS.5.1.6

2 Examine Chemical Evidence FS.5.2

- 1 Recognize types of chemical evidence FS.5.2.1
- 2 Describe methodology for toxicology, controlled substances and arson analysis FS.5.2.2
- 3 Compare and contrast presumptive and confirmatory results in chemical analysis FS.5.2.3
- 4 Summarize interpretation and conclusions for toxicology, controlled substance and arson analysis FS.5.2.4
- 5 Compose reports for toxicology, controlled substance, and arson analysis FS.5.2.5

3 Examine Fingerprint Evidence FS.5.3

- 1 Compare and contrast latent, plastic, patent, and ink prints FS.5.3.1
- 2 Compare and contrast latent print processing techniques FS.5.3.2
- 3 Understand photography as it applies to latent print processing and recovery FS.5.3.3
- 4 Understand comparison methodology FS.5.3.4

- 5 Understand structure of automated fingerprint identification system (AFIS) [FS.5.3.5](#)
 - 6 Summarize interpretation and conclusions for fingerprint evidence [FS.5.3.6](#)
 - 7 Compose report for fingerprint comparison [FS.5.3.7](#)
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4 Examine Firearm and Tool Mark Evidence [FS.5.4](#)

- 1 Recognize firearms and tool mark evidence [FS.5.4.1](#)
 - 2 Describe methodologies for firearm, tool mark and serial number restoration [FS.5.4.2](#)
 - 3 Understand structure of National Integrated Ballistic Information Network (NIBIN) [FS.5.4.3](#)
 - 4 Summarize interpretation and conclusions for firearms, tool marks and serial number restoration [FS.5.4.4](#)
 - 5 Compose reports for firearms, tool marks and serial number restoration [FS.5.4.5](#)
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5 Examine Additional Disciplines [FS.5.5](#)

- 1 Explore question documents [FS.5.5.1](#)
 - 2 Explore shoe and tire impression evidence [FS.5.5.2](#)
 - 3 Explore trace evidence [FS.5.5.3](#)
 - 4 Explore digital evidence [FS.5.5.4](#)
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Understand Courtroom Proceedings [FS.6](#)

1 Identify Courtroom Processes [FS.6.1](#)

- 1 Identify roles and responsibilities of courtroom personnel [FS.6.1.1](#)
 - 2 Identify the components of legal proceedings [FS.6.1.2](#)
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2 Describe the Role of Expert Witnesses [FS.6.2](#)

- 1 Compare and contrast qualifications of expert versus lay witnesses [FS.6.2.1](#)
 - 2 Describe forensic methodology to jury [FS.6.2.2](#)
 - 3 Demonstrate courtroom demeanor [FS.6.2.3](#)
 - 4 Understand direct examination questioning [FS.6.2.4](#)
 - 5 Understand cross examination questioning [FS.6.2.5](#)
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Explore Forensic Specialties [FS.7](#)

1 Explore Death Investigation [FS.7.1](#)

- 1 Discuss the determination of cause and manner of death [FS.7.1.1](#)
 - 2 Explore forensic pathology [FS.7.1.2](#)
 - 3 Compare and contrast injury types [FS.7.1.3](#)
 - 4 Distinguish post-mortem changes [FS.7.1.4](#)
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2 Explore Forensic Anthropology [FS.7.2](#)

- 1 Define anthropology [FS.7.2.1](#)
 - 2 Explore the examination of skeletal remains [FS.7.2.2](#)
 - 3 Develop an anthropological profile [FS.7.2.3](#)
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3 Explore Forensic Entomology [FS.7.3](#)

- 1 Discuss the determination of post-mortem interval [FS.7.3.1](#)
 - 2 Identify entomological collection procedure [FS.7.3.2](#)
 - 3 Identification of species using a variety of sources [FS.7.3.3](#)
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4 Explore Forensic Odontology [FS.7.4](#)

- 1 Understand dental identification [FS.7.4.1](#)
 - 2 Critique bite mark analysis [FS.7.4.2](#)
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5 Explore Forensic Psychology [FS.7.5](#)

- 1 Discuss forensic psychology in criminal investigations [FS.7.5.1](#)
- 2 Explore psychological/criminal profiling [FS.7.5.2](#)