Cerro Coso College

Course Outline of Record Report

10/06/2021

ADMJC230 : Forensic Crime Scene Investigation

General Information

Author:	-
Course Code (CB01) :	ADMJC230
Course Title (CB02) :	Forensic Crime Scene Investigation
Department:	Public Service
Proposal Start:	Fall 2013
TOP Code (CB03) :	(2105.40) Forensics, Evidence, and Investigation
SAM Code (CB09) :	Clearly Occupational
Distance Education Approved:	Yes
Course Control Number (CB00) :	CCC000569038
Curriculum Committee Approval Date:	10/02/2015
Board of Trustees Approval Date:	11/03/2015
External Review Approval Date:	12/17/2015
Course Description:	This course enables students to attain a comprehensive understanding of the processes used to respond to, secure, document and collect evidence at a crime scene. The legal, ethical, and practical issues involving crime scene investigations are covered in greater detail. The coursework includes identifying and working a crime scene in the field.
Submission Type:	New Course
Author:	No value

Faculty Minimum Qualifications

Master Discipline Preferred:	• Administration of Justice (Police science, corrections, law enforcement)
Alternate Master Discipline Preferred:	No value
Bachelors or Associates Discipline Preferred:	No value
Additional Bachelors or Associates Discipline Preferred:	No value

Course Development Options

Basic Skills Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- Letter Grade Methods
- Pass/No Pass

☐ Allow Students to Gain Credit by Exam/Challenge

Allowed Number of Retakes

0

Course Prior To College Level (CB21)

Not applicable.

Rationale For Credit By Exam/Challenge

Retake Policy Description

No value

Non-Repeatable Credit

Allow Students To Audit Course

Course Support Course Status (CB26)

No value

Associated Programs

Course is part of a program (CB24)

Associated Program	Award Type	Active
CC Associate in Science Degree in Administration of Justice for Transfer -	A.S. Degree for Transfer	Summer 2018

Transferability & Gen. Ed. Options

Course General Education Status (CB25)

No value

Transferability

Transferable to CSU only

Transferability Status

Approved

Units and Hours:

Summary

Minimum Credit Units (CB07)	3
Maximum Credit Units (CB06)	3
Total Course In-Class (Contact) Hours	54
Total Course Out-of-Class Hours	108
Total Student Learning Hours	162
Faculty Load	0

Credit / Non-Credit Options

Course Credit Status (CB04)

Credit - Degree Applicable

Course Non Credit Category (CB22)

Credit Course.

Non-Credit Characteristic

No Value

Course Classification Status (CB11)

Funding Agency Category (CB23)

Cooperative Work Experience Education Status (CB10)

Credit Course. Not Applicable.

Variable Credit Course

Weekly Student Hours

	In Class	Out of Classs
Lecture Hours	3	6
Laboratory Hours	0	0
Activity Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	0
Laboratory	0
Activity	0
Total	54
Course Out-of-Class Hours	
Lecture	0
Laboratory	0
Activity	0
Total	108

Time Commitment Notes for Students

No value

Faculty Load

Extra Duties: 0

Faculty Load: 0

Units and Hours: - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Prerequisite

ENGLC070 - Introductory Composition

Due to the industry-specific importance of report writing and the necessity of interpreting case law precedent to comprehending the current legal Zeitgeist, a proficient completion of English 70 will provide the student with the reading and writing skills required to successfully navigate this course.
This course text and supplemental readings cover complicated concepts, procedures and scientific terminology which suggests a need for a level 1 reading ability.

Entrance Skills

Entrance Skills	Description
No value	No value

Limitations on Enrollment

Limitations on Enrollment	Description
No value	No value

Specifications

Methods of Instruction

Methods of Instruction	Written work
Rationale	No value
Methods of Instruction	Outside reading
Rationale	No value
Methods of Instruction	Problem Solving
Rationale	No value
Methods of Instruction	Project-based learning
Rationale	No value
Methods of Instruction	Skills Development and Performance
Rationale	No value
Methods of Instruction	Lecture
Rationale	No value

Methods of Instruction	Guest Lecturers
Rationale	No value

Methods of Instruction	Discussion
Rationale	No value

Methods of Instruction	Group Work
Rationale	No value

Methods of Instruction	Demonstration
Rationale	No value

Methods of Instruction	Case Study
Rationale	No value

Methods of Instruction	Audiovisual
Rationale	No value

Assignments

Example: Students will complete a 3-5 page research paper on the O.J. Simpson murder trial, the Casey Anthony murder trial, or the George Zimmerman murder trial. The paper should provide a brief overview of the case and the decision paying close attention to the evidence; how it was presented, what, if anything, was excluded (and why the evidence was excluded), and what expert witnesses were used. The student should identify the political, social, and ideological pressures that may have influenced the court's decision. Paper should be 3-5 pages in length not including the title, abstract, or reference page. Paper should follow APA format and be free of grammatical and spelling errors. Superior papers will be sufficiently developed and correctly cited with few or no spelling and grammatical errors. Assignment Example: Students will draw a sector sketch of the classroom to include a scale and applicable legend.

Methods of Evaluation	**Rationale**
Other	Writing assignment on a concept from the course 5 page single-spaced class paper on a concept covered in the class.
Other	Class exercise processing a crime scene
Tests	(5) 20 question quizzes
Final Exam	(1) 50 question Final Exam
Participation	Group discussions on course concepts
Tests	Written quizzes and exams on course content

Equipment

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
	Saferstein, Richard. (2016) Forensic Science: From the crime scene to the crime lab, 3rd, Pearson Prentice Hall			

Other Instructional Materials

No Value

Materials Fee

No

Learning Outcomes and Objectives

Course Objectives

Identify and explain the role of forensic specialists in the Criminal Justice System.

Identify the various types of crime scenes and differentiate between crime scene process versus crime scene analysis.

Identify and differentiate the types of pattern evidence and explain their respective importance in crime scene reconstruction.

Identify and explain Personal Identification Patterns that identify a person.

Identify and explain the processes for analyzing questioned documents

Identify and explain the processes for analyzing tool mark and firearm evidence.

Identify the three methods of DNA typing.

Explain the procedures for the collection and preserving DNA evidence to prevent contamination.

Identify and Differentiate the chemical and material evidence in Arson and Explosives crime scenes.

Identify and Differentiate depressant, stimulant, hallucinogen, and narcotic substances and explain the methods of analyzing each type of substance in a forensic laboratory.

CSLOs

Demonstrate the methods used in crime scene assessment, containment, search, and processing. Expected SLO Performance: 70.0

Demonstrate the use of the crime scene sketch and crime scene photographs as methods to document and reconstruct the crime scene. Expected SLO Performance: 70.0

Analyze reasons why physical evidence is important to criminal investigations and demonstrate the methods used to collect, document and process physical evidence. Expected SLO Performance: 70.0

Differentiate between the proper procedures involved in the safe collection of biological versus chemical evidence. Expected SLO Performance: 70.0

Discuss major legal issues involved in the use of DNA technology. Expected SLO Performance: 70.0

Outline

Course Outline

I. Physical Evidence
A. Types of evidence
1. Direct evidence
2. Circumstantial evidence
3. Testimonial evidence
B. Value of Physical evidence
1. Determine whether a crime has occurred
2. Link an individual to the crime scene
3. Provides investigation leads
4. Provides facts for jury to determine guilt or innocence
5. Aid in reconstruction of crime scene
C. Categories of physical evidence
1. Fingerprints
2. Firearms
3. Biological
4. Trace
5. Document
6. Physical matching
7. Toxicology
8. Drug
9. Other types
D. Laboratory Analysis of Physical Evidence
1. Comparative analysis process
2. Results of comparison process
E. Ethical; Legal; and Scientific Requirements for evidence collection
1. Ethical
i. Objectivity

ii. Determine facts
iii. Gather all relevant evidence
2. Legal
i. Search and seizure laws
ii. Documentation of scene
iii. Identification of physical evidence
iv. Chain of custody
3. Scientific
i. Preventing contamination of evidence
ii. Preserving condition of evidence
iii. Adequate comparison standards
II. Crime Scene Search Principles
A. First responder to scene
1. Safety
2. Emergency care
3. Approaching scene
B. Actions to be taken by first responder
1. Need for lifesaving procedures
2. Detain witnesses and suspects
3. Secure the scene
4. Scene data
5. Initial survey of scene
6. Preserve fragile evidence
C. Crime scene investigator (CSI)
1. Role of CSI
2. Choice of CSI
3. Record pertinent data immediately
i. Time called/arrived at scene
ii. Actions taken
iii. Person at scene
1. Establish a plan for processing scene
2. Data to compile before collection process
i. Unusual odors
ii. Presence/condition of blood stains
iii. Signs of struggle
iv. Points of entry/exit
v. Temperature of room
vi. Lighting
vii. etc.
D. Crime scene search
1. Keep notes of actions
2. Photograph the scene
3. Sketch the scene
4. Systematic search methods
i. Strip Method
ii. Grid Method
iii. Zone Method
iv. Spiral Method
III. Crime Scene Photography
A. Number of photographs at scene
B. Conditions at scene
C. Camera choice
D. Film type
E. Videotaping the scene
F. Log all photographs
G. Types of photographs of scene
IV. Crime Scene Sketches
A. Objectives of crime scene sketch
1. Present clear picture of scene
2. Complement CSI notes and photographs
B. Show accurate location and relationship of evidence items
C. Refresh CSI memory
D. Illustrates the testimony of witness
E. Factual data for scene reconstruction
F. Rules for sketches
1. Plan systematically for sketching the scene
2. Roughly show overall scene layout

3. Detailed sketches of pertinent area with measurements
4. Prepare blowup sketches when needed
5. Show compass point on sketch
6. Make accurate measurements foe evidence
G. Use fundamental methods for measuring
H. Have two people verify all measurements
I. Types of sketches
1. Rough
2. Locality
3. Layout
4. Detailed
5. Blowup
6. Exploded
7. Elevation
8. Finished
i. Not to scale
ii. Drawn to scale
9. Courtroom display sketches
10. Critical accuracy sketch
11. Manually drawn
12. Professionally drawn
13. Computer drawn
14. Three-dimensional computer drawn
i. Strip Method
ii. Grid Method
iii. Zone Method
iv. Spiral Method
J. Measurement techniques
1. Rectangular coordinates
2. Triangulation
3. Secondary reference point
4. Transecting baseline
5. Polar coordinates
V. Latent Fingerprint Evidence
A. Types of fingerprints and impressions
B. General considerations for latent prints
C. Safety of personnel present
D. Choice of development techniques
E. Systematic approach
1. Development with powder and brush
2. Development with Cyanoacrlate
3. Processing with small particle reagent
4. Processing with Ninhydrin
F. Approaches to latent detection and collection
G. Absorbent surfaces
H. Nonabsorbent surfaces
VI. Trace Evidence
A. Hair evidence
1. Significant features of hair
2. Microscopic features of human hair
i. Cuticle
ii. Cortex
iii. Medulla
B. Laboratory examinations of hair evidence
1. Unaided eye and stereoscopic (low power) microscopic
2. High-power microscopic
3. Comparison microscopic
4. DNA analysis
i. Collection of hair evidence
ii. Standard/control specimens of hair
C. Fiber evidence
1. Natural fibers
2. Synthetic fibers
3. Collection of fiber evidence
D. Standards/controls needed for lab analysis

E. Laboratory examination of fiber evidence

F. Glass evidence
1. Collection of glass evidence
2. Lab examination of glass evidence
G. Paint evidence
1. Collection of paint evidence
2. Lab examination of paint evidence
H. Soil evidence
1. Collection of soil evidence
I. Lab examination of soil evidence
J. Arson accelerant evidence
1. Nature of volatile flammables
2. Precautions at arson scene
K. Collection of accelerant evidence
L. Lab examination of accelerant evidence
VII. Biological Fluid and Stain Evidence
A. Blood evidence
1. Genetic markers in bloodstains
2. Modern and historical genetic marker testing
3. Nature of genetic markers
4. ABO blood type
5. Enzyme and protein blood types
B. Nature of DNA
C. Crime scene documentation of bloodstains
1. Notes
2. Photographs
3. Searching for bloodstains
4. Collection of bloodstain evidence
5. Small items containing potential bloodstains
6. Large immobile objects with hard; smooth surfaces
7. Large liquid pools of blood
8. Large objects with soft; porous surface
9. Large objects with hard; porous surface
D. Lab examination of bloodstains evidence
E. Semen evidence
1. Collection of semen evidence
2. Clothing of the victim
3. Bedding
4. Blood and semen stains on nonabsorbent surfaces
5. Lab examinations for semen
6. Detection
7. Screening test
F. Identification
G. Genetic marker testing
H. Blood standards needed
VIII. Firearms Evidence
A. Firearms cartridges
1. Bulleted Cartridges
2. Rimfire
3. Centerline Handgun
4. Centerline Rifle
B. Laboratory analysis
C. Laboratory exam of firearms evidence
D. Identification of the firearm that fired
E. Muzzle-to-target distance determination
F. Gunshot residue identifications
G. Weapon functionality exam
H. Bullet trajectory and/or sequence of firing
1. Collection of firearms evidence
2. Unloading revolvers
3. Unloading auto-loading firearms
I. Trace evidence and fingerprints
J. Weapons found in water
K. Recovery of fired ammunition components
L. Bullets embedded in wood or plaster
M. Removal of bullets from deceased person
N. Cartridge cases
O. Shot wads

P. Shot pellets
Q. Live shot shells or cartridges
R. Gunshot residue (GSR)
S. Collection of GSR
T. Target discharge residues
IX. Impression Evidence
A. Nature of impression evidence
B. Indented impression
1. Transfer prints
2. Residue prints
3. Collection of impression evidence
4. Footwear and tire tread impressions
5. Photograph footwear and tire tread impressions
6. Vehicle wheelbase and width measurement
C. Casting and lifting impressions
1. Lifting residue impressions
2. Casting of footwear and tire impressions
3. Casting materials for footwear and tire impressions
D. Tool-mark evidence collection
1. Special precautions for tool-mark evidence
2. Doors; windows; and other openings
3. Presence of trace evidence
4. Paint transfer to the tool from object source
5. Documentation of tool-mark evidence
6. Notes and sketches
7. Photography of tool-marks
8. Marking of items removed bearing tool-mark evidence
9. Preparing casts of tool-marks
10. Packaging of objects bearing tool-mark evidence
E. Fracture evidence
F. Tape cut piece
G. Wire cut piece
H. Rope cut piece
X. Drug and Alcohol Evidence
A. Controlled substances
1. Narcotics
2. Psychoactive
3. Sedatives
4. Tranquilizers
B. Central nervous system stimulants
C. DEA Schedule of controlled substances
1. Schedule I
i. High potential for abuse
ii. Have no currently accepted medical use
iii. Examples: heroin; LSD; Methaqualone
1. Schedule II
i. High potential for abuse
ii. Have currently accepted medical use
iii. Examples: morphine; PCP; cocaine
1. Schedule III
i. Potential for abuse
ii. Currently accepted medical use
iii. Examples: anabolic steroids; codeine; hydrocodone
1. Schedule IV
i. Lower potential for abuse
ii. Have currently accepted medical use
iii. Examples: Darvon; Valium; and Xanax
1. Schedule V
i. Low potential for abuse
ii. Currently accepted medical use
iii. Example: codeine in cough syrup
XI. Document Evidence
A. Functions of document examiner
1. Handwriting comparisons
2. Typewriting comparisons
B. Examinations of photocopies; Printers; and fax machines
C. Alterations; erasures; and obliterations

D. Indented writings
E. Ink examinations and comparisons
1. ID of document paper composition and manufacture
2. ID of the source of a torn paper
F. Collection of document evidence
G. Precautions for handling
H. Latent fingerprints
I. Charred documents
J. Exemplar writings
K. Packaging of questioned documents
XII. Vehicle Scene Investigations
A. General automobile search
B. Traffic Accident Investigations
1. Photographs at the scene
2. Overview of the scene
3. Point of impact
4. Position where each vehicle come to rest
5. Damage to vehicles
6. View drivers had while approaching scene
7. Point of view each witness had of scene
8. Accident sketches of scene
9. Accuracy of the measurements
10. Pre-designed scene sketch forms
11. Types of sketches for the accident scene
C. Finished sketches
D. Hit and run investigations
1. Vehicle versus pedestrian
2. Vehicle versus vehicle
3. Vehicle lights evidence
E. Scene investigation
1. Collection and packaging
2. Intact lights and bulbs
3. Broken lights and bulbs
4. Headlight filaments
5. Laboratory examinations
XIII. Sexual Assault Investigations
A. First responder responsibility at crime scene
1. Protection of victim
2. Secure the scene
3. Document the scene
4. Interview victim
5. Initiate crime broadcast
6. Arrange medical exam for victim
7. Crime scene investigator
8. Latent fingerprint impressions
9. Footwear; tire track; and tool-marks impressions
10. Semen evidence
11. Saliva
12. Trace evidence
13. Police report to forensic lab
14. Evidence from victim
15. Sexual assault evidence collection kit
16. Clothing
17. Injuries
18. Blood
19. Trace evidence
20. Latent print impressions
21. Bindings from victim
22. Medical exam of victim
23. Standard identification
24. Chain of custody
25. Collection of clothing
B. Examination of body surfaces and orifices
1. Semen and blood stains
2. Collection of foreign materials
3. Bite-marks and bruises
4. Oral aspirates

5. Blood samples
6. Saliva standard
7. Fingernail scraping
8. Evidence from suspect
9. Medical history
10. Clothing
11. Physical exam
12. Physical evidence
13. Head and pubic hair standard
14. Blood
15. Saliva
16. Fingernail scrapings
17. STD culture specimen

XIV. Homicide Crime Scene InvestigationsPersonnel who may be needed

1. Criminalist
2. Pathologists
3. Prosecuting attorney
4. Fire department personnel
5. Forensic anthropologist
6. Forensic entomologist

B. At the scene

1. Position of body
2. Postmortem levity
3. Wounds and signs of struggle on body
4. Signs of struggle at scene
5. Presence/absence of notes
6. Nude bodies
7. Time of death considerations
8. Bloodstains and patterns
9. Protect body during removal
10. Check area under body

C. Postmortem Examination

1. Pre-autopsy conference
2. Postmortem photography
3. Trace evidence
4. Hair standard samples
5. Fingernail scrapings
6. Gunshot residue
7. Gunshot wounds
8. Condition of teeth/dentures
9. Sexual assault homicides
10. Vehicular homicides
11. Decomposed remains
12. Body fluids and toxicology
13. Wrap-up conference

XV. Crime Scene ReconstructionEstablishment of expertise

1. Appropriate foundation for expertise
2. Education
3. Training classes
4. Mentored experience
5. Case and research experience
6. Experiential development of expertise

B. Process of crime scene reconstruction

1. Crime scene reconstruction components
2. Documentation component
3. Analysis component
4. Synthesis component
5. Recognition and documentation of physical evidence
6. Collection and examination of physical evidence
7. Laboratory examinations of physical evidence
8. Analysis of data from crime scene
9. Synthesis of analysis data

C. Types of reconstructions

1. Traffic accident
2. Homicide
3. Sexual assault
4. Reconstructions classified by evidence type

i. Bloodstain/pattern
ii. Firearms
iii. Other or more than one type

Delivery Methods and Distance Education

Delivery Method: Please list all that apply -Face to face -Online (purely online no face-to-face contact) -Online with some required face-to-face meetings (“Hybrid”) -Online course with on ground testing -iTV – Interactive video = Face to face course with significant required activities in a distance modality -Other

Face 2 Face true
Online true
Interactive true

Rigor Statement: Assignments and evaluations should be of the same rigor as those used in the on-ground course. If they are not the same as those noted in the COR on the Methods of Evaluation and out-of-class assignments pages, indicate what the differences are and why they are being used. For instance, if labs, field trips, or site visits are required in the face to face section of this course, how will these requirements be met with the same rigor in the Distance Education section?

The online course will include virtual crime scene with which the student will be able to interact and select evidence to collect and determine the correct method for collection. In addition, videos and photographs of simulated crime scenes built by the instructor will be provided to the online student through the online learning management system so they can demonstrate their ability to accurately write a report and complete a sector sketch based off of the simulated crime scene. This virtual crime scene will simulate the physical crime scene, evidence collection, sector sketch, and report writing assignments completed in the on ground course.

Effective Student-Instructor Contact: Good practice requires both asynchronous and synchronous contact for effective contact. List the methods expected of all instructors teaching the course. -Learning Management System -Discussion Forums -Moodle Message -Other Contact -Chat/Instant Messaging -E-mail -Face-to-face meeting(s) -Newsgroup/Discussion Board -Proctored Exam -Telephone -iTV -Interactive Video -Other (specify)

No Value

Software and Equipment: What additional software or hardware, if any, is required for this course purely because of its delivery mode? How is technical support to be provided?

No Value

Accessibility: Section 508 of the Rehabilitation Act requires access to the Federal government's electronic and information technology. The law covers all types of electronic and information technology in the Federal sector and is not limited to assistive technologies used by people with disabilities. It applies to all Federal agencies when they develop, procure, maintain, or use such technology. Federal agencies must ensure that this technology is accessible to employees and the public to the extent it does not pose an "undue burden". I am using -iTV—Interactive Video only -Learning management system -Publisher course with learning management system interface.

itv
learning management system
publisher

Class Size: Good practice is that section size should be no greater in distance ed modes than in regular face-to-face versions of the course. Will the recommended section size be lower than in on-ground sections? If so, explain why.

No Value