

Justice Studies Department
San Jose State University
Spring 2005
Class hours MW 1200-1315
Room: MH 520

Instructor: Dr. Steven Lee
Office Hrs: M 1315-1815
set by appointment via email
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JS 112 Criminalistics

Course Description:

Course Objective

This course will teach an understanding of the fundamental theories of physical evidence, practically applied; and the legal consideration involved in its recognition, collection, preservation and presentation in court. Physical evidence includes such things as fibers, glass, hair, soil, bullets, fingerprints, and shoeprints. Learn the appropriate methods for processing, securing, and isolating a crime scene. Topics include recording the scene, searching for evidence, decision-making about what evidence is appropriate and necessary to collect, procedures for collecting physical evidence, and maintaining the chain of custody to avoid contamination.

Course Text and materials: Spartan Bookstore

Required Texts:

Techniques of Crime Scene Investigation, Seventh Edition. 2004 Barry Fisher.

ISBN084931691X, 544 pages. CRC Press

Evidence and Crime Scene Reconstruction (Expanded 6th edition - **April 2002**), National Crime Investigation and Training Joe Rynearson, Jerry Chisolm and Jim Weigand

<http://www.ncit.com>

Required reading and internet materials:

Journal articles and other readings will be accessible at the SJSU library, on reserve or will be accessible on line. Citations and URLs for on line materials will be provided in assignments.

NIJ on line documents (eg: Crime scene investigation guidelines

<http://www.ncjrs.org/pdffiles1/nij/178280.pdf>, Crime Scene Investigator Web sites-

<http://www.crime-scene-investigator.net/> and the CA Dept of Justice Physical Evidence Bulletins:

<http://www.cci.ca.gov/Reference/pehb/peb.html> and other web sites will be required.

Supplementary Texts (Optional)- Course material may include citations from the following:

Criminalistics: An Introduction to Forensic Science (College Version), 8/E, Copyright 2004, published 6-18-2003, RE. Saferstein, Ph.D., ISBN: 0-13-111852-8, Prentice Hall, 608 pp.

<http://vig.prenhall.com/catalog/academic/product/0,4096,0131118528,00.html>

Henry Lee's Crime Scene Handbook. 2001. Henry Lee. PhD. ISBN 0-12-440830-3, 418pp. Academic Press.

Forensic Science: An Introduction to Scientific and Investigative Techniques. 2003. Stuart H. James and Jon J. Nordby eds., ISBN: 0849312469, 698pp. CRC Press

Forensic Firearms Evidence handbook. 1995. Lucian Haag. Workbook.

Experiments and Practical Exercises in Bloodstain Pattern Analysis. 1998. Laber, T and Epstein B. 1998 5th printing. Minnesota BCA.

Course Format:

The course will include **lectures by the instructor and guest lectures** from law enforcement agencies. **Discussions, videos, small-group hands-on activities, and hands-on crime scene exercises** will also be included throughout the semester. On-line chat sessions if possible will also be offered.

Course requirements:

Exams: Three exams will be given in this course. Exams will be cumulative and will include all material covered up to the date of the exam. Exams may include multiple choice, matching, true/false, short answer, diagrams, drawings and sketches, short essay and/or long essay.

Exam 1: Wed 03/02/05 Exam 2: Wed 04/06/05 Final: TBA

Quizzes

Quizzes on assigned readings, laboratories, small group activities and other assigned materials will be given during the semester. These will generally be multiple choice, matching, true/false and short answer but may also include essay questions.

Hands-on Crime scene Exercises and Assignments

Five hands-on crime scene exercises will be required. Each will be worth 10 points. The format and grading of the laboratory reports will be provided at the first laboratory session. Bound notebooks are required for all 5 laboratory reports.

Grading

Quizzes	100 points
Exam 1	100 points
Exam 2	100 points
Final exam	150 points
Crime scene exercises	50 points
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Total required	500 points

A total of 10 points may be granted for small group assignments and other individual assignments during the semester. Each assignment will be worth 1-2 points each. These extra credit points may be used to augment your final point total.

Grading Policies

Make-up exams will not generally be permitted. However, under extraordinary circumstances, with proper documentation and approval by the instructor, a 15 page single-spaced term paper of an instructor assigned topic, may substitute for 1 exam.

	From	To
A+	483.5	500
A	467	483.4
A-	450	466.9
B+	433.5	449.9
B	417	433.4
B-	400	416.9

C+	383.5	399.9
C	367	383.4
C-	350	366.9
D+	333.5	349.9
D	317	333.4
D-	300	316.9
F	<300	

Instructor

Professor Lee holds an MS from NYU and PhD from University of California, Berkeley in Molecular Biology. Lee holds several concurrent positions including a consulting position as Director of R&D at MiraiBio Inc. a small biotech company in Alameda, CA, Visiting Scholar at UC Berkeley, and holds adjunct professor appointments in Biological Sciences at San Francisco State University and Chemistry at Florida International University. He was formerly the Director of R&D at CA Dept of Justice DNA Laboratory from 1994-2000 where he served as an expert witness in DNA and conducted DNA training courses. He is a full member of the American Association for the Advancement of Science, American Academy of Forensic Sciences, the California Association of Criminalists and is an American Society of Crime Laboratory Directors Laboratory Accreditation Board certified inspector. He also served on the FBI Technical Working Group on DNA Analysis Methods group from 1994-2000.

Tentative Course Schedule:

Dates	Topics	Fisher
Week 1	Introduction and Overview of the Course	C1
1/26/05:	Welcome- Sign up for small groups Photograph assignment- Safety concerns Review list of CSI tools Types of Crime Overview of Physical Evidence in Criminal Investigation	
Week 2:	Physical Evidence and Crime Scene Management	C1&C5
1/31	Overview of Physical Evidence in Criminal Investigation continued	
2/2	Information, Resources, Technology Logistics, Role of the Criminalist Crime Scene Exercise 1: Measurements – Precision/Accuracy	
Week 3:	General Crime Scene Procedures	C2&C4
2/7	Role of the first responder Initial crime scene response, Communication, Legal implications Documentation, Preliminary reconstruction, Investigative team, Biohazards Note-taking, Videography, Photography, Sketching	
2/9	Crime Scene Exercise 2A: Measurements, Securing a scene, documentation Chain of custody	
Week 4:	Crime Scene Documentation and Searching for PE	C5
2/14	Crime Scene Exercise 2B: Documentation, Sketching and Note taking	
2/16	Searching the scene- Chain of custody review- Proper collection	
Week 5:	Guest Lecture and Video	
2/21	Guest Lecture- Dr. Doug Wallace- mtDNA	
2/23	Video- Lee at AAFS meeting	
Week 6:	Student led review and EXAM 1	
2/28	Student Led Reviews- Exam 1- C1, 2, 4 and 5	
3/2	Exam 1	

Week 7:	Searching for Physical Evidence	
3/7	Crime Scene Exercise 3A- Searching for Physical Evidence	
	Locating physical evidence, Search patterns, Practical applications	
3/9	Crime Scene Exercise 3B- Searching for Physical Evidence cont	
	Locating physical evidence, Search patterns, Practical applications	
Week 8:	Collection/ Preservation of Physical Evidence- Fingerprints	C6&7
3/14	Fingerprints, Hairs, Fibers and Trace	
3/16	Crime Scene Exercise 4A- Fingerprints	
Week 9:	Firearms and Toolmarks and Impression Evidence	C9&C10
3/21	Firearms and Toolmarks/Impression Evidence	
3/23	Crime Scene Exercise 4B- Impression Evidence- Shoeprints	
Week 10:	Spring Break- No class	
Week 11:	Student Led Reviews and Exam 2	
4/4	Student Led Reviews	
4/6	Exam 2	
Week 12:	Collection and Preservation of Physical Evidence cont	C6/C11&12
4/11	Arson, explosives, Drugs, Volatile and transitory evidence	
4/13	QDs	
	Crime Scene Exercise 4C- QD	
Week 13:	Biological Evidence- Searching for biological fluids	C8&C13
4/18	Types of Biological Evidence	
4/20	Crime Scene Exercise 5A: Bloodspatter	
Week 14:	Biological Evidence-Serology and DNA	
4/25	Searching for biological fluids	
4/27	Intro to Cell biology and Deoxyribonucleic Acid	
	General Considerations- Liquid vs dried blood	
	Reference samples, seminal stains, saliva, urine, perspiration	
	Crime Scene Exercise 5B- Collection of biological evidence part 1	
Week 15	Field Tests, Enhancement Reagents	C8
5/2	Video (Lee at AFDIL)	
5/4	Crime Scene Exercise 5C- Collection of biological evidence part 2	
	Tests for blood, body fluids, GSR, explosives, drugs, blood, protein, fatty acids	
Week 16	Crime Scene Reconstruction and Homicide Investigation	C10/C16
	Computer Evidence, Student led reviews	C9
5/9	Crime Scene Reconstruction Computer evidence	
	Importance, Nature, Basic principles	
5/11	Student Led Review	
	Course Review, All reports in notebooks are due	

Assignment 1. Due 31 Jan 05 by email to Steven.Lee@sjsu.edu

Part A.

Review for the following: <http://www.crime-scene-investigator.net/respon1.html>

Read and discuss the Overview section and Personnel Duties and Responsibilities of this URL (next time we will discuss personnel duties and responsibilities) among your team mates.

After reviewing **write 3 quiz questions with a separate sheet for answers and explanations.**

Total size of the document you submit should not be more than 3 paragraphs (300 words of questions and answers). You may include 1 multiple choice question. **Email Qs and As to me**

Part B. Start to collect the following individually and with your team mates

(For a complete list See Appendix I in Lee, 2001)

For each person:

1. *Bound notebook with page numbers- Spiral notebooks are not as good as pages can easily be torn out. If you need to use a spiral notebook, be sure every page is numbered. 1 per person*
2. *Tape measure- 1 per person*
3. *Rulers and protractors (with metric and inches)- 1 per person*
4. *Graph paper (10 sheets/person)*
5. *Permanent sharpie markers (at least 2- black or blue)*
6. *Pens (ball points)*
7. Manila envelopes (10 – 8x11”, 10 coin envelopes per person)
8. Paper bags- Grocery sized (2/person)
9. Plastic ziplock bags (5/person)
10. Q tips (20/person)

Important ! (Items in Bold and Italics are needed by 1 Sept)

For each team

11. Clear packing tape with dispenser
12. 35 mm camera with 3 rolls of film
13. Rope or Twine
14. Pill boxes (various sizes)
15. String
16. Labels
17. Tweezers
18. Dust buster vacuum and new vacuum bag
19. Scissors
20. Toothpicks

I will provide access to

- Knife
- Gloves (latex)
- Masks (painters)
- Etoh wash bottles
- Cleaning solutions
- Lab coveralls/booties
- Water bottles

This list will be completed in the following weeks before our first exercise.

For next week please bring items 1-6