Justice Studies Dept
San Jose State University
Fall 2006
Class Hours: Tuesday 5:30 – 8:15
Room: MH 520

Instructor: Archna Patel
Office Hours: Mon 2:00 – 3:00
Thur 3:00 – 4:00
or by appointment
Email: abmp1781@comcast.net

JS 113 – INTRODUCTION TO FORENSIC SCIENCE

Course Description:

This course is designed to introduce students to the basics of forensic science. Students will be introduced to the scientific concepts, methods, practices, and analytical instrumentation utilized by forensic scientists for recognition, collection, preservation, identification, comparison, analysis and documentation of physical evidence. Evidence interpretation, court testimony, professional requirements, standards, training, ethics, and quality assurance will also be covered.

Course Text and materials:

Required Text: Criminalistics: An Introduction to Forensic Science (College Version), 9/E. Copyright 2007, published . Richard E. Saferstein, Ph.D ISBN: 0-13-221655-8, Prentice Hall, 672 pp

Required reading and internet materials:

Journal articles and other readings will be accessible on reserve at the SJSU library or will be accessible online. Citations and URLs will be provided in the assignments. CA Dept of Justice Physical Evidence Bulletins: http://www.cci.ca.gov/Reference/peb/peb.html and other forensic websites will be required reading. These readings will be announced.

Optional Supplemental Texts:

Course materials may include citations from the following:

Forensic Science Handbook Volume II. Richard Saferstein, 1988/ISBN 0133268772
Forensic Science Handbook Volume III. Richard Saferstein, 19 ISBN 0133253902
Techniques of Crime Scene Investigation, 2003. 7th Ed. Barry A.J. Fisher. ISBN 084931691X. CRC Press LLC. 544 pp
Forensic Science: An Introduction to Scientific and Investigative Techniques. 2003. Stuart H James and Jon J Nordby eds. ISBN 049312469, CRC Press. 698 pp.
Henry Lee's Crime Scene Handbook. 2001. Henry Lee, Ph.D. ISBN 0124408303, Academic Press. 418 pp

Forensic DNA Typing: Biology and Technology Behind STR Markers. 2001. John Butler PhD. ISBN 0-12-147951-X. Academic Press. 322 pp
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 lecturers. Discussions, videos, small-group projects or presentations, hands-on activities, and laboratories will also be included in the curriculum. If possible, field trips to local crime labs may be scheduled during the semester. Readings will be assigned weekly and are mandatory.

Course Requirements:
Exams: There will be two midterms and one final exam during this course. Exams will be cumulative, thus covering all material up to the date of the exam. Exams will include multiple choice, matching, true/false, short answer, diagrams, drawings/sketches, short and/or long essay. Material on the exam will be taken from some or all of the followings sources: in class lectures and guest lecturer, assigned reading, laboratory exercises, videos, tours, in-class presentations.

Quizzes: There will be quizzes on the assigned reading, the laboratories and the lecture material. Quizzes will be ten points each, will be formatted similar to the exams, and will be closed book. Quizzes will be announced. Quiz grades are part of your final grade.

Laboratory Reports: Several lab reports will be required. Details will be provided at the first lab session. Lab grades are part of your final grade.

Grading:

Quizzes	50 points
Midterm 1	100 points
Midterm 2	100 points
Final Exam	200 points
Lab Reports	150 points
Total	600 points

Grades will follow the scale below unless otherwise announced by the instructor:

A	540-600
B	480-539
C	420-479
D	360-419
F	359 and below

Grading Policies:

Make-up exams will generally not be permitted. However, under extraordinary circumstances, with proper documentation and with approval by the instructor, a make-up exam may be granted. There will be no make-ups for the final exam. Late work will not be accepted without prior approval from the instructor. There will be no opportunities for extra credit except for extra credit questions on the exam. However, students are invited to attend office hours to obtain help on any aspect of the class. In accordance with the University policy, students caught cheating will automatically receive an F grade.

Academic Integrity Statement

Academic integrity is essential to the mission of San José State University. As such, students are expected to perform their own work (except when collaboration is expressly permitted by the course instructor) without the use of any outside resources. Students are not permitted to use old tests, quizzes, or material from previous terms when preparing for exams, nor may they consult with students who have already taken the exam. When practiced, academic integrity ensures that all students are fairly graded. Violations to the Academic Integrity Policy undermine the educational process and will not be tolerated. It also demonstrates a lack of respect for oneself, fellow students and the course instructor and can ruin the university's reputation and the value of the degrees it offers. We all share the obligation to maintain an environment which practices academic integrity. Violators of the Academic Integrity Policy will be subject to failing this course and being reported to the Office of Student Conduct & Ethical Development for disciplinary action which could result in suspension or expulsion from San José State University. The policy on academic integrity can be found at: http://sa.sjsu.edu/student_conduct

To better understand plagiarism and to aid you in making sure that you are not plagiarizing, please see me and/or visit:

http://tutorials.sjlibrary.org/plagiarism/index.htm

Safety:

Any student with special needs should contact the instructor on the 1st day of class. Classroom safety will be discussed on the first day of class and in the laboratory when warranted.

Americans with Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires students with disabilities requesting accommodations must register with DRC to establish a record of their disability.

Course Add/Drop Statement

Instructors are permitted to drop students who fail to attend the first scheduled class meeting and who fail to inform the instructor prior to the second class meeting of the reason for any absence and their intention to continue in the class. Some instructors will drop students who do not meet the stated course prerequisites. However, instructors are not required to drop a student from their course. *It is the student's responsibility to make sure classes are dropped.*

You, **the student**, are responsible for understanding the policies and procedures about add/drops, academic renewal, withdrawal, etc. found at: http://sa.sjsu.edu/student_conduct

Instructor:

Archna Patel holds a Masters of Science in Forensic Science from the University of Alabama at Birmingham. Archna Patel also graduated from Barnard College of Columbia University with a degree in Biochemistry. She worked for a year and a half in proteomic research at the University of Alabama at Birmingham.

Tentative Course Schedule

Note: This schedule is subject to change and students will be given notice of changes. The reading assignments are from the required text: Criminalistics: An Introduction to Forensic Science by Saferstein. Readings from journals, etc will be announced.

Date	Topic & Description	Reading
Week 1 (8/29)	**Introduction/Overview to Forensic Science** Handouts, Syllabus, Introduction, course Description, grading policies Introduction to Forensic Science	**Chapter 1**
Week 2 (9/5)	**The Crime Scene & Physical Evidence** Processing the crime scene and legal Considerations Introduction to physical evidence	**Chapter 2, 3**
Week 3 (9/12)	**The Microscope: Light/Compound/ Comparison/Microspectrophotometer/ SEM** Initial Examination, Characterization, Application and Identification	**Chapter 4, 7**

Week 4 (9/19)	**Trace Evidence:** Collection, preservation and comparison of trace evidence. Hairs, Fibers, Paint Arson & Explosives *Trace Evidence Lab*	**Chapter 8, 11**
Week 5 (9/26)	**Fingerprints** Detection, classification, preservation and documentation of latent prints AFIS *Review for Midterm*	**Chapter 14**
Week 6 (10/3)	**Midterm 1. Video Presentation**	**Chapter 1-4, 7, 8, 11**
Week 7 (10/10)	**Fingerprints (cont'd from week 5)** *Fingerprint Lab* Go over Midterm 1	**Chapter 14**
Week 8 (10/17)	**Chemical Foundations – Organic and Inorganic Analysis** Chromatography, Spectrometry, Emission Spectra of elements Atomic Absorption Spec. GC, MS, FTIR	**Chapter 5, 6**
Week 9 (10/24)	**Controlled Substance/Forensic Toxicology** Narcotics, Hallucinogens, Depressants Stimulants, Club drugs, Drug ID, Drug Control laws, collection and preservation Of drug evidence	**Chapter 9, 10**
Week 10 (10/31)	**Firearms and Impression Evidence** Comparing bullets, cartridge cases Determining Distance, Serial Number Restoration, GSR, Tool marks, Shoeprints *Footprint Lab*	**Chapter 15**

Week 11 (11/7)	**Ethics/Court Testimony** Court Testimony Ethics in forensic science *Firearms Lab* *Review for Midterm 2*	
Week 12 (11/14)	**Firearms Wrap up. Midterm 2**	**Chapter 5, 6,9,10,14, 15**
Week 13 (11/21)	**Forensic Biology/Serology** Intro to Serology Presumptive testing for biological Fluids Review Midterm 2 *Serology Lab*	**Chapter 12**
Week 15 (11/28)	**Forensic Biology/DNA/PCR** Introduction to DNA. Extraction Quantification, PCR, STR, RFLP, DNA Mixtures, Degradation of DNA	**Chapter 13**
Week 16 (12/5)	**Forensic Biology** *DNA/PCR Lab* Review for Final Exam	**Chapter 13**
Final Exam	**Tuesday December 12** 5:15 – 7:30	**Cumulative**