

FIU Department of Chemistry and Biochemistry

CHS 3501 Survey of Forensic Science – Fall 2007

Tues. & Thurs. 5:00-6:15 PM Rafael Diaz-Balart (RDB) 1100 (College of Law)

Instructors: Dr. Ken Furton furtonk@fiu.edu 305-348-6546 & George Borghi gborghi@mdpd.com 305-471-3005

Office Hours: Tues. & Thurs. 6:15-7:15 PM ECS 447

Required text: *Criminalistics: An Introduction to Forensic Science 9th Ed.* by Richard Saferstein, ©2007

Pre-requisites: There are no pre-requisites required for this course.

Objectives of the Course: This is a survey course introducing the principles and techniques of forensic science as they pertain to crime scene investigation and crime laboratory analysis. It is designed to be accessible to those without a science background, but at the same time will provide a well-rounded introduction to forensic science for those considering further studies in the field.

Homework assignment: All odd-numbered review questions (answers in back of textbook).

Class Schedule / Last Updated on 8/21/2007 (updates @ www.furton.org)

Date:	Chapter	Subject:	Tentative lab experiments
8/28	Chp. 1	Introduction	Lab check in
8/30	Chp. 2	The Crime Scene	
9/4	Chp. 3	Physical Evidence	No lab
9/6	Chp. 14	Fingerprints	
9/11	Chp. 14	Fingerprints (George Borghi)	Crime scene video
9/13	Chp. 12	Forensic Serology	
9/18	Chp. 12	Serology case studies	Fingerprints
9/20	Review	Review	
9/25	EXAM	EXAM 1	Blood spatter
9/27	Chp. 7	The Microscope	
10/2	Chp. 8	Hairs, Fibers and Paint	Microscopy
10/4	Chp. 13	DNA Analysis	
10/9	Chp. 13	DNA/Bioterrorism	Impression evidence
10/11	Chp. 15	Firearms, Tool marks	
10/16	Handout	Forensic Osteology	Bood ID typing
10/18	Review	Review	
10/23	EXAM	EXAM 2	DNA extraction
10/25	Chp. 4	Glass and Soil *Drop deadline*	
10/30	Chp. 5	Organic Analysis	Document examination
11/1	Chp. 6	Inorganic Analysis	
11/6	Chp. 9	Drugs	Product rule
11/8	Chp. 9	Drugs	
11/13	Chp. 10	Forensic Toxicology	
11/15	Review	Review	
11/20	EXAM	EXAM 3	
11/22		Thanksgiving	
11/27	Chp. 16	Document and Voice examination	Mock crime scene
11/29	Chp. 17	Computer Forensics	
12/4	Chp. 18	The Internet	
12/6	Chp. 19	The future / review	
12/13	EXAM	FINAL EXAM 5:00-6:15	Check http://www.fiu.edu/orgs/register/final.htm

- Attendance of the lecture is essential as not all of the course material is covered in the text and web materials.
- The course grade will be based on an average of final exam and the two highest regular exam scores.
- There will be no make up exams. You must bring a #2 pencil with you to take each exam.
- Students should review FIU's Code of Academic Integrity and Student Misconduct Procedures at <http://academic.fiu.edu/docs/misconduct.htm>
- Any students caught talking and/or looking on another student's exam or sitting next to another student with the same exam form number will have their exam removed and disciplinary action taken ranging from a failing grade being issued for that exam to formal misconduct charge being filed with the Provost's office.



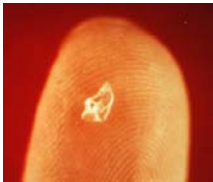
“But it is necessary, if the wound has occurred at the sutures, and the weapon has impinged on the bone or the parts about it, to pay attention and find out what injury the bone has sustained.”

-Hippocrates (460-370 B.C.)



“Detection is, or ought to be, an exact science and should be treated in the same cold and unemotional manner.” said Holmes.

-Sir Arthur Conan Doyle,
The Sign of Four (1890).



“Objects or surfaces which come into contact always exchange trace evidence”

- Edmond Locard (1877- 1966)



“We wish to put forward a radically different structure for the salt of deoxyribose nucleic acid. This structure has two helical chains each coiled round the same axis (see diagram).” - J.D. Watson and F.H.C. Crick, *Nature*, Vol. 171, p. 737, 1953.

D
N
A

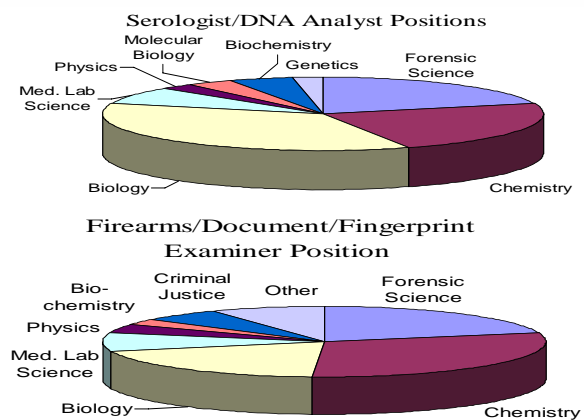
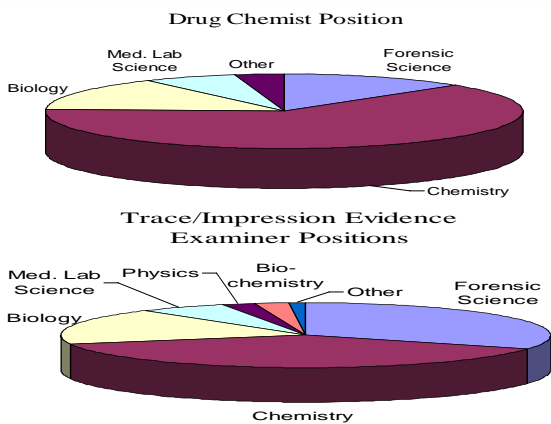
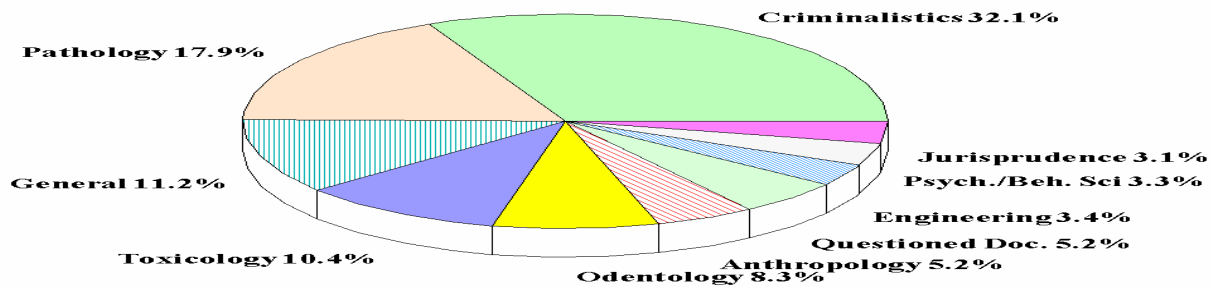


PCR “would make the structures of the molecules of our genes as easy to see as billboards in the desert and as easy to manipulate as Tinkertoys.”

- Kary Mullis (1993 Chemistry Nobel Prize)



Membership in the American Academy of Forensic Sciences (AAFS) by section



Degree Specialty Preferred by Crime Lab Directors