



FORS 5360

Pattern and Physical Evidence Concepts

Fall Semester 2017

Professor: Jorn (Chi Chung) Yu, PhD, D-ABC

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Class hours: Monday 12:00-13:50. Lab hours: Friday 09:00-11:50 or 12:00-14:50, CFS 203 and CFS 219

Classroom: CFS 104. Lab: CFS 203 and CFS 219

Office hours: Monday, 10:00-11:50, Wednesday 13:00-14:00, Friday 15:00-16:00, or by appointment

Textbooks:

Practical Crime Scene Processing and Investigation, Second Edition, R.M. Gardner, ISBN 9781439853023, CRC Press, 2011. E-book available from NGL (Newton Gresham Library).

Lab Manual:

Crime Scene Processing and Investigation Workbook, CR Ramirez, C Parish-Fisher, CRC Press, 2012.

Recommended Textbooks:

1. *Forensic Science: An Introduction to Scientific and Investigative Techniques*, Fourth Edition, Stuart H. James, Jon J. Nordby, Suzanne Bell, CRC Press, 2014. E-book available from NGL
2. *Criminalistics: An Introduction to Forensic Science*, Tenth Edition, Richard Saferstein, Prentice Hall, ISBN: 0-13-504520-7.
3. *The Fingerprint Sourcebook, Scientific Working Group on Friction Ridge Analysis, Study and Technology (SWGFAST)*, August 2011. E-book available from NIJ (National Institute of Justice): <http://www.nij.gov/pubs-sum/225320.htm>

Course Description:

This course will introduce the interpretation of pattern evidence and the forensic analysis of physical evidence. Contemporary crime scene investigation techniques for the recognition, identification, collection, preservation, and evaluation of physical evidence will be reviewed. Scientific experiments and analysis of pattern evidence in support of crime scene reconstruction will be discussed. Pattern recognition of physical evidence, such as fingerprint, bloodstains, tire prints, shoeprints, fire burn pattern, glass fracture, body gesture, and wound patterns, will be covered within the lecture. Physical and chemical techniques for the visualization or enhancement of various types of patterns will also be introduced. Expert interpretation of observed pattern of physical evidence will be discussed.

Learning Objectives:

At the completion of this course, students will be able to

1. define physical evidence.
2. recognize and handle physical evidence at the crime scene.
3. understand physical evidence concepts for crime scene investigation.
4. understand the standard procedures for processing indoor and outdoor crime scenes.
5. understand the proper investigation techniques for the collection and preservation of physical evidence at the crime scene.
6. identify and compare pattern evidence.
7. understand bloodstain pattern analysis and fingerprint comparison.
8. use pattern evidence for crime scene reconstruction.
9. Develop experimental demonstration of crime scene investigation technique or pattern evidence examination that can be delivered to a high school classroom- Community Engagement Project.

Course Requirements:

No prerequisite is required for this course.

Grading:

	Topic	Marks
Lab	Each lab topic (reports 15% and Pre-lab quizzes, 15%)	30%
Paper	Assigned topics in crime scene management	10%
Competency exam	Fingerprint comparison	10%
Mid-term exams		30%
Final Exam	Comprehensive	20%

Letter Grade Distribution:

≥ 90.00	A
80.00 - 89.99	B
70.00 - 79.99	C
≤ 69.99	F

Make-up Exams:

There is no make-up exams in this course.

Student Academic Policies:

concerning Attendance, Academic Honesty, Disabled Student and Services for Disabled Students, and Absences on Religious Holy days may be found at: <http://www.shsu.edu/dept/academic-affairs/aps/aps-students.html>

Use of Telephone and Text Messages in Academic Classrooms and Facilities:

<http://www.shsu.edu/dept/academic-affairs/aps/aps-curriculum.html>

Final Exam Schedule:

<http://www.shsu.edu/dept/registrar/calendars/final-exam-schedules.html>

Services for Students with Disabilities (SSD)

SSD Office Location: Lee Drain Annex (next to the Farrington Building)

Telephone: 936-294-3512

TDD: 936-294-3786

E-mail: disability@shsu.edu

Web Address: <http://www.shsu.edu/disability>

List of Labs:

Labs (Check-in time)	Location	Topic	Workbook
1 (08:00, 11:00)	Conference Room	Introduction	Ch. 1
2 (08:30, 11:30)	CSI Room	The Nature of Physical Evidence	Ch. 2
3 (09:00, 12:00)	Lab 201	Processing Methodology	Ch. 3 and Ch. 4
4 (08:00, 11:00)	CSI Room	Assessing the Scene	Ch. 5
5 (08:30, 11:30)	CSI Room	Crime Scene Photography	Ch. 6
6 (09:00, 12:00)	CSI Room	Crime Scene Sketching and Mapping	Ch. 7
7 (09:00, 12:00)	CSI Room	Narrative Descriptions	Ch. 8
8 (08:00, 11:00)	Lab 201	Basic Skills for Scene Processing PART I	Ch. 9.1-9.4
9 (08:30, 11:30)	Lab 219	Basic Skills for Scene Processing PART II	Ch. 9.6-9.9
10 (08:00, 11:00)	CSI Room	Advanced Skills for Scene Processing	Ch. 10
11 (08:00, 11:00)	CSI Room	Competency exam on fingerprint comparison	

Tentative Schedules:

Lecture and lab schedules are subject to change. Changes will be announced in class and updated in the Blackboard system.

Week	Content
	Unit 1: Physical Evidence Concepts
Week 1	<ul style="list-style-type: none">• Introduction to Physical Evidence Concepts
Week 2	<ul style="list-style-type: none">• Labor Day
Week 3	<ul style="list-style-type: none">• Forensic Science and Criminalistics• The Nature of Physical Evidence
Week 4	<ul style="list-style-type: none">• Handle Different Types of Physical Evidence• Collection and Preservation of Physical Evidence
Week 5	<ul style="list-style-type: none">• Identification and Comparison of Physical Evidence
Reading	<ul style="list-style-type: none">• Gardner: Chapter 1 and 2• James <i>et al.</i>: Chapter 1 and 2
	Unit 2: Crime Scene Investigation
Week 6	<ul style="list-style-type: none">• Introduction to Crime Scene Investigation• <i>Exam 1</i>
Week 7	<ul style="list-style-type: none">• Response to Crime Scene• Crime Scene Processing
Week 8	<ul style="list-style-type: none">• Crime Scene Mapping and Sketch• Crime Scene Photography
Week 9	<ul style="list-style-type: none">• Crime Scene Investigation Methodology• Evidence Handling and Processing
Reading	<ul style="list-style-type: none">• Gardner: Chapter 3 -7• James <i>et al.</i>: Chapter 3
	Unit 3: Examination of Pattern Evidence
Week 10	<ul style="list-style-type: none">• Fingerprints and Latent Fingerprint Development• <i>Exam 2</i>
Week 11	<ul style="list-style-type: none">• Fingerprint Comparison, SWGFAST• Bloodstain Pattern Analysis, SWGSTAIN
Week 12	<ul style="list-style-type: none">• Physical Evidence and Crime Scene Reconstruction
Week 13	<ul style="list-style-type: none">• Thanksgiving week• Take home assignment - Latent fingerprint comparison
Week 14	<ul style="list-style-type: none">• Crime Scene Patterns and Crime Scene Reconstruction
Week 15	<ul style="list-style-type: none">• <i>Final Exam</i>