

FIS 402 - Forensic Science II
Course Description and Outline

Professor

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Office Hours

TBD

Course Description

Continuation of FIS401. Forensic identification of biological evidence including blood and other body fluids. Blood spatter pattern analysis.

Prerequisite Requirements:

FIS205, FIS401. Open only to FIS majors.

Textbook and Reading Materials

- Bevel & Gardner (2002), Bloodstain pattern analysis, 2nd Edition, CRC.
- James & Eckert (1998), Interpretation of bloodstain evidence at crime scenes, 2nd Edition, CRC (optional).
- Additional readings in forensic biological evidence literature will be provided.

Course Content and Organization

This course will introduce the concepts, theories and principles used in forensic identification of biological evidence. The course will cover the characterization of blood and other body fluids including the determination of whether a stain is blood and if it is human blood. The techniques applied in forensic identification of blood and other body fluids will be covered. Additionally, the blood spatter pattern analysis will be introduced. The analysis of blood spatter patterns will be studied with an emphasis on determining the type of spatter and the direction and angle from which the spatter was made.

Course Objectives

At the end of this course, students should be able to:

1. Determine if a stain is blood
2. Determine if a blood stain is human
3. Identification of other body fluids
4. Determine the motion and directionality of blood spatter pattern
5. Determine the point of convergence and the point of origin of blood spatter pattern

CLASS SCHEDULE

<u>WEEK</u>	<u>TOPICS</u>
1	Introduction of biological evidence Laboratory and personal safety when dealing with forensic fluids and tissues
2, 3, 4	Bloodstain pattern evidence Determination of motion and directionality Determination of the point of convergence and the point of origin Blood stain patterns Bloodstain pattern analysis for reconstruction Impact spatter bloodstains
5	Biological evidence documentation and collection
6, 7	Identification of blood Presumptive tests for identification of blood Confirmatory tests for identification of blood Species identification
8	Pattern enhancement reagents
9	Identification of semen Presumptive tests for identification of semen Confirmatory tests for identification of semen
10	Identification of saliva
11	Identification of vaginal materials
12, 13	Identification of other body fluids
14, 15	Mock case evidence analysis

LABORATORY EXERCISES:

Blood spatter patterns
Identification of blood
 Presumptive test
 Confirmatory test
 Species test
Pattern enhancement for bloody evidence with fluorescence and luminescence
Identification of semen
 Visual examination
 Presumptive test
 Confirmative test
 Spermatozoa identification
Identification of saliva
 Visual examination
 Presumptive test

