GROSSMONT COLLEGE

COURSE OUTLINE OF RECORD

Curriculum Committee Approval: 09/27/2022

Approved by GCCCD Governing Board: 10/11/2022

ADMINISTRATION OF JUSTICE 220 – FORENSIC ANALYSIS

1. Course Number Course Title Semester Units

AOJ 220 Forensic Analysis 4

Semester Hours

3 hours lecture (48-54 hours); 3 hours laboratory (48-54 hours); 96-108 outside-of-class hours;

192-216 total hours

2. Course Prerequisites

A “C” grade or higher of Pass in Administration of Justice 218 or equivalent.

Corequisite

None

Recommended Preparation

None

3. Catalog Description

This course will examine the scientific method as it applies to the collection, processing and analysis of physical

evidence associated with crime scenes. Lectures and labs will be utilized to explore techniques and theories

related to collecting, processing and analyzing trace evidence, bloodstain patterns, footwear/tire impressions,

firearms, ballistics, questioned documents, toxicology and serology.

4. Course Objectives

The students will:

1. Define the capabilities and limitations of the forensic laboratory.
2. Describe the scientific principles involved in the analytical procedures of a crime lab and how scientific

methodology applies to crime scene reconstruction.

1. Recognize the various categories of physical evidence and the techniques available for analysis.
2. Identify the skills and education necessary to function as a crime lab criminalist, or forensic evidence

technician and explain with the roles and responsibilities as they relate to one another.

1. Perform routine experiments using proper lab procedures and documentation.
2. Prepare a computer-generated crime scene diagram.
3. Use microscopes, forensic light sources, and other forensic equipment and supplies to analyze various

types of physical evidence, including hairs, fibers, biological fluids, expended cartridge casings and bullets,

footwear and tire impressions, plant and powder evidence.

1. Analyze and reconstruct bloodstain patterns.
2. Recognize and/or demonstrate the proper evidence collection techniques in a shallow grave excavation and

explain the various techniques used in a variety of body dump locations both above and below ground and

water.

1. Describe the application of forensic anthropology, archeology and odontology as it relates to skeletal

remains investigations.

1. Describe the role of a criminalist involved in the investigation of special crimes such as bomb/arson,

clandestine laboratories, sexual assault crimes, child and elder abuse, domestic violence, and other special

or unusual scenes.

1. Prepare a courtroom presentation based on a crime scene reconstruction and/or evidence analysis.
2. Articulate a code of ethics and demonstrate standards of ethical conduct.
3. Demonstrate professionalism and effectiveness in working with a team.

5. Instructional Facilities

1. Standard classroom for lecture
2. Mock crime scene areas (indoor and outdoor)
3. Forensic lab including appropriate microscopes, chemicals, fume hood, eyewash station, and personal

protective equipment

1. Computer lab (laptops) for using software that designs computer generated crime scene diagrams

6. Special Materials Required of Student

Appropriate materials to develop a complete forensic evidence technology portfolio

7. Course Content

1. Physical and chemical examinations of forensic evidence.
2. Instrumental analytical methods in current crime lab use.
3. Experimental and possible future forensic methodologies.
4. Student participation in basic analytical methods performed in class.
5. Scientific principles involved in analytical procedures and scientific methodology in crime scene

reconstruction.

1. Experiments using proper lab procedures and documentation.
2. The role of a criminalist involved in the investigation of special crimes such as bomb/arson, clandestine

laboratories, sexual assault crimes, child and elder abuse, domestic violence, and other special or unusual

scenes.

8. Method of Instruction

1. Lecture
2. Participation in lab assignments and analysis of crime scenes
3. Videos on actual case analysis

9. Methods of Evaluating Student Performance

1. Classroom presentation and participation.
2. Written assignments including analytical crime lab reports and narrative crime scene descriptions.
3. Laboratory assignments including indoor and outdoor scenes, and microscopic labs.
4. Exams including a comprehensive written final exam, which measure students’ ability to analyze various

disciplines in forensics.

1. Final forensic technology portfolio.
2. Team project of mock court case.

10. Outside Class Assignments

1. Students will be required to read text and supplementary materials.
2. Complete lab notebook.
3. Analytical writing assignments including analytical crime lab reports and narrative crime scene descriptions.
4. Computer generated crime scene diagram.
5. Mock course case project.

11. Representative Texts

1. Representative Text(s):
2. James, Stuart H., et al. *Forensic Science: An Introduction to Scientific and Investigative*

*Techniques*. 4th ed., Boca Raton: CRC Press, 2014.

1. Supplementary texts and workbooks:

None

Addendum: Student Learning Outcomes

Upon completion of this course, our students will be able to do the following:

a. Analyze and classify basic bloodstain patterns.

b. Identify firearm tool marks from expended bullets and cartridge cases.

c. Demonstrate the proper use of a compound and stereo binocular microscope.

d. Apply scientific methodology in various forensic disciplines.