WILMINGTON UNIVERSITY  
COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES  
BASIC COURSE INFORMATION  

COURSE TITLE: Criminalistics  
COURSE NUMBER: CRJ 409  

I. RATIONALE:  
Science is the companion to crime analysis in the 21st century. Criminalistics is the discipline that brings science and investigation together in modern policing.

II. MAJOR INSTRUCTIONAL GOALS:

GOAL A:  
The student will develop an understanding and appreciation for the scope of criminalistics and forensic science.

Learning Outcomes: The student will:

A-1 Develop a definition of criminalistics and forensic science.  
A-2 Review the history and development of forensic science.  
A-3 List the services performed by a crime laboratory.  
A-4 Discuss the role and functions of a forensic scientist.  
A-5 Become familiar with the organization of a crime laboratory.

GOAL B:  
The student will become familiar with the protocol for the processing of a crime scene.

Learning Outcomes: The student will:

B-1 Define physical evidence.  
B-2 Review the process of record, photograph and sketch at a crime scene.  
B-3 Compare the techniques used in the spiral search, grid search, line search and zone search as methods to conduct a crime scene search.  
B-4 Discuss the collection, labeling, packaging and submission of evidence to the crime laboratory.  
B-5 List the legal issues concerning crime scene searches.

GOAL C:  
The student will develop an understanding of the many types of physical evidence and the special concerns in the collection of each.

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Learning Outcomes: The student will:

C-1 Review the proper evidence collection methods for body fluids including blood, semen and saliva.
C-2 Review the proper evidence collection methods for drugs, explosives, firearms, ammunition, tools.
C-3 Review the proper evidence collection methods for hairs, fibers, clothing, soil and minerals.
C-4 Review the proper evidence collection methods for paint, petroleum products, plastic, rubber, residues and chemicals.
C-5 Review the proper evidence collection methods for human body parts.
C-6 Describe the process of making comparisons for determination of common origin.
C-7 Describe the process of identification in the attempt to make an absolute determination of a substance.

GOAL D:
The student will develop an understanding of the importance of determining the chemical and physical properties of an item of evidence.

Learning Outcomes: The student will

D-1 Discuss the physical properties of temperature, weight and mass, density, and refraction.
D-2 Apply the knowledge of physical properties to glass and soil samples.
D-3 Review organic analysis and the methodologies used in the various examinations.
D-4 Review inorganic analysis and the methodologies used in the various examinations.
D-5 Review the use of the microscope in the examination of evidence.
D-6 Discuss the variety of measurements that are used in the examination of evidence.

GOAL E:
Students will develop an understanding and appreciation for the specific guides the physical evidence collection as used by the law enforcement agency crime laboratories.

Learning Outcomes: The student will:

E-1 Review the Guides for the Collection of Physical Evidence as used by the FBI laboratory at Quantico, VA.
E-2 Review the policy guidelines for submitting DNA evidence to the FBI.
E-3 Discuss the suggested chemical formulas for latent fingerprint development.
E-4 Discuss the procedures for the development of footwear impressions.

GOAL F:
Students will develop an understanding of the discovery, examination and use of deoxyribonucleic acid (or DNA) in the identification of criminal offenders.

Learning Outcomes: The student will:

F-1 Define DNA.
F-2 Discuss the work of Alec Jeffreys in the development of “DNA fingerprinting”.
F-3 Discuss the forms of DNA typing as RFLP, PCR, and STR.
F-4 Discuss how the results of DNA testing are introduced as evidence in a court of law.

GOAL G:
Students will develop an understanding of the examination, recovery and processing of fingerprint evidence.

Learning Outcomes: The student will:

G-1 Discuss the history of fingerprinting.
G-2 Review the fundamental principles of fingerprints.
G-3 Discuss the classification of fingerprints including the Henry system and the modern AFIS system.
G-4 Review the methods of detecting and developing fingerprints.
G-5 Review the methods used for the preservation of developed fingerprints.

GOAL H:
Students will demonstrate appropriate writing and presentation skills.

Learning Outcomes: The student will:

H-1 Prepare written reports using APA style.
H-2 Give oral presentations.