



**COWLEY COLLEGE
& Area Vocational Technical School**

COURSE PROCEDURE FOR

**CRIMINALISTICS
CRJ5460 3 CREDIT HOURS**

Student Level:

This course is open to students on the college level in their freshman or sophomore year.

Catalog Description:

CRJ5460 - CRIMINALISTICS (3 hrs)

This course covers the proper application of the scientific processes and techniques to aid in establishing the identification of evidence submitted to the lab. The course will also cover the collection of physical evidence and processing of that evidence to determine if an identity can be established from known standards submitted for comparison purposes.

Prerequisites:

None.

Controlling Purpose:

This course is an introductory level course designed to help the student increase their knowledge concerning the application of the scientific processes in the examination of physical evidence both at the crime scene and in the crime laboratory. The student will learn the proper collection methods for various types of evidence. The student will be also learn the capabilities and limitations of forensic crime laboratories.

Learner Outcomes:

Upon completion of the course, the student will be able to.

1. Understand and explain the scientific method.
2. Understand how scientific processes need to be adhered to for successful criminal prosecution.
3. Demonstrate the ability to properly document, collect and process various types of physical evidence.
4. Explain the capabilities and limitations of modern day forensic laboratories.
5. Be able to verify or disprove witness statements based on physical evidence at a crime scene.
6. Use reasonable deduction skills to analyze what physical evidence is establishing.

Units Outcomes and Criterion Based Evaluation Key for Core Content:

The following defines the minimum core content not including the final examination period. Instructors may add other content as time allows.

Evaluation Key:

- A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.
- B = All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.
- C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of inadequacy in his background.
- D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
- F = Failing, will be computed in GPA and hours attempted.
- N = No instruction or training in this area.

UNIT 1: Introduction to Forensic Science

Outcomes: Upon completion of this unit, the students will be able to explain what forensic science is, discuss the key figures in the history of forensic science, and explain what benefits forensic science has on modern criminal cases.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Discuss what forensic science is, the history of forensic science and list the key people in the history of forensic science.
						Explain the nature of identification, identity and individualization in the lab.
						List the steps in the scientific method and explain how the scientific method works.
						List and describe the various forensic science specialties.
						Demonstrate laboratory safety protocols and emergency procedures.

UNIT 2: Physical Evidence and the Legal System

Outcomes: Upon completion of this unit, the students will be able to explain the physical evidence process and apply it to today's legal system.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Explain the different ways in which physical evidence is produced.
						Describe the classifications of physical evidence.
						List the steps in the physical evidence process.
						Discuss physical evidence as it applies to the modern legal system.
						Demonstrate proper handling of physical evidence.

UNIT 3: Crime Scene Processing and Analysis

Outcomes: Upon completion of this unit, the students will be able to understand the fundamentals of crime scene preservation and processing. Students will be able to explain the detail required to properly collect and document evidence for a successful case.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Compare and contrast the similarities and differences between crime scene processing and crime scene analysis.
						Describe and demonstrate the different types of crime scene documenting.
						Explain and demonstrate approved evidence collection and preservation methods.
						Discuss crime scene analysis.
						Discuss the difficulties presented by the different types of crime scenes.

UNIT 4: Fingerprints

Outcomes: Upon completion of this unit, the students will be able to explain the evolution of human identification and discuss the important role fingerprints currently play in the identity of a specific person.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Discuss the history of fingerprinting and early attempts to identify individuals.
						Identify the basic fingerprint patterns and their subgroups.
						Demonstrate the ability to detect, process, and lift latent prints.
						List and demonstrate the various physical and chemical methods for the detection of fingerprints, explaining the pros and cons of each method.
						List the other individualistic features and methods of human identification other than fingerprints.

UNIT 5: Pattern Evidence: Blood Spatter Patterns/Glass Fracture Patterns

Outcomes: Upon completion of this unit, the students will be able to understand the physics that pertain to certain patterns found at crime scenes and how to interpret what they see.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Discuss the challenges and dangers of working with blood and other biological material and demonstrate what precautions should be taken when working with these items.
						Demonstrate the ability to calculate the angle of impact of blood spatter as well as the ability to establish points of convergence.
						Demonstrate the ability to determine the side of impact of a bullet in glass a determine the order the shots were made in.
						Demonstrate the ability to verify or disprove witnesses versions of events at a crime scene based on pattern evidence.
						List the different types of pattern evidence that may be found at crime scenes.

UNIT 6: Physical Pattern Evidence

Outcomes: Upon completion of this unit, the students will be able to establish whether certain items of evidence are a positive match for those found at crime scenes using scientific principles and learn the legal limitations concerning some physical items of evidence.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Explain the differences between impressions, Imprints, and Indentations
						Demonstrate the ability to properly collect and document footwear, tire, and other impressions.
						Demonstrate and explain techniques for better clarification and contrast of pattern evidence.
						Explain the relevance of the Daubert decision on physical evidence presented in court.
						Establish physical match comparisons on various items of evidence.

UNIT 7: Questioned Document Examination

Outcomes: Upon completion of this unit, the students will be able to understand what can be gained by an investigator from document examination and the methods used for that comparison.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Discuss the different types of document examination, the effects of modern technology on document examination, and what an investigator can potentially gain from document examination.
						Demonstrate the ability to establish a match between a suspect's handwriting and known samples.
						List the class and individual characteristics of writing samples.
						Describe and demonstrate how to properly collect and protect document evidence.
						Discuss the importance of known standards in document examination.

UNIT 8: Miscellaneous Examinations

Outcomes: Upon completion of this unit, the students will be able to demonstrate an ability to identify unknown substances using various techniques.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Demonstrate the ability to conduct a presumptive test on various kinds of Illegal drugs.
						Discuss the concepts of shine and sine as pertaining to human tracking.
						Demonstrate the ability to distinguish which bullets came from the same weapon.
						Determine whether a tool mark was made by a specific tool based on its individual characteristics.

Projects Required:

Students will be responsible for reading and all class materials. Class will consist of exams, quizzes and various lab projects. Many lab projects will only be conducted once so attendance is highly indicative of a student's grade. Students will conduct fingerprint lifting, blood spatter exams, and experiment with various techniques and chemicals.

Textbook:

Contact Bookstore for current textbook.

Materials/Equipment Required:

12" clear plastic ruler
Protractor
#2 Pencils
Scientific Calculator

Attendance Policy:

Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:

The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:

Based on classroom occupancy

Course Timeframe:

The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

Refer to the following policies:

[402.00 Academic Code of Conduct](#)

[263.00 Student Appeal of Course Grades](#)

[403.00 Student Code of Conduct](#)

Disability Services Program:

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability, which may impact work in this class which requires accommodations, contact the Disability Services Coordinator.