

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼  
HUMAN RESOURCES ENTERPRISE

**CRIMINALIST**

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**DEFINITION**

Collects and preserves evidence and conducts varied and complex forensic analyses and examinations of physical substances in the Division of Criminal Investigation Crime Laboratory or for the State Medical Examiner, or forensic examinations of electronic and digital media in the Division of Criminal Investigation Cyber Crime Unit, as a part of the scientific investigation of crimes; performs related work as required.

**The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.**

**WORK EXAMPLES**

Conducts forensic examinations and analysis on a variety of electronic and digital source media.

Receives and conducts proper intake submission procedures for electronic and digital source media as submitted for examination.

Follows DPS/DCI investigative guidelines relative to examinations and investigations of electronic and digital source media or cyber crime.

Conducts and facilitates training for DPS Officers and outside agencies related to proper best practices in the handling and seizure of electronic and digital source media.

Conducts community outreach programs related to Cyber Crime, when requested.

Attends continual training as required by the DCI Cyber Crime Unit regarding forensic examination of electronic and digital media and cyber crime.

Attends and completes continual specialized training related to electronic and digital forensic examinations.

Provides technical assistance and supports law enforcement agencies upon request.

Analyzes body tissues to ascertain the presence of drugs, narcotics, alcohol or poisons for toxicology purposes.

Analyzes and compares handwriting, printing, typewriting, typeset print, photographs and other types of printed material to ascertain the author of the material or demonstrate relationships between two materials.

Identifies and compares fingerprints, footwear, foot and palm impressions, tire treads and serial numbers to identify persons and/or materials used in criminal activities.

Writes laboratory reports on analyses conducted on physical evidence to reflect the identification, grouping or characteristics of materials that have been submitted for analysis.

Presents testimony at grand jury proceedings, preliminary hearings, or trials in order to interpret, present and clarify evidence and test results.

Instructs laboratory personnel (on-the-job training) in the proper methods of submitting laboratory paper work, new lab techniques, operating lab equipment, and policies in the laboratory.

Identifies and compares tool marks, fired bullets, cartridge cases, distance determinations, firearm discharges and residues in order to determine the physical and chemical aspects of unknowns and to show similarities to knowns.

Analyzes physiological stains such as blood and body fluids to determine, identify, and group as to origin or species.

Examines beverages, blood, urine, body fluids, and post-mortem human organs to determine if alcohol, drugs and/or poisons are present for toxicology purposes, and to identify the type and quantity of the substance present.

Analyzes chemical reagents purchased by or developed in the laboratory to determine if they will perform the task they are designed to achieve.

Identifies and compares materials such as glass, paint, soil, flammable materials, metals, greases, ink, alcoholic beverages, gunpowder residues or other hard trace evidence to ascertain if they came from a common source or determine what the item is.

Identifies and conducts quantitative analysis of drugs and alcoholic substances.

### **COMPETENCIES REQUIRED**

Knowledge of the use of chemical and physical analysis instruments and/or equipment (i.e., microscope, ultra-violet spectrophotometer, infrared apparatus, thin layer chromatography apparatus) in a laboratory.

Knowledge of the nature of physical evidence and the proper collection procedures and documentation of physical substances obtained in criminal investigations.

Knowledge of proper laboratory procedures and equipment, instrumentation, chemicals, and other materials used in the laboratory.

Knowledge of journals, textbooks and other information resources and their application to the investigation of crimes.

Knowledge of chemistry, biochemistry, toxicology, physics, biology, and microanalysis as they relate to lab analysis of physiological body fluids and organs, alcohol, drugs, poisons, hair samples, paint and documents.

Knowledge of the physical characteristics of physiological stains, human organs, alcohol, drugs, poisons, human and animal hair, fibers and textiles, and paint so as to appropriately identify the substance for the purpose of conducting the proper analysis.

Knowledge of methods used to illustrate information for use in reports and support testimony in criminal investigations.

Knowledge of laboratory reporting procedures.

Ability to testify/communicate, orally and in writing, and maintain composure while under direct/cross-examination in a court of law/grand jury regarding scientific evidence and personal qualifications.

Ability to determine size, color, smell and shape of objects in order to identify evidence.

Ability to follow laboratory investigation procedures, observe reactions, record and interpret results, and arrive at conclusions.

Ability to read graphs and charts resulting from instrumentation output.

Ability to adapt theories and principles of natural and physical sciences to problems encountered in the analysis of substances.

Ability to recognize and select those items which should be analyzed.

Ability to recognize evidential materials and package evidence properly and securely.

Ability to use lab equipment, chemicals, and instruments in conducting analyses of substances submitted to the laboratory as a part of the investigation of a criminal case.

Ability to conduct tests using lab equipment, chemicals, and instrumentation to obtain results.

Ability to assist in lifting bodies weighing over 300 pounds.

Displays high standards of ethical conduct by refraining from dishonest behavior.

Works and communicates with all clients and customers providing polite, quality professional service.

Displays a high level of initiative, effort, attention to detail and commitment by completing assignments efficiently with minimal supervision.

Follows policy, cooperates with supervisors and aligns behavior with the goals of the organization.

Fosters and facilitates cooperation, pride, trust, group identity and team spirit throughout the organization.

Exchanges information with individuals or groups effectively by listening and responding appropriately.

#### **EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS**

Graduation from an accredited college or university with a Bachelor's Degree in Forensic Science, Chemistry, Biology, Physics or a closely related physical or natural laboratory science;

OR

an equivalent combination of education and experience substituting one year of experience in a crime laboratory performing firearms identification, latent print identification, document examination, trace evidence, forensic toxicology, forensic serology, forensic photography, or crime scene investigation and forensic training, for one year (thirty semester hours) of the required education.

#### **SPECIAL REQUIREMENTS**

All applicants for this class must be able to pass a thorough background investigation conducted by the Division of Criminal Investigation.

Applicants must be available to travel and may be required to stay away from home overnight during assignments.

Effective Date: 11/09 SP