

**MONTGOMERY COUNTY GOVERNMENT  
ROCKVILLE, MARYLAND  
CLASS SPECIFICATION**

**Class Code: 003522  
Grade: 26  
FLSA: Exempt**

**SENIOR FORENSIC SCIENTIST**

**DEFINITION OF SERIES:**

This is professional work in the field of forensic science that involves analyzing and evaluating physical evidence using different analysis methods and techniques for the Montgomery County Crime Laboratory.

**DISTINGUISHING CHARACTERISTICS:**

This class serves either as the technical lead or shift supervisor for the assigned unit or exercises quality management oversight for multiple units of the Crime Lab. Duties require an incumbent oversee the technical aspects of the assigned unit, including ensuring the accuracy of work and competency of staff, which requires a high level of expertise. This classification is distinguished from the Forensic Scientist III in that the Senior Forensic Scientist is the technical expert or shift supervisor, exercises a greater degree of independent judgment, and serves in a lead capacity through daily technical and administrative oversight of unit work in coordination with the Laboratory Supervisor or other supervisory staff.

**MAJOR DUTIES:**

An employee in this class receives, screens, prioritizes, assigns, monitors and reviews (quality assures) all cases for the Forensic Biology Unit, Forensic Chemistry Unit, Latent Print Unit Examination Unit, Crime Scene Unit, Forensic Firearms Examination Unit, or the Electronic Crimes Unit of the Montgomery County Police Department (MCPD) Crime Laboratory, and personally performs forensic casework as a full performance level laboratory scientist or serves as the quality assurance manager, ensuring that all units of the Crime Laboratory meet quality standards and are compliant with accreditation standards. As technical leader and quality manager of an assigned unit or quality assurance program, stays abreast of and evaluates advances in technology (techniques and equipment), documents procedures, establishes standards, trains subordinates, reviews their work, completes grant applications or requests for funding, and performs related functions. As a full performance level forensic scientist, conducts biological or chemical or comparison tests; examining items of digital evidence utilizing various tools to extract data and identify specific artifacts; identifying and preserving latent prints; shot pattern testing; testing firearms for proper function and safety; crime scene investigation; evidence collection and preservation; drafting reports and testifying in court as an expert witness regarding forensic analysis of evidence, such as physiological fluids (blood, semen and saliva), hairs, fibers, latent prints, digital evidence, and controlled dangerous drugs (CDS) and other substances and firearms related evidence.

**EXAMPLES OF DUTIES: (Illustrative Only)**

- Leads unit personnel in the performance of work, which may include giving assignments and instructions, answering questions about laboratory analysis, checking work, ensuring that work processes and safety rules are strictly observed and otherwise providing lead level supervision.
- Serves as the technical leader of assigned functional area, providing oversight of the technical operations which may include authority to initiate, suspend, and resume technical operations for an individual or the functional area. Reviews and improves or recommends improvements of the quality system.

- Performs, reviews, and recommends validation studies for new methods, techniques, and equipment prior to use in casework. May research, recommend and/or initiate the validation process for new techniques and procedures for assigned functional area.
- Ensures requirements of the quality management system, including quality control and quality assurance, are established, implemented, followed, maintained, and evaluated.
- Receives, screens, prioritizes, assigns, and monitors analytical work on and quality reviews completed casework, as pertinent to the position of assignment.
- Oversees reported discrepancies and non-conforming work, evaluating the significance, assessing risk level, conducting a root cause analysis, determining final disposition, recommends, implements, and track corrective action plans as required.
- Contacts investigators about the examinations requested; determines the order and types of examinations required to maximize evidentiary value for each item and case and reprioritizes and reassigns cases as necessary.
- Trains or ensures the training of new unit personnel, including competency testing, proficiency testing, annual training, and mock court testimony. May review training records for newly qualified personnel, ensuring qualifications meet requirements and approving qualifications for independent casework analysis. May help screen applications of candidates for crime laboratory positions and serve on interview boards.
- Monitors adherence to, and improvement of, the unit quality control system (including laboratory safety). Stays abreast of, and evaluates, new techniques, procedures, and equipment for possible application in the unit(s). Recommends adoption of new techniques or procedures or procurement of new equipment based on evaluation and consideration of cost-benefit. Upon approval of the Laboratory Supervisor of higher echelon, implements and documents changes and trains or ensures training of personnel in the unit. Reviews procedures and quality assurance system on a regular basis, as assigned.
- Creates and updates all procedural and training manuals for assigned functional areas.
- Maintains all requirements to ensure accreditation standards are attained and maintained, including documentation of remediation or any deficiencies and improvements.
- Leads and/or participates in audit activities; reviews and responds to internal and external audit documents as required.
- Develops and/or enforces unit protocols for the collection, receipt, storage, examination, testing, release, and destruction of evidence.
- May request funding or make the technical justification for a grant in coordination with MCPD's grants manager and other appropriate personnel. May prepare grant reports to grantor, including such requisite information as performance metrics.
- Requests quotes from vendors for supplies and instrumentation used in assigned unit; estimates budgetary needs for assigned unit, following appropriate procedures to request funds to purchase supplies, reference standards, and other needed items.
- May conduct crime scene investigations, identifying, collecting, processing and preserve digital and physical evidence.
- Examines physical evidence submitted by MCPD or other supported law enforcement agencies using chemical, microscopic and instrumental methods to identify biological substances and compare them to known sources using DNA analysis, or to use chemical, microscopic, and instrumental methods to identify CDS, and/or other chemical compounds or to examine latent prints or firearms related evidence.

- Performs or assures routine calibrations of instruments is performed to ensure reliability in daily use; cleans and maintains laboratory equipment, instruments, and glassware.
- Troubleshoots and maintains analytical instrumentation; may coordinate and maintain maintenance contracts and ensure contracts for critical instrumentation are renewed as required.
- Evaluates data, prepares, and technically reviews (peer reviews) reports and related documentation of completed laboratory analyses.
- Confers with, and advises, the State's Attorney on forensic aspects of cases, and preparation of testimony concerning analysis of biological material (DNA), trace evidence, CDS, latent prints, and/or firearms related evidence based on area of expertise.
- May oversee testimony monitoring program including managing Testimony Evaluation forms, observing testimony, and providing feedback.
- Testifies in court as an expert witness in one's area(s) of expertise, including unit procedures as well as one's own casework. Testifies in Daubert/Frye hearings as needed.
- Instructs police officers, sexual assault forensic examiners and personnel in the judicial system or the medical community on proper collection, preservation, and submission of physical evidence.
- Maintains records and files regarding casework and complies with court-mandated discovery requests.
- Accounts for receipt, storage, release, and destruction of evidence; maintains a strict chain of custody of evidence submitted.
- Attends meetings, symposia, and workshops to keep up with mandatory continuing education requirements.
- Adheres to all required laboratory standards regarding unit of assignment and/or laboratory accreditation requirements.
- Reviews and approves methods and techniques utilized by contracted outsourcing laboratories; audits outsourcing laboratories on a regular basis to ensure compliance with federal requirements.
- Enters casework profiles and conducts database searches on these profiles using the local CODIS (Combined DNA Index System) – Forensic Biology Unit or NIBIN for Firearms Examination Unit.
- Conducts tours for dignitaries, students, and the general public about the role of forensic science and the Crime Laboratory.
- Performs related duties as required.

**SUPERVISORY CONTROLS:**

Work is performed under general direction of the Laboratory Supervisor, Laboratory Manager of higher authority, or sworn supervisory level staff who assigns work in terms of functional responsibilities, available resources and ongoing requirements for quality, quantity, timeliness, and other factors. The employee is responsible for planning and conducting unit technical leadership and quality assurance independently, resolving most of the daily problems that arise, coordinating work with others as necessary, and seeking supervisory assistance with vexing technical or administrative problems or conflicts. The employee has full technical responsibility for personal technical work and unit technical leadership. Personal technical work is evaluated only from an overall standpoint in terms of effectiveness in meeting laboratory objectives and standards.

**SUPERVISION EXERCISED:**

Employees in this classification may lead lower-level positions.

**GUIDELINES:**

An employee in this class has definitive guidelines to follow including, but not limited to, State and Federal regulations, standards and rules of evidence, Montgomery County Police Department directives and procedures, County Crime Laboratory standards and procedures, Forensic Biology Unit standards and procedures, forensic biology principles, methods and techniques, and County procedures that govern the leadership of employees. However, mature judgment is applied in evaluating new techniques, equipment, and procedures for improving unit operations and adherence to accreditation standards, in interfacing with prosecutors, defense attorneys and others on high-stakes issues, in leading subordinates in their work, and in personally analyzing the evidence gathered in a case, determining the number and types of tests to conduct, and interpreting and explaining the results of these tests.

**COMPLEXITY:**

The complexity of this class of work is marked by continuing leadership of subordinates in their work, evaluation and implementation of improved analytical techniques or equipment for use in the unit, diversity of evidence the employee examines, the actual conduct of numerous types of analyses and tests to produce optimum results for identification or enhancement, and the presentation of findings which will stand up in a court of law according to Maryland Rules of Evidence and the licensing requirements set forth by Forensic Laboratory Unit of the Maryland Department of Health, Office of Health Care Quality.

**SCOPE AND EFFECT:**

Unit leadership (in the form of quality assurance, forensic analyses performed by subordinates or the incumbent, etc.) has an important impact on meeting accreditation standards, on police investigations or arrests, and on the results of criminal trials (through analysis and testimony).

**CONTACTS:**

Personal contacts include coworkers, discipline specific (forensic) work groups and/or scientific workgroups, a wide range of persons at various levels in the criminal justice system and the medical community (including nurses and doctors), and others to quality assure technical work and custody of evidence within the unit, to personally perform casework to establish a fact-pattern, to analyze and report on evidence, to advise others on crucial basics so they can preserve potential evidence at crime scenes, and make informed analytical requests, etc. The incumbent exchanges information with, and provides unbiased technical advice to, sworn law enforcement officers, prosecutors, and defense attorneys, and testifies in court regarding the scientific interpretation of evidence in trace amounts, which can be controversial and highly important to the prosecution and/or the defense.

**PUBLIC SERVICE/ASSISTANCE:**

While this class of work involves an employee talking with citizens groups, teachers, and students about the field of forensic science, such presentations occur occasionally and are incidental to the primary purpose of the job.

**HAZARDS:**

Regular exposure to toxic substances, Controlled Dangerous Substances (CDS), carcinogens, biohazards (including human blood and needles used by drug users), corrosives, firearms, and/or sharp instruments.

May have occasional exposure to elevated noise levels. Uses goggles, face shield/masks, gloves, protective clothing/lab coats, special ventilation, and adheres to safety procedures.

**MINIMUM QUALIFICATIONS:**

**Education:**

Forensic Chemistry and Firearms Examination Unit: Graduation from an accredited college or university with a Bachelor's Degree in a natural, physical, or forensic science. Specific Federal or State mandated educational requirements shall apply as needed.

Latent Print Examination Unit: Graduation from an accredited college or university with a Bachelor's Degree in a natural, physical, or forensic science. Specific Federal or State mandated educational requirements shall apply as needed.

Crime Scene Unit: Graduation from an accredited college or university with a Bachelor's Degree in a natural, physical, or forensic science,

Electronic Crimes Unit: Graduation from an accredited college or university with a Bachelor's Degree in a computer science related field.

Forensic Biology Unit: A Master's Degree from an accredited college or university in biology, chemistry, or forensic science related area, which includes the equivalent of 12 semester credit hours from a combination of undergraduate and graduate coursework covering: biochemistry, genetics, molecular biology, and statistics or population genetics as required by applicable laboratory accreditation standards. Other specific Federal or State mandated educational requirements shall apply as needed.

Quality Assurance: Graduation from an accredited college or university with a degree in biology, chemistry, or forensic science, including an equivalent combination of undergraduate and graduate coursework as required by applicable laboratory accreditation standards. Other specific Federal or State mandated educational requirements shall apply as needed.

**Experience:** Five (5) years of professional experience in a laboratory actively engaged in the forensic sciences, with particular area of forensic science expertise linked to the position vacancy – Senior/Lead Forensic Scientist (Biology Unit), Senior/Lead Forensic Scientist (Chemistry Unit), Senior/Lead Forensic Scientist (Firearms Examination Unit), Senior/Lead Forensic Scientist (Crime Scene Unit), Senior/Lead Forensic Scientist (Latent Print Examination Unit) or Senior/Lead Forensic Scientist (Quality Assurance). Senior/Lead Forensic Scientist (Biology Unit) experience must include a minimum of three (3) years of human DNA experience as a qualified analyst on forensic samples.

Other specific Federal or State mandated experience requirements shall apply as needed.

**Substitution:**

**Equivalency:** An equivalent combination of scientific education and forensic science experience may be substituted as permitted by applicable Federal and/or State mandates and certifying bodies.

**Knowledge, Skills, and Abilities:**

## Expert Knowledge of

- Comprehensive knowledge of the principles, methods, instrumentation, and techniques of assigned unit, consistent with the position of assignment, to develop and enforce quality control measures for, and quality assure the work of, the laboratory unit led.
- Knowledge of the Maryland State Rules of Evidence, and licensing requirements of the Forensic Laboratories Unit of the Maryland Department of Health, Office of Health Care Quality, as they apply to providing expert testimony about the analysis of bodily fluids, drugs and other substances, and firearms related evidence, and recognition by one or more courts of law as an expert witness in the employee's area of forensic expertise, as well as skill in developing and enforcing laboratory protocols for the receipt, storage, examination, testing, release and destruction of evidence. This includes knowledge of, and skill in, preserving items of possible evidentiary value, of the procedures for chain of custody and how it relates to the integrity of evidence, of State and Federal regulations regarding the storage and destruction of CDS, biohazard material, and other substances and firearms related evidence, and knowledge of quality control, quality assurance and laboratory hazards, and skill in overseeing quality and leading others in working safely.
- Knowledge of accreditation requirements.
- Knowledge of FBI Quality Assurance Standards for Forensic DNA Testing Laboratories – Forensic Biology Unit.

***Skill In:***

- Skill in problem solving to select, organize, and logically process relevant information (verbal, numerical or abstract) to solve a problem. Examples include skill in performing forensic tests, in conducting quantitative and statistical analyses to collect and analyze statistical information and prepare technical reports, graphs, and charts to reflect test results, in using reference materials to establish laboratory guidelines that are consistent with technical and legal requirements, and in using and caring for laboratory equipment and evidence.
- Skill in leading the work of others in the field(s) of the unit of assignment.
- Skill in written communication to understand written information (including facts, assertions, and ideas), and to express information in writing so that others will understand and, at times, be convinced or persuaded. This includes, but is not limited to, skill in reading incoming biology case work, in staying abreast of accreditation requirements and the latest in forensic techniques, equipment and custody requirements through literature reviews and other means, in documenting validation studies, and in writing grant applications/reports etc.
- Skill in verbal communication to understand verbal information (including facts, assertions, and ideas) and to express such information verbally so that others will understand and in some cases be convinced or persuaded. Examples include technical information exchange with forensic scientists and technicians, expert technical testimony in court, and technical and non-technical information exchange with persons at various levels in the criminal justice system, the medical community (including nurses and doctors) and others to establish a fact-pattern, analyze and report on evidence and advise others on crucial basics so they can preserve evidence and make informed analytical requests.
- Skill in encouraging effective verbal communication by others, such as subordinates regarding casework and police officers regarding forensic information for investigations, is included.
- Interpersonal skills to interact effectively with business contacts in customer service-oriented, businesslike manner. This includes ability to deal courteously, tactfully, and effectively with all types and levels of contacts, including contacts during high-pressure situations.

- Skill in using a computer for planning, scheduling, communicating (email), word processing, presentations, spreadsheets, and other applications.

***Ability to:***

- Ability to pass a police background investigation.
- Ability to remediate technical deficiencies to ensure adherence to accreditation standards.
- Ability to compare, interpret, and evaluate results of analysis and develop sound conclusions.
- Ability to manage time and resources efficiently and effectively.
- Ability to work well under pressure in a high stress environment.

**Licenses, Registrations, Certifications, or Special Requirements:**

Possession and maintenance at all times of a valid Class "C" (or equivalent) driver's license from the applicant's state of residence when required for job-related duties.

Certification by the Maryland State Department of Health and Mental Hygiene as required for the position of assignment such as Certification as a Chemist for Chemistry division/section.

Must maintain compliance with any certification and training requirements mandated by law and/or certifying organization.

Note: There will be no substitutions for this section.

**Work Environment:**

Performs work in an office setting, crime laboratory, crime scene and/or indoor shooting space. Occasionally testifies in a courtroom setting.

**Physical Demands:**

Stands or stays in one place for prolonged periods and bends while performing analyses. Lifts and carries objects weighing twenty (20) to fifty (50) pounds. Requires fine finger movements to examine evidence, including operating instrumentation, balances, microscopes, and other tools or equipment requiring a high degree of dexterity. Incumbents must have sufficient corrected vision to examine evidence and distinguish between shades of colors.

**PROBATIONARY PERIOD:**

Individuals appointed or promoted to this class will be required to serve a probationary period of six (6) months, during which time performance will be carefully evaluated. Continuation in this class will be contingent upon successful completion of the probationary period.

**BARGAINING STATUS:** Positions assigned to this class are normally in the Office, Professional, and Technical (OPT) bargaining unit.

**MEDICAL PROTOCOL:** Core II Exam with a Drug/Alcohol Screen.

**PROMOTION POTENTIAL:** This is the lead level for the Forensic Scientist series. May be competitively promoted into a vacant Laboratory Supervisor position provided the employee meets the qualifications.

**CLASS SPECIFICATION HISTORY:**

**Class Established:** November 2010

**Revised:** August 2013

October 2014

(Included Senior Forensic Scientist - Firearms Examination Unit) August 2021

Former Forensic Specialty Classes

December 2023(M)

(Class Codes: 003518, 003519, 003521, 03520, 003505, 003507 Condensed into Forensic Scientist

I, II, III\*, & Senior Forensic Scientist Series)

(Included Electronic Crimes Unit) **Revised:** May 2025