MICHIGAN CIVIL SERVICE COMMISSION

JOB SPECIFICATION

FORENSIC SCIENTIST

JOB DESCRIPTION

Employees in this job complete and oversee a variety of tests, analyses, identification, and classification of mechanical devices, chemical, biochemical, biological, and physical substances, materials, liquids, or other physical evidence for criminal, law enforcement, or investigative work in a State Police laboratory.

There are four classifications in this job.

Position Code Title - Forensic Scientist-E

Forensic Scientist 9

This is the entry level. As a trainee, the employee carries out a range of forensic scientist assignments while learning the methods of the work.

Forensic Scientist 10

This is the intermediate level. The employee carries out an expanding range of professional forensic scientist assignments in a developing capacity.

Forensic Scientist P11

This is the experienced level. The employee performs a full range of professional forensic scientist assignments in a full-functioning capacity. Considerable independent judgment is required to carry out assignments that have significant impact on services or programs. Guidelines may be available, but require adaptation or interpretation to determine appropriate courses of action.

Position Code Title - Forensic Scientist-A

Forensic Scientist 12

This is the advanced level. The employee may function as a lead worker or senior worker. At this level, employees are responsible for overseeing the work assignments of other professionals or have regular assignments which have been recognized by Civil Service as having significantly greater complexity than those assigned at the experienced level.

NOTE: Employees generally progress through this series to the experienced level based on satisfactory performance and possession of the required experience.

JOB DUTIES

NOTE: The job duties listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

Tests and analyzes a variety of samples, specimens, products or materials for chemical composition or presence of specific substances; follows standardized analytical procedures.

Employs analytical instrument techniques such as microscopy, spectroscopy, microphotography, spectophotometry, infrared and ultra violet light, and gas chromatography to characterize materials and identify samples and specimens; develops new instrument methods.

Carries out qualitative and quantitative analyses.

Devises and adapts technical procedures and modifies equipment, as needed.

Keeps informed of new analytical or manufacturing methods.

Processes crime scenes for physical evidence.

Carries out examinations of portions of human tissues or body fluids for poisons, drugs and alcohol, antibody titers and infectious agents.

Tests for the presence and type of blood in stains or other specimens.

Analyzes specimens related to arson and hit-and-run accidents.

Participates in field investigations and makes on-the-scene examinations.

Determines photometric properties of reflective and light emitting devices.

Examines firearms evidence to determine distance, caliber, type and kind of powder; and compares fired bullets and shells with suspect firearms.

Compares tools with suspect tool markings.

Performs serial number restorations.

Examines and identifies handwritten, printed, typed, altered and obliterated documents to determine possible source.

Processes evidence to develop, compare and identify latent prints; identifies unknown dead through comparisons with known impressions.

Testifies in court as an expert witness on evidence or crime laboratory techniques.

Confers with experts in ballistics, fingerprinting, handwriting, documents, electronics, metallurgy, biochemistry, medicine, or others for reviewing evidence.

Performs routine maintenance on laboratory equipment, and inventories and orders required supplies.

Assists in the training of new laboratory personnel.

Assists in the training of law enforcement personnel in areas related to Forensic Science.

Maintains records and prepares reports and correspondence related to the work.

Performs related work as assigned.

Additional Job Duties

Forensic Scientist 12 (Lead Worker)

Oversees the work of professional staff by making and reviewing work assignments, establishing priorities, coordinating activities, and resolving related work problems.

Forensic Scientist 12 (Senior Worker)

Performs on a regular basis professional forensic scientist assignments which are recognized by Civil Service as more complex than those assigned at the experienced level.

JOB QUALIFICATIONS

Knowledge, Skills, and Abilities

NOTE: Some knowledge in the area listed is required at the entry level, developing knowledge is required at the intermediate level, considerable knowledge is required at the experienced level, and thorough knowledge is required at the advanced level.

Knowledge of the principles and practices of general, qualitative, quantitative, organic, physical and physiological chemistry.

Knowledge of the principles of biochemistry.

Knowledge of the principles of microbiology.

Knowledge of the fundamentals of physics and mathematics.

Knowledge of ammunition and its components.

Knowledge of the principles, theories, and methodologies of crypt-analysis.

Knowledge of laboratory tests and control techniques.

Knowledge of statistical techniques used in the treatment of scientific data.

Knowledge of the fundamentals of analytical instrumentation.

Knowledge of departmental rules, regulations and policies related to the work.

Knowledge of the analysis of blood and other biologic products.

Knowledge of the physical, chemical and biological testing of materials.

Knowledge of biochemical, chemical and physical laboratory tests used in crime detection.

Knowledge of appropriate health, safety and environmental regulations to provide for safe laboratory practices.

Knowledge of foods, feeds, fertilizers, economic poisons, and agricultural products.

Knowledge of the methods used in the production and testing of biologic products involving the application of biochemical, microbiological and immunological principles and practices.

Knowledge of photographic techniques and films.

Knowledge of techniques used in crime scene investigations.

Knowledge of computer application programs for laboratory activities and data.

Ability to plan and conduct research projects.

Ability to carry out laboratory procedures, tests and analyses required in the work and to interpret results obtained.

Ability to set up and carry out quality control programs for laboratory operations.

Ability to set up, use and maintain laboratory equipment.

Ability to prepare technical reports, records and papers related to the work.

Ability to provide effective courtroom testimony.

Ability to conduct methodological research from the assignment of a project through the various steps, including reporting of results.

Ability to maintain records and conduct correspondence related to the work.

Ability to communicate effectively with others.

Ability to maintain favorable public relations.

Additional Knowledge, Skills, and Abilities

Forensic Scientist 12 (Lead Worker)

Ability to organize and coordinate the work of others.

Ability to set priorities and assign work to other professionals.

Working Conditions

Typical assignments are carried out at a crime scene and in a laboratory environment with some exposure to noxious fumes and unpleasant noises.

Work involves some risk of sustaining illness and injury from the use of chemicals, high-pressure laboratory systems, biological materials and organisms, and high energy light sources and voltage.

Some jobs require an employee to work in proximity to caustic chemicals in darkened and confined area.

Some jobs require an employee to be exposed to disease and illness.

Some jobs require an employee to be exposed to hazardous work environments.

Some jobs require an employee to work in a hostile environment.

Some jobs require an employee to be exposed to inclement weather conditions.

Some jobs require an employee to work where there is a significant chance of injury.

Some jobs require an employee to work outdoors as well as in an office or a laboratory.

Physical Requirements

Periods of prolonged standing are normal.

Education

Possession of a bachelor's degree in forensic science, natural science, or a related pure or applied science.

Experience

Forensic Scientist 9

No specific type or amount is required.

Forensic Scientist 10

One year of professional experience working in a crime laboratory carrying out a variety of tests, analyses or production and research activities involving chemical, biochemical, biological or physical evidence samples, specimens, or products equivalent to a Forensic Scientist 9.

Forensic Scientist P11

Two years of professional experience working in a crime laboratory carrying out a variety of tests, analyses or production and research activities involving chemical, biochemical, biological or physical evidence samples, specimens, or products equivalent to a Forensic Scientist, including one year equivalent to a Forensic Scientist 10.

Forensic Scientist 12

Three years of professional experience working in a crime laboratory carrying out a variety of tests, analyses or production and research activities involving chemical, biochemical, biological or physical evidence samples, specimens, or products equivalent to a Forensic Scientist, including one year equivalent to a Forensic Scientist P11.

Alternate Education and Experience

Forensic Scientist 9

Firearms Specialty:

Individuals possessing a bachelor’s degree in any major and at least two years of State Police Specialist experience performing firearms and toolmarks examinations in the Michigan State Police Forensic Science Division.

Special Requirements, Licenses, and Certifications

Positions in this class are test-designated and subject to pre-appointment, random-selection, and post-accident drug and alcohol testing.

Chemical/Biological Specialty:

Positions in the State Police Laboratory biology, controlled substances, trace evidence or toxicology areas require possession of a bachelor's degree in forensic science, chemistry, biochemistry, biology, microbiology, or a related pure or applied science.

Firearms Specialty:

Positions in the State Police Laboratory firearms and toolmarks area require possession of a bachelor's degree with a major in physical science, natural science, forensic science, criminal justice, industrial technology, or a related field.

Latent Prints and Questioned Documents Specialty:

Positions in the State Police Laboratory latent prints and questioned documents areas require possession of a bachelor's degree with a major in natural science, criminal justice, forensic science, or a related pure or applied science, with at least 8 semester credits in chemistry.

Individuals possessing a bachelor's degree with a qualifying major but not completing 8 semester credits in chemistry may be appointed to a position in the Latent Prints and Questioned Documents Specialty provided they attain the required semester credits in chemistry by the end of the second year of employment within the specialty area. Failure to earn the 8 semester credits within the specified timeframe may result in separation from the forensic sciences program.

NOTE: Equivalent combinations of education and experience that provide the required knowledge, skills, and abilities will be evaluated on an individual basis.

JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION

Job Code	Job Code Description
FORENSCI	FORENSIC SCIENTIST

Position Title	Position Code	Pay Schedule
Forensic Scientist-E	FORNSCIE	H21-002
Forensic Scientist-A	FORNSCIA	H21-010

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