



Code: 9234

Family: Legal and Regulatory

Service: Public Safety

Group: Police Service

Series: Police Identification and Laboratory

CLASS TITLE: FORENSIC FIREARM/TOOLMARK EXAMINER

CHARACTERISTICS OF THE CLASS

Under supervision, the class examines and tests recovered firearms, spent bullet casings, items with gunshot residue and related evidence using forensic methods of analysis to identify and substantiate proof of matched identification links as part of criminal investigations, and performs related duties as required

ESSENTIAL DUTIES

- Applies instrumental, physical and/or chemical techniques in the examination of firearm evidence
- Restores obliterated serial numbers and other weapon identification markings using various processes including acid etching and chemical methods
- Examines items of evidence under a comparison microscope or stereo microscope for identifiable markings
- Disassembles, reassembles, renders safe and tests firearms in a ballistics shooting tank to determine operability, safety, and accuracy
- Performs complex examinations and comparisons of firearms, bullets, shells, casings, and other related items
- Documents unique characteristics and records physical parameters using measuring projections, micrometers, and other equipment
- Performs distance determination and examination of gunshot patterns with test standards
- Conducts database searches, entering search criteria into the Integrated Ballistics Information System (IBIS), to obtain data matches to firearm/tool markings and compare with other recovered evidence
- Compares and evaluates positive forensic matches of evidence ensuring that any discrepancies are adequately explained and/or justified
- Records examination findings into the National Integrated Ballistics Information Network, (NIBIN) database
- Interacts with the City and State agencies to troubleshoot issues resulting from evidence recognition errors, incorrect identification matches, and resolves problems
- Testifies as an expert witness regarding forensic analysis explaining evidence identification criteria and substantiating examination findings
- Ensures chain of evidence procedures and quality control standards are followed in firearm/evidence identification investigations
- Complies with unit performance measures, adheres to established goals and objectives, and prepares work reports on casework
- Makes microscopic comparisons and potentially identifies striated or impressed toolmarks as having been made by the same tool
- Tests toolmarks from an evidence tool by comparing toolmarks on evidence recovered from a crime scene to determine if the evidence tool marked the evidence item
- Analyzes evidence toolmarks recovered from multiple crime scenes to determine if the scenes are related to a single tool

- Prepares work reports on casework

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

- Graduation from an accredited college or university in a Natural Science, Chemistry, Biology, Physics, Forensic Science or a directly related field, plus at least two (2) years of work experience as a trained Firearm and Tool Mark Examiner with experience working in a forensic laboratory

Licensure, Certification, or Other Qualifications

- Membership by the Association of Firearm and Toolmark Examiners, preferred
- Successful completion of a documented Firearm and/or Tool Mark Examiner training program
- Must provide documents (i.e., court transcripts) to demonstrate previous experience providing expert testimony as a Firearm/Toolmark Examiner in court cases

WORKING CONDITIONS

- Forensic Laboratory
- General office environment

EQUIPMENT

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals)
- Micrometers, Dual Comparison Microscopes, and stereo microscope
- IBIS Brass Trax 3 D System, Match Point Plus System

PHYSICAL REQUIREMENTS

- None

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Advanced knowledge of:

- *computer hardware and software technology used in analyzing firearm tool markings including Integrated Ballistics Identification System (IBIS)
- *record keeping methods, practices, and procedures
- *principles and techniques of firearm/evidence examination for positive identification using the forensic analysis methods
- knowledge of forensic identification standards used to analyze evidence submitted into the IBIS database system for comparison
- The National Integrated Ballistics Identification Network (NIBIN) network
- laboratory safety and QA/QC procedures

Knowledge of applicable City and department policies, procedures, rules and regulations

Skills

- *ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- *ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- *CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
- MONITORING – Monitor and assess performance of one’s self, other individuals, or organizations to make improvements or take corrective action
- COMPLEX PROBLEM SOLVING – Identify complex problems and review related information to develop and evaluate options and implement solutions.
- INSTRUCTING – Teach others how to do something
- MANAGEMENT OF PERSONNEL RESOURCES – Motivate, develop and direct people as they work and identify the best people for the job

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK – Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE – Communicate information and ideas in writing so others will understand
- REASON TO SOLVE PROBLEMS – Apply general rules to specific problems to produce answers that make sense
- REACH CONCLUSIONS – Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

Other Work Requirements

- INITIATIVE - Demonstrate willingness to take on job challenges
- LEADERSHIP – Demonstrate willingness to lead, take charge, and offer opinions and direction
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL – Pay careful attention to detail and thoroughness completing work tasks
- ANALYTICAL THINKING – Analyze information and using logic to address work or job issues and problem

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City’s Ethics standards; and other City policies and procedures.

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The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.

City of Chicago
Department of Human Resources
September, 2014
December, 2021
March, 2023