

Firearms and Ballistics Analyst

DEFINITION

This is a specialized classification, exclusive to the Edmonton Police Service. The core responsibilities of this classification are to coordinate and manage all aspects of Firearms training for Edmonton Police Services sworn members as well as provide technical expertise and consultation with regards to ballistics, investigations, court proceedings, firearms maintenance, inspection, and purchasing.

The firearms training aspect of this classification require the incumbent to manage the full training cycle by researching, developing and implementing firearms training programs, while utilizing a variety of methods to effectively and efficiently train Edmonton Police Service members.

The ballistic reconstruction component of this classification requires the incumbent to develop accurate, true-to-scale 3D models, bullet trajectory animations, and crime/shooting scene reconstructions for court proceedings. The incumbent will utilize various 3D animation software and specialized techniques, such as photogrammetry, to provide the evidence required by Crown Prosecutors. This classification is required to coordinate and liaise extensively with internal units and external agencies, as well as attend court and offer expert testimony regarding investigations.

This classification differs from the Police Armourer in that it is responsible for overseeing the process for the purchasing, inspection, repair, modification, destruction, servicing and determination of suitability and fitness of firearms for operational deployment, while the Police Armourer classification is solely responsible for the actual hands on inspection, repair, modification and servicing of firearms. This classification will oversee the research and maintenance of the weapons systems for EPS usage, manage firearms related operational and capital expenditures and assist with budget forecasting.

WORKING CONDITIONS

The condition in which the work is performed is of varying conditions. Work may require heavy lifting and effort, working in conditions prone to exposure to chemicals, toxins, fumes, due to the repair and use of firearms. Also work is often done alone and subject to shift work. Employees of this classification are also required to be "on call" to respond to crime scenes to examine and analyze exhibits and crime/shooting scene to assist investigations. In doing so, they can be exposed to varying weather conditions. They are also actively involved in live scenario training for officers and can be physically demanding.

TYPICAL DUTIES *

- Often will be required to attend crime/shooting scenes to examine and analyze exhibits and assist investigations by providing consultative advice to crime scene investigators
- Photograph shooting/crime scenes and assist crime scene investigators
- Analyze exhibits, scenes and statements to create 3D models, computer animations and bullet trajectory reconstructions utilizing various specialized software and sound ballistics knowledge
- Examine and analyze photos using photogrammetry to extract measurements and create 3D scenes to be used for firearms related investigations and court proceedings
- Provide potential determinations of the range, direction and position of shooter
- Prepare and present expert testimony regarding firearms used in criminal offences
- Prepare various reports on weapons and firearms usage, often being submitted to the Alberta Serious Incident Response Team

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- Instruct and train sworn police officers on firearms, firearms instruction, as well as firing range and targetry use and maintenance
- Deliver training to all forensic crime scene investigators in the area of firearms trajectory and shooting reconstruction
- Assist with budget forecasting for firearms purchasing and training requirements
- Research, design and produce "Use of Force" training scenarios for video based judgemental training
- Instruct in the proper use of firearms, safety techniques, range safety, assembly and disassembly of firearms and associated procedures
- Research and design course of fire and range exercises
- Actively participate in range simulations and training
- Research and develop lesson plans and provide training utilizing a variety of training delivery methods (i.e. Traditional classroom, shooting range, video based)
- Research, maintain awareness, and implement new technologies to be utilized for firearms training
- Function as a firearms specialist and oversee the day-to-day functions of the Police Armourer
- Consult and liaise with internal sections within EPS and external agencies, including RCMP, Calgary Police and Solicitor General.
- Other duties as required

KNOWLEDGE, ABILITIES AND SKILLS

- Extensive knowledge in the area of ballistics and ballistic reconstructions
- Strong and demonstrated spatial and mechanical aptitude
- In-depth knowledge of firearms
- Demonstrated analytical and problem solving abilities
- Highly proficient with various 3D animation software (PhotoModeler, Right Hemisphere, 3D Studio Max, Google Sketch Up), CAD and overall advanced computer proficiency
- Ability to quickly learn and utilize new software applications
- Demonstrated ability to effectively instruct and train individuals
- Ability to develop effective training programs
- Excellent interpersonal and verbal communications skills
- Strong ability to effectively and concisely prepare reports and briefs
- Knowledge of the Criminal Code and Firearms act

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TRAINING AND EXPERIENCE REQUIREMENTS

Job Level

Completion of a Bachelor's degree in Science, Forensic Science, Engineering or related degree and a minimum of two (2) years of relevant experience
 or

Completion of a two (2) year diploma in civil, drafting or related technology at a recognized institute of technology and four (4) years of relevant experience

Experience in firearms repair, maintenance, modification and training

Master Firearms Instructor Certification (or ability to obtain)

The following specialized armourer and instructor certifications (or ability to obtain):

- Glock
- Colt
- Heckler and Koch
- Arwen
- Remington

* *This is a class specification and not an individualized job description. A class specification represents and defines the general character, scope of duties and responsibilities of all positions within a specific job classification. It is not intended to describe nor does it necessarily list the essential job functions for a specific position in a classification. Positions may perform some of the duties listed above but this does not necessarily qualify for placement into this classification.*

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Salary Plan	<u>21M</u>	<u>21A</u>	<u>21B</u>	<u>21C</u>
Job Code	3225		3224	
Grade	025		027	
Originated:	2009-12			
Last Updated:				
Previous Updates:				