

ARSENAL ABIS OPERATOR (Version 4.x)

TRAINING PROGRAM

Training duration: 12 calendar days (including days of your arrival and departure and 2 weekend days – Saturday and Sunday. Total: **8 training days**).

Admission requirements to learners:

- basic knowledge of forensic ballistics (nature of ballistic fingerprints and theory of identification)
- knowledge of tasks of forensic-ballistic and trace evidence analysis
- basic PC skills (work with text editors)

Form of Classes	Qty	Hours
Lecture-presentations and lecture-demonstrations	7	5 h. 20 min.
Demonstrations	10	9 h. 50 min.
Practice	12	31 h. 30 min.
Testing	2	6 h. 50 min.
Meetings (Opening and closing sessions)	2	3 h.
TOTAL		56 h. 30 min.

COURSE SYLLABUS

The program of this course is scheduled with provision for coffee breaks and lunch hours.

TOPIC	DESCRIPTION	HOURS
OPENING SESSION	Meeting the students. Administrative questions. Goals and objectives of the course.	40 min.
INTRODUCTORY LECTURE-PRESENTATION ARSENAL ABIS: Mission and Paramount Capabilities	<ul style="list-style-type: none">▲ Mission and capabilities of the system▲ History of development▲ Basic terms and definitions used in ARSENAL ABIS▲ Main steps in the work with objects▲ Key features of ARSENAL ABIS▲ Some points of preparation order to the training course	2 h.40 min.
DEMONSTRATION Operator's Workplace	<ul style="list-style-type: none">▲ Starting and shutting down the workstation▲ Logging into the system▲ Securing the login name of the trainee	10 min.
DEMONSTRATION Work with Bullets. Alphanumeric Data Entry.	<ul style="list-style-type: none">▲ Generating scanning requests▲ Getting to know the program interface▲ Distinctions between scanning requests for evidence and testfire specimens▲ Work with the program picklists	30 min.
LECTURE-DEMONSTRATION	<ul style="list-style-type: none">▲ Switching On/Off the ballistic scanner▲ Construction and components of the scanner	1 h.

Work with Bullets. Image Acquisition (Scanning)	<ul style="list-style-type: none"> ⤴ Positioning into the scanner and fixing the bullets made of different matters; using the scanner accessories ⤴ Rules of using tools at scanning ⤴ Getting to know the GUI of the Scanning application ⤴ Process of scanning a bullet 	
PRACTICE Work with Bullets. Alphanumeric Data Entry. Image Acquisition (Scanning)	<ul style="list-style-type: none"> ⤴ 20 bullets are delivered for practice. ⤴ Generating scanning requests ⤴ Scanning the bullets ⤴ ⤴ Analysis and correction of mistakes 	2 h.
LECTURE- PRESENTATION Method of Coding Characteristic Marks on Bullets in ARSENAL ABIS	<ul style="list-style-type: none"> ⤴ Characteristic marks on bullets: defChecking and consulting by the tutor initiation and classification. ⤴ Rules of coding characteristic marks on bullets: <ul style="list-style-type: none"> - coding features in common - coding of individual features - special aspects of coding primary (skid) marks - special aspects of coding secondary marks (land and groove impressions) - special aspects of coding characteristics associated with the mark forming conditions - recommendations of how to code marks specific to some models of firearms 	40 min.
DEMONSTRATION Work with Bullets. Coding Characteristic Marks on Bullets.	<ul style="list-style-type: none"> ⤴ GUI of the Coding application ⤴ Automatic positioning of land impressions boundaries and check by the operator ⤴ Outlining characteristic marks using marquee boxes 	1 h.
PRACTICE Work with Bullets. Coding Characteristic Marks on Bullets.	<ul style="list-style-type: none"> ⤴ Coding marks on bullets scanned at the previous session ⤴ Continued work with bullets delivered earlier ⤴ Checking and consulting by the tutor ⤴ Analysis and correction of mistakes 	1 h. 40 min.
DEMONSTRATION Work with Bullets. ARSENAL ABIS Database (DB).	<ul style="list-style-type: none"> ⤴ Browsing the DB. Work with DB windows. ⤴ Work with lists of evidence and testfire bullets: <ul style="list-style-type: none"> - samples - list sorting - list filtering - removing / adding fields - editing of textual information <ul style="list-style-type: none"> ⤴ Viewing text and graphic information ⤴ Candidate lists view procedure ⤴ Rules of viewing the candidate lists ⤴ Object management ⤴ Work with Hit Lists 	2 h.

	<ul style="list-style-type: none"> ⤴ Drawing up identification results 	
PRACTICE Work with Bullets. Browsing of ARSENAL ABIS DB.	<ul style="list-style-type: none"> ⤴ Viewing candidate lists for previously added bullets ⤴ Checking and consulting by the tutor ⤴ Analysis and correction of mistakes 	1 h. 40 min.
PRACTICE Work with Bullets (The whole session)	<ul style="list-style-type: none"> ⤴ Generating a scanning request ⤴ Image acquisition ⤴ Coding characteristic marks ⤴ Viewing candidate lists ⤴ Drawing up results ⤴ Checking and consulting by the tutor ⤴ Analysis and correction of mistakes 	3 h. 40 min.
DEMONSTRATION Work with Cartridge Cases. Rules of Alphanumeric Data Entry.	<ul style="list-style-type: none"> ⤴ Generating a scanning request ⤴ Getting to know the GUI of the Scanning application ⤴ Distinctions between scanning requests for testfire and evidence cartridge cases ⤴ Work with program picklists 	30 min.
LECTURE-DEMONSTRATION Work with Cartridge Cases. Rules of Object Scanning.	<ul style="list-style-type: none"> ⤴ Preparing a cartridge case for image capture (head) ⤴ Rules for using tools at scanning ⤴ Preparing a cartridge case for image capture (side) ⤴ Getting to know the GUI of the Scanning application ⤴ Process of scanning 	40 min.
PRACTICE Work with Cartridge Cases. Alphanumeric Data Entry. Image Acquisition.	20 cartridge cases are provided for practice: <ul style="list-style-type: none"> ⤴ Generate scanning requests ⤴ Scan cartridge case heads ⤴ Scan cartridge case sides ⤴ Checking and consulting by the tutor ⤴ Analysis and correction of mistakes 	2 h. 30 min.
LECTURE-PRESENTATION Methods of Coding Characteristic Marks on Cartridge Cases in ARSENAL ABIS	<ul style="list-style-type: none"> ⤴ Categories of characteristic marks ⤴ Peculiarities of coding impressions identifiable on the cartridge case head: <ul style="list-style-type: none"> - centerfire cartridges - rimfire cartridges ⤴ Peculiarities of coding striations/impressions identifiable on the cartridge case side 	40 min.
DEMONSTRATION Work with Cartridge Cases. Coding Characteristic Marks on Cartridge Cases.	<ul style="list-style-type: none"> ⤴ The GUI of the Coding application ⤴ Coding areas of significance with frames (marquee boxes) 	1 h.
PRACTICE Work with Cartridge Cases. Coding Characteristic Marks on Cartridge Cases.	<ul style="list-style-type: none"> ⤴ Coding characteristic marks on cartridge cases scanned at the previous session ⤴ Continued work with cartridge cases provided earlier ⤴ Checking and consulting by the tutor 	1 h. 40 min.

	<ul style="list-style-type: none"> ⤴ Analysis and correction of mistakes 	
DEMONSTRATION Work with Cartridge Cases. ARSENAL ABIS DB.	<ul style="list-style-type: none"> ⤴ Types of candidate lists generated for cartridge cases ⤴ Procedure for viewing candidate lists: <ul style="list-style-type: none"> - generalized list - synthesized list ⤴ Object management ⤴ Operations with Hit Lists ⤴ Drawing up the results 	1 h. 40 min.
PRACTICE Work with Cartridge Cases. Browsing of ARSENAL ABIS DB.	<ul style="list-style-type: none"> ⤴ Viewing candidate lists for previously added cartridge cases ⤴ Checking and consulting by the tutor ⤴ Analysis and correction of mistakes 	2 h. 40 min.
PRACTICE Work with Cartridge Cases. (The whole session)	<ul style="list-style-type: none"> ⤴ Generating a scanning request ⤴ Scanning ⤴ Coding areas of significance ⤴ Viewing candidate lists ⤴ Drawing up results ⤴ Checking and consulting by the tutor ⤴ Analysis and correction of mistakes 	2 h. 40 min.
LECTURE-PRESENTATION Typical Mistakes at Coding Characteristic Marks on Bullets and Cartridge Cases.	Typical mistakes the ARSENAL users make when encoding characteristic marks on ballistic objects.	1 h.
DEMONSTRATION Work with Deformed Objects and Fragmented Bullets	<ul style="list-style-type: none"> ⤴ Generating a scanning request ⤴ Preparing a fragmented bullet (shell) for image capture ⤴ Process of scanning ⤴ Coding areas of significance on the image ⤴ Viewing search results ⤴ Drawing up results 	1 h.
PRACTICE Work with Deformed Objects and Fragmented Bullets	Work with heavily deformed specimens and fragments of bullet shells: <ul style="list-style-type: none"> ⤴ Generating a scanning request ⤴ Scanning a deformed bullet ⤴ Scanning a fragmented bullet ⤴ Coding ⤴ Viewing of search results ⤴ Drawing up results ⤴ Checking and consulting by the tutor ⤴ Analysis and correction of mistakes 	6 h. 20 min.
DEMONSTRATION Work with Specimens Fired from Smooth-bore Guns	<ul style="list-style-type: none"> ⤴ Generating a scanning request ⤴ Preparing specimens for image capture ⤴ Scanning ⤴ Coding characteristic marks ⤴ Viewing search results ⤴ Drawing up results 	1 h.
PRACTICE	Work with samples fired from smooth-bore guns	1 h. 40 min.

Work with Specimens Fired from Smooth-bore Guns	provided for practice: <ul style="list-style-type: none"> ⤴ Generating a scanning request ⤴ Scanning ⤴ Coding characteristic marks ⤴ Viewing search results ⤴ Drawing up results 	
LECTURE- PRESENTATION The Use of PAPHILLON Ballistic Scanner and ARSENAL Software for Trace Evidence Analysis of Non-ballistic Objects.	<ul style="list-style-type: none"> ⤴ Comparative studies in the forensic expert practice ⤴ Possibility of comparative studies provided by ARSENAL ABIS ⤴ Practical examples of trace evidence research of non-ballistic objects 	40 min.
DEMONSTRATION Elementary Administrating in ARSENAL ABIS.	<ul style="list-style-type: none"> ⤴ Work with dictionaries and picklists ⤴ User management ⤴ Segment management ⤴ Backup management ⤴ Log viewing 	1 h.
PRACTICE Elementary Administrating in ARSENAL ABIS.	<ul style="list-style-type: none"> ⤴ Work with dictionaries and picklists ⤴ User management ⤴ Segment management ⤴ Backup management ⤴ Log viewing 	3 h.
PRACTICE Summarizing. Preparing for the Final Testing.	The tutor's consultations on trainee's questions. Self instruction.	2 h.
FINAL TESTING	<ul style="list-style-type: none"> ⤴ Instructions on the final testing procedure ⤴ Test consisting of two parts: <ul style="list-style-type: none"> - written test - practical part (full session of entry - a bullet and a cartridge case) with drawing up search results. <ul style="list-style-type: none"> ⤴ Checking the tasks by the tutor ⤴ Filling in the exam report 	6 h. 10 min.
CLOSING SESSION	Summarizing the outcome of training course. Giving certificates.	1 h.