

## PAPILLON-8 AFIS Operator Training (Basic Course)

**Course duration:** 8 training days (or 12 calendar days)

### Admission requirements to learners:

- Knowledge of fundamentals of forensic
- Computer skills (at using any text editor)

<b>Form of Classes</b>	<b>Qty</b>	<b>Hours</b>
<b>Lectures, lectures-presentations, lectures-demonstrations</b>	<b>16</b>	<b>11 h 40 min</b>
<b>Demonstrations and demonstration with practice</b>	<b>14</b>	<b>9 h 20 min</b>
<b>Practice</b>	<b>14</b>	<b>18 h</b>
<b>Exams</b>	<b>1</b>	<b>3 h</b>
<b>Testing</b>	<b>2</b>	<b>7 h 50 min</b>
<b>Other lessons</b> (Training simulator on latent coding. Guidance)	<b>1</b>	<b>20 min</b>
<b>Meetings</b>	<b>2</b>	<b>3 h</b>
<b>TOTAL</b>		<b>53 h 10 min</b>

*Version 4*

## COURSE SYLLABUS

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

Day	Topic / Subject	Description	Hours
<b>1 Sun</b>	<b>DAY OF ARRIVAL</b>	<ul style="list-style-type: none"> <li>Transfer from an airport/railway station to PAPILLON</li> <li>Accommodation</li> </ul>	
<b>2 Mon</b>	<b>OPENING SESSION</b>	<ul style="list-style-type: none"> <li>Completion of questionnaires</li> <li>Safety rules talk</li> <li>Fire safety instructions</li> <li>Code of behaviour on the company premises</li> <li>Administrative and organizational matters</li> </ul>	2 h
	<b>INTRODUCTORY LECTURE-PRESENTATION</b> Mission and Principal Capabilities of PAPILLON-8 AFIS System	<ul style="list-style-type: none"> <li>Application and capabilities of PAPILLON-8</li> <li>Basic terms and definitions</li> </ul>	1 h
	<b>LECTURE-PRESENTATION</b> Operator's Work with Tenprints in PAPILLON AFIS	Technology of operation and workflow of tenprint entry in PAPILLON-8	10 min
	<b>DEMONSTRATION &amp; PRACTICE</b>	<ul style="list-style-type: none"> <li>Switching on/off the operator workstation</li> <li>Logging into the system</li> </ul>	10 min
	<b>LECTURE-DEMONSTRATION</b> Text Data Entry Procedure	<ul style="list-style-type: none"> <li>Types of registration</li> <li>Rules of tenprint numbering</li> <li>Application GUI</li> <li>Working with drop-down picklists</li> <li>Rules of text data entry</li> </ul>	40 min
	<b>LECTURE-DEMONSTRATION</b> Tenprint Image Acquisition	<ul style="list-style-type: none"> <li>Application GUI</li> <li>Practical instructions for scanning tenprints</li> </ul>	1 h
	<b>PRACTICE</b> Text Data Entry and Scanning	<ul style="list-style-type: none"> <li>Entering text data to create a scanning request</li> <li>Scanning</li> <li>Control over text data entry mistakes and check for compliance with tenprint scanning rules</li> <li>Consulting by the tutor</li> </ul>	1 h
<b>3 Tue</b>	<b>LECTURE-PRESENTATION</b> Classification of Fingerprint Patterns	<ul style="list-style-type: none"> <li>Characteristics used in classification</li> <li>Types of patterns as classified in PAPILLON AFIS</li> </ul>	20 min
	<b>PRACTICE</b> Quiz	<ul style="list-style-type: none"> <li>Characteristics and classification of fingerprint patterns</li> </ul>	20 min
	<b>LECTURE-DEMONSTRATION</b> Reasons for Tenprint Coding in PAPILLON-8 AFIS	<ul style="list-style-type: none"> <li>Causes why tenprints might appear at the coding stage</li> <li>Application GUI</li> <li>Procedure of tenprint coding (except tenprints of the unknown dead)</li> </ul>	1 h
	<b>PRACTICE</b> Reasons for Tenprint Coding in PAPILLON-8 AFIS	<ul style="list-style-type: none"> <li>Complete package entry of tenprints that have different reasons for their occurrence at the stage of coding</li> <li>Checking by and consulting with the tutor</li> </ul>	1 h 30 min

	<b>LECTURE-PRESENTATION</b> PAPILLON AFIS Database Structure	<ul style="list-style-type: none"> <li>• Database (DB) segments</li> <li>• Contents of segments and relevant attributes</li> <li>• Logic of DB structure</li> </ul>	30 min
	<b>DEMONSTRATION &amp; PRACTICE</b> PAPILLON AFIS Database Browser	<ul style="list-style-type: none"> <li>• DB Browser GUI</li> <li>• Making selections and sorting lists</li> <li>• Viewing text and graphic information</li> <li>• Editing text data</li> </ul>	2 h
	<b>PRACTICE</b> PAPILLON AFIS Database Browser	<ul style="list-style-type: none"> <li>• Working with PAPILLON AFIS database</li> <li>• Checking by and consulting with the tutor</li> </ul>	1 ч. 40 МИН.
<b>4</b> <b>Wed</b>	<b>LECTURE-PRESENTATION</b> Work with Tenprint-to-Tenprint (TP-TP) Candidate Lists	<ul style="list-style-type: none"> <li>• Types of searches</li> <li>• Contents of TP-TP candidate lists</li> <li>• Working with TP-TP candidate lists</li> <li>• Rules for verifying TP-TP candidate lists</li> <li>• Making a report on search results</li> </ul>	1 h 20 min
	<b>DEMONSTRATION</b> Work with Tenprint-to-Tenprint (TP-TP) Candidate Lists	<ul style="list-style-type: none"> <li>• Verifying TP-TP candidate lists</li> <li>• TP-TP Hit Lists</li> <li>• Making a report on search results</li> </ul>	40 min
	<b>PRACTICE</b> Work with TP-TP Candidate Lists	<ul style="list-style-type: none"> <li>• Entering tenprints into database</li> <li>• Verifying TP-TP candidate lists generated for tenprints entered</li> <li>• Making a report on search results</li> <li>• Checking by and consulting with the tutor</li> </ul>	1 h 40 min
	<b>DEMONSTRATION</b> Technology of Bulk Tenprint Entry	<ul style="list-style-type: none"> <li>• Concept of 'Bulk Entry'</li> <li>• Station for bulk tenprint entry</li> <li>• Aims of the bulk entry procedure</li> <li>• Making tenprints ready for bulk entry (numeration, restoration)</li> <li>• Transmitting tenprint packages to the AFIS on demand, and receiving them</li> </ul>	30 min
	<b>DEMONSTRATION</b> Completion of Bulk Tenprint Entry to the AFIS	<ul style="list-style-type: none"> <li>• GUI of the application</li> <li>• Joined and non-joined packages of tenprints</li> <li>• Peculiarities of entry</li> <li>• Image Acquisition</li> </ul>	10 min
	<b>PRACTICE</b> Work with Tenprints Acquired after Bulk Scanning	<ul style="list-style-type: none"> <li>• Entry of a package of tenprints using the paperless (bulk) technology</li> <li>• Check for correctness of entered text data and for observance the rules of scanning</li> <li>• Consulting by the tutor</li> </ul>	30 min
	<b>DEMONSTRATION &amp; PRACTICE</b> PAPILLON AFIS Database: Re-scanning and Adding Images	<ul style="list-style-type: none"> <li>• Rescanning objects</li> <li>• Adding lacking images</li> <li>• Criteria for choosing options</li> <li>• Requests for re-scanning and adding</li> <li>• Checking and consulting by the tutor</li> </ul>	20 min
	<b>LECTURE-PRESENTATION</b> Technology of Operator's Work with Latent Prints in PAPILLON-8	Technology of operation and workflow of latent print entry in PAPILLON-8	10 min

	<p><b>DEMONSTRATION</b> Entry of Alphanumeric Data Associated with Latent Prints. Image Acquisition (flatbed scanner, USB flash drive)</p>	<ul style="list-style-type: none"> <li>• Application GUI</li> <li>• Working with drop-down picklists when entering alphanumeric data</li> <li>• Rules for scanning latents</li> </ul>	1 h
	<p><b>PRACTICE</b> Latent Print Text Data and Image Entry (flatbed scanner, USB flash drive)</p>	<ul style="list-style-type: none"> <li>• Entering text data from latent print cards</li> <li>• Scanning latent print cards with a flatbed scanner</li> <li>• Acquiring latent print images from a file recorded on USB flash drive</li> <li>• Checking for compliance with rules for scanning latent prints</li> </ul>	1 h
5 Thu	<p><b>LECTURE-PRESENTATION</b> Methods of Latent Print Coding in PAPILLON-8</p>	<ul style="list-style-type: none"> <li>• Defining a type of the latent</li> <li>• Choosing an image type</li> <li>• Specifying search parameters</li> <li>• Positioning of an axis. Tolerances for axis position and orientation</li> <li>• Outlining usable areas</li> <li>• Characteristics of minutiae</li> <li>• Classification of minutiae in PAPILLON AFIS</li> <li>• Recommendations for plotting minutiae</li> <li>• Rules for working with a skeleton image</li> <li>• Check of the minutiae plot</li> </ul>	1 h 30 min
	<p><b>DEMONSTRATION &amp; PRACTICE</b> Methods of Latent Print Coding</p>	<ul style="list-style-type: none"> <li>• Application GUI</li> <li>• Step-by-step procedure of coding: axis, tolerances, usable area(s), skeleton, check of minutiae, search parameters, sending to database</li> </ul>	1 h
	<p><b>PRACTICE</b> Latent Print Coding</p>	<ul style="list-style-type: none"> <li>• Coding of latents previously scanned (up to minutia extraction)</li> <li>• Checking by and consulting with the tutor</li> <li>• Sending the latents to the database</li> </ul>	1 h 10 min
	<p><b>DEMONSTRATION</b> Database Browser. Work with Latent-to-Tenprint (LT-TP) Candidate Lists</p>	<ul style="list-style-type: none"> <li>• Contents of LT-TP candidate lists</li> <li>• Rules for working with LT-TP candidate lists</li> <li>• Instructions on latent-to-candidate comparisons</li> <li>• LT-TP Hit Lists</li> <li>• Making a report on search results</li> </ul>	1 h 40 min
	<p><b>PRACTICE</b> Database Browser. Work with Latent-to-Tenprint (LT-TP) Candidate Lists</p>	<ul style="list-style-type: none"> <li>• Working with LT-TP candidate lists generated for entered latents</li> <li>• Making a report on search results</li> <li>• Checking by and consulting with the tutor</li> </ul>	1 h 30 min
	<p><b>TRAINING SIMULATOR</b> Exercising Latent Print Coding Skills on TRAINING SIMULATOR</p>	<ul style="list-style-type: none"> <li>• Guidance of how to use the simulator.</li> <li>• Practicing on the simulator</li> </ul>	20 min

<b>6 Fri</b>	<b>LECTURE-DEMONSTRATION</b> Working with Tenprints of the Unknown Dead	<ul style="list-style-type: none"> <li>Practices in working with tenprints of the unknown dead</li> <li>Rules for working with tenprints of the unknown dead</li> <li>Making a report on search results</li> </ul>	30 min
	<b>PRACTICE</b> Working with Tenprints of the Unknown Dead	<ul style="list-style-type: none"> <li>Entering tenprints to AFIS database</li> <li>Coding fingerprints as quasi latents (if needed)</li> <li>Verifying candidate lists</li> <li>Making a report on search results</li> <li>Checking by and consulting with the tutor</li> </ul>	2 h 10 min
	<b>PRACTICE</b> Complete Procedure of Tenprint Entry in PAPILLON AFIS and Reporting on Search Results	<ul style="list-style-type: none"> <li>Tenprint package entry to the database</li> <li>Verifying candidate lists</li> <li>Making a report on search results</li> <li>Checking by and consulting with the tutor</li> </ul>	1 h
	<b>EXAM</b> on Tenprint Entry	<ul style="list-style-type: none"> <li>Instructions on the testing procedure</li> <li>Entry of a test package of tenprints</li> <li>Verifying search results</li> <li>Filling in the test protocol</li> </ul>	3 h
	<b>Reviewing the Examination Results</b>	Review and analysis of results of the exam on tenprint entry	10 min
	<b>LECTURE-PRESENTATION</b> Work with PAPILLON RASTR	<ul style="list-style-type: none"> <li>Mission and main capabilities of RASTR</li> <li>Basic terms and definitions</li> <li>Introduction to using RASTR tools and functions</li> </ul>	40 min
<b>7</b>	<b>Saturday</b>	<b>Day Off</b>	
<b>8</b>	<b>Sunday</b>	<b>Day Off</b>	
<b>9 Mon</b>	<b>LECTURE-PRESENTATION</b> Using of FFT Tools at Coding Latents	Basics of Fast Fourier Transform <ul style="list-style-type: none"> <li>Resolving images into components</li> <li>Amplifying/suppressing the wave frequency</li> <li>Removing or weakening of the surface background under the latent print</li> <li>Examples of using the FFT</li> </ul>	20 min
	<b>DEMONSTRATION</b> Latent Print Processing with RASTR Tools	GUI of FFT Examples of use: <ul style="list-style-type: none"> <li>Separation of overlapping latents</li> <li>suppression of periodical pattern of the surface where latents are discovered</li> <li>Enhancement of barely traceable latent prints</li> </ul>	20 min
	<b>PRACTICE</b> Latent Print Processing with RASTR Tools	<ul style="list-style-type: none"> <li>Separation of overlapping latents</li> <li>Enhancement of barely traceable latent prints</li> <li>suppression of periodical pattern of the surface where latents are discovered</li> <li>Checking and consulting by the tutor</li> </ul>	30 min

	<p><b>DEMONSTRATION &amp; PRACTICE</b> More Capabilities for Working with Latents Stored in the Database</p>	<ul style="list-style-type: none"> <li>• Adding latent print images to the case</li> <li>• Replacement / adding images of latent print card pages</li> <li>• History of editing</li> <li>• List copy</li> <li>• Charting of matching minutiae</li> </ul>	20 min
	<p><b>DEMONSTRATION</b> Database Browser: Work with TP-LT and LT-LT candidate lists</p>	<ul style="list-style-type: none"> <li>• Task significance of verifying TP-LT and LT-LT candidate lists</li> <li>• Rules of working with TP-LT and LT-LT candidate lists</li> <li>• Hit Lists</li> <li>• Making a report of search results</li> </ul>	30 min
	<p><b>LECTURE-DEMONSTRATION &amp; PRACTICE</b> Express ID Check Workstation (MDS)</p>	<ul style="list-style-type: none"> <li>• Application of MDS</li> <li>• Procedure of real-time identity check</li> <li>• Creation of an electronic live-scan tenprint</li> <li>• Data transmission to upper-level AFIS</li> </ul>	40 min
	<p><b>LECTURE-DEMONSTRATION &amp; PRACTICE</b> PAPILLON-M Mobile Versatile Professional Workstation</p>	<ul style="list-style-type: none"> <li>• Application of PAPILLON-M</li> <li>• System components</li> <li>• Capabilities</li> </ul>	30 min
	<p><b>TEST</b> Latent Print Encoding</p>	<ul style="list-style-type: none"> <li>• Test instructions</li> <li>• Coding of a test package</li> <li>• Verification of search results (all latents under test have confirmable mates in AFIS DB)</li> <li>• Filling in the test report form</li> </ul>	3 h
	<p><b>PRACTICE</b> Complete Procedure of Latent Print Entry from Latent Print Cards (<b>continued</b>)</p>	<ul style="list-style-type: none"> <li>• Text data entry</li> <li>• Scanning</li> <li>• Encoding and insertion into DB</li> <li>• Verification of LT-TP candidate lists</li> <li>• Checking by and consulting with the tutor</li> </ul>	1 h
<b>10 Tue</b>	<p><b>LECTURE-DEMONSTRATION &amp; PRACTICE</b> Elementary Adminstrating of PAPILLON-8</p>	<ul style="list-style-type: none"> <li>• Tasks and objectives of administering the AFIS system</li> <li>• Instructions of switching on/off the AFIS hardware</li> <li>• User management and access control</li> <li>• Editing picklists and dictionaries, and updating text data entry forms.</li> <li>• System monitoring</li> <li>• Data interchange with other AFISs</li> <li>• Export Control application: mission and capabilities</li> <li>• Import Control application: mission and capabilities</li> <li>• Copying data on external mediums</li> <li>• A register of imported/exported objects</li> </ul>	1 h 30 min
	<p><b>DEMONSTRATION</b> Analysis of LT-TP Omissions</p>	Analysis of causes which led to omission of true candidates in LT-TP search results gained in the previously conducted test on latent encoding	40 min
	<p><b>PRACTICE</b> Complete Procedure of Latent Print Entry from Latent Print Cards (<b>continued</b>)</p>	<ul style="list-style-type: none"> <li>• Text data entry</li> <li>• Scanning</li> <li>• Encoding and insertion into DB</li> <li>• Verification of LT-TP candidate lists</li> <li>• Checking by and consulting with the tutor</li> </ul>	3 h

<b>11 Wed</b>	<b>EXAM</b> Latent Print Encoding	<ul style="list-style-type: none"> <li>• Instructions on the examination procedure</li> <li>• Encoding of a test package of latent prints</li> <li>• Verification of search results (each latent has a confirmable mate in the database)</li> <li>• Filling in the exam report form</li> </ul>	3 h 40 min
	<b>EXAM</b>	Analysis of the examination results together with tutor	1 h
	<b>CLOSING SESSION</b>	<ul style="list-style-type: none"> <li>• Summing up the training course, exchange of opinions</li> <li>• Presenting documentation to the trainees</li> </ul>	1 h
<b>12 Thu</b>	<b>DAY OF DEPARTURE</b>	<ul style="list-style-type: none"> <li>• Check-out</li> <li>• Transfer from PAPILLON to an airport/railway station</li> </ul>	