



NATIONAL COMMISSION ON FORENSIC SCIENCE

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Views of the Commission Accreditation of Forensic Science Certification Bodies

Subcommittee
Accreditation and Proficiency Testing
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Note: This document reflects the views of the National Commission on Forensic Science, and does not necessarily represent the views of the Department of Justice or the National Institute of Standards and Technology. This document does not formally recommend any action by a government entity, and thus no further action will be taken upon its approval by the Commission.

Overview

Obtaining certification in a forensic science specialty through an accredited certification body complements the accreditation of forensic science service providers (FSSP)¹, forensic units, and part-time and private forensic science entities for the overall improvement of forensic science. This document provides Commission views for the accreditation of forensic science certification bodies and the accreditation of the certification body's program by a third-party accreditation body.

Views of the Commission

It is the view of the Commission that certification bodies should:

- Seek compliance to ISO/IEC 17024 Conformity Assessment – General Requirements for Bodies Operating Certification of Persons. This process should be accomplished within 10 years of implementation.
- Be accredited in accordance with the requirements of ISO/IEC 17024 by an accreditation body, operating in accordance with ISO/IEC 17011 – General Requirements for Accreditation Bodies Accrediting Conformity Assessment Bodies and signatory to the

¹ A forensic science agency or forensic science practitioner providing forensic science services. Definition adopted by NCFCS Commissioners on May 1, 2015

International Accreditation Forum (IAF) Multilateral Arrangement (MLA).

- Collaborate with other certification bodies to develop uniform certification requirements.
- Ensure that certification examinations are continually reviewed to incorporate new technologies and remove obsolete information.

Background

Professional forensic certification programs with certification boards have existed for more than three decades although programs do not exist for all forensic science categories of testing. In 2010, the Accreditation, Certification, and Proficiency Testing Inter-Agency Working Group (ACPTIWG) of the National Science and Technology Council's Subcommittee on Forensic Science collated information on existing certification programs (Appendix A, updated in 2016 from representatives of the following organizations: American Board of Criminalistics (ABC), International Association for Computer Information Systems (IACIS), International Association for Identification (IAI), American Society for Testing and Materials (ASTM) International, Institute for Credentialing Excellence (ICE), Idaho State Police Forensic Services, American National Standards Institute (ANSI), American Society for Clinical Pathology Board of Certification (ASCP), American Society for Quality Certification (ASQ), Forensic Specialties Accreditation Board (FSAB)².

There are specialties and subspecialty categories of testing that do not have certification bodies due to the very small number of practitioners (Appendix B). It is recognized in the certification community that it is difficult to create a certification program with less than 50 practitioners.³

Comparison of three forensic certification bodies' requirements revealed vast differences in the certification examination process and essential elements for forensic disciplines which leads to fragmentation of the various certification programs (Appendix C).

Forensic science certification bodies are similar to the certification bodies in other industries in their ability to assess conformity to the knowledge, skills, and abilities of an individual. The certification body should be ISO/IEC 17024 accredited, and importantly, it is essential that the competency of a certification body be verified by an authoritative accreditation body. This means that the certifying body should be accredited by an accreditation body operating in accordance with ISO/IEC 17011 and signatory to the IAF MLA.

To date, although many forensic science certification bodies are accredited, they are not currently accredited to the ISO/IEC 17024 standard by an accreditation body that has obtained IAF MLA signatory status. This means that the accrediting body has not been evaluated by IAF and found to meet the stringent IAF MLA recognition requirements.

² https://www.whitehouse.gov/sites/default/files/microsites/ostp/NSTC/strengthening_the_forensic_sciences_may_-_2014.pdf

³ Swift, Roy A. "Increasing the Credibility and Quality of Certification through Accreditation." Presentation to the Accreditation Certification IWG ACPTIWG. May 5, 2011

The Forensic Specialties Accreditation Board (FSAB) was created in 2000 as a voluntary program to assess, accredit, and monitor forensic science certification bodies. The program reviews and evaluates the operating procedures and standards of applicant forensic science certification bodies to ensure that a minimum set of standards are being met. FSAB accreditation standards are modeled on ISO/IEC 17024; however, they are not recognized as meeting ISO/IEC 17011. Alternatively, the ANSI is recognized as a signatory to the IAF MLA and is the only accrediting body in the United States that offers accreditation under ISO/IEC 17024 but currently does not accredit forensic science certification bodies. Accreditation under ISO/IEC17024 provides strategic tools to objectively assess the validity, reliability and quality of the certification programs. A certification body accredited under ISO/IEC 17024 must demonstrate: a fair and equitable evaluation of all candidates; an organizational structure to support the mission; policy and procedures for complaints, appeals and confidentiality; and a certification and recertification scheme.

The Commission acknowledges that there will be challenges for requiring forensic science certifying bodies to attain ISO/IEC 17024 accreditation, including the possibility they may need to change operating practices (Appendix D). Potentially, they would have to develop new categories of testing and provide varying levels of certification; as a result, certification costs may increase. Developing new examinations in categories of testing with a small number of practitioners may not be practical for most certifying bodies. The FSSPs may be impacted in that the direct and indirect cost to the certifying bodies may be passed onto the people seeking certification or their parent organizations. A FSSP may also be impacted in that policies and procedures must be written to address an internal certification program. These may include the addition of a certification statement in job descriptions, designation of approved certifying bodies, defined time intervals for certification, and defined personnel actions based on successful or unsuccessful certification.

Many certification bodies rely on the use of unpaid volunteers, but requiring compliance with ISO/IEC 17024 may require these bodies to hire staff for administration and quality control of the certification process.

Appendix A: Forensic Certification Bodies

ILAC G19 Categories of Testing	Discipline / Sub-discipline	Certification Organization	Contact Info	Accrediting Organization	Approx . # of Diplomates or Certified Individuals	Application Fee	Examination Fee	Annual Recertification Fee or Dues
Controlled Substances	Drug Analysis	American Board of Criminalistics	www.criminalistics.com	FSAB	232	\$50	\$250	\$50
Comprehensive Criminalistics Examination (General Criminalistics)	Criminalistics Subjects	American Board of Criminalistics	www.criminalistics.com	FSAB	111 (718)	\$50	\$250	\$50
Hairs, Blood, Body Fluids and Tissues	Molecular Biology	American Board of Criminalistics	www.criminalistics.com	FSAB	364	\$50	\$250	\$50
Trace Evidence	Fire Debris	American Board of Criminalistics	www.criminalistics.com	FSAB	47	\$50	\$250	\$50
Trace Evidence	Hairs and Fibers	American Board of Criminalistics	www.criminalistics.com	FSAB	27	\$50	\$250	\$50
Trace Evidence	Paint and Polymers	American Board of Criminalistics	www.criminalistics.com	FSAB	22	\$50	\$250	\$50
Entomology	Forensic Entomology	American Board of Forensic Entomology	www.forensicentomologist.org		16	\$50	\$50	\$50
Handwriting and Document Examination	Forensic Document Examination	American Board of Forensic Document Examiners	www.abfde.org	FSAB	106	\$250	N/A	250 Annual Dues
Handwriting and Document Examination	Forensic Document Examination	Board of Forensic Document Examination	www.bfde.org	FSAB	14	\$100	\$500	\$50
Fingerprints	Latent Fingerprints	International Association for Identification	www.theiai.org	FSAB	1041	\$200/ IAI Members; \$300/Non-Members	N/A	Recert every 5 yrs: \$200/IAI Members; \$300/Non-Members

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Fingerprints	Ten-Print Fingerprints	International Association for Identification	www.theiai.org	FSAB	117	\$200/ IAI Members; \$300/Non- Members	N/A	Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members
Scene Investigation	Blood Stain Pattern	International Association for Identification	www.theiai.org	FSAB	39	\$200/ IAI Members; \$300/Non- Members	N/A	Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members
Scene Investigation	Crime Scene-Four Levels	International Association for Identification	www.theiai.org	FSAB	1625: Outside F.S. Service Practitioners	\$200/ IAI Members; \$300/Non- Members	N/A	Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members
Scene Investigation	Forensic Artist	International Association for Identification	www.theiai.org	FSAB	34	\$200/ IAI Members; \$300/Non- Members	N/A	Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members
Scene Investigation	Forensic Photography	International Association for Identification	www.theiai.org	FSAB	57	\$200/ IAI Members; \$300/Non- Members	N/A	Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members
Marks and Impressions	Footwear	International Association of Identification	www.theiai.org	FSAB	105	\$200/ IAI Members; \$300/Non- Members	\$300	\$200/IAI Members; \$300/Non- Members
Audio, Video and Computer Analysis	Digital Evidence / Video- Forensic Video Certification	International Association of Identification	www.theiai.org		23	\$200/ IAI Members; \$300/Non- Members	\$300	\$200/IAI Members; \$300/Non- Members

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Marks and Impressions	Footwear/ Fingerprints	Canadian Identification Society	www.cis-sci.ca		NA for U.S.A.	\$150	N/A	\$150
Audio, Video and Computer Analysis	Digital Evidence / Video - Certified Forensic Video Analyst	Law Enforcement and Emergency Services Video Association (LEVA)	www.leva.org		54	N/A	N/A	\$55/year
Audio, Video and Computer Analysis	Digital Evidence / Video - Certified Forensic Video Technician	Law Enforcement and Emergency Services Video Association (LEVA)	www.leva.org		267	N/A	N/A	\$55/year
	Evidence Handling	International Association for Property and Evidence	www.IAPE.org		1,400+; Outside F.S.S.P.	\$150	N/A	\$100
Firearms and ballistics	Firearms	Association of Firearm & Tool Mark Examiners	www.afte.org		116	N/A	\$250	\$25 every 5 years
Marks and Impressions	Tool Marks	Association of Firearm & Tool Mark Examiners	www.afte.org		46	N/A	\$250	\$25
Firearm Distance Determination	Gunshot Residue	Association of Firearm & Tool Mark Examiners	www.afte.org		39	N/A	\$250	\$25
Audio, Video and Computer Analysis	Digital Evidence / Computer Forensics - Digital Forensics Certified Practitioner and DFCA	Digital Forensics Certification Board	www.dfcb.org		178	\$250.00	\$100	

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Audio, Video and Computer Analysis	Digital Evidence / Computer Forensics - Certified Computer Examiner (CCE)	International Society of Forensic Computer Examiners	www.isfce.org		805	\$395	N/A	\$75
Audio, Video and Computer Analysis	Digital Evidence / Computer Forensics - Certified Digital Forensic Examiner (CDFE), Certified Digital Media Collector (CDMC), Certified Computer Crime Investigator (CCCI)	DOD Cyber Crime Center	www.dc3.mil/dcita/dcit aCertification.php		Training source			
Audio, Video and Computer Analysis	Digital Evidence / Computer Forensics - Certified Forensic Computer Examiner (CFCE)	International Association of Computer Investigative Specialists	www.iacis.com	FSAB	1,963	N/A	w/ training (\$2795) wo/ training (\$750)	\$50
Audio, Video and Computer Analysis	Digital Evidence / Computer Forensics - Certified Advanced Windows Forensic Examiner (CAWFE)	International Association of Computer Investigative Specialists	www.iacis.com		26	N/A	w/ training (\$1495) wo/ training (\$750)	\$50
Audio, Video and Computer Analysis	Digital Evidence / Mobile Devices - Certified Mobile Device Examiner (CMDE)	International Association of Computer Investigative Specialists	www.iacis.com			N/A	w/ training (\$1495) wo/ training (\$750)	\$50
Audio, Video and Computer Analysis	Digital Evidence / Mobile Devices - Advanced	Global Information Assurance Certification	www.giac.org	ANSI	GOAC # certified is not available, but 80,079	N/A	w/training (\$1,149) wo/training (\$659)	\$399

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	Smartphone Forensics (GASF)				certifications granted			
Audio, Video and Computer Analysis	Digital Evidence / Computer Forensics - Certified Forensic Analyst, Certified Forensic Examiner, Reverse Engineering Malware, many others	Global Information Assurance Certification	www.giac.org	ANSI	GOAC # certified is not available, but 80,079 certifications granted	N/A	w/training (\$1,149) wo/training (\$659)	\$399
	Forensic Engineering	International Board of Forensic Engineering Sciences	www.iifes.org	FSAB	16; Outside of FSSP	\$300	N/A	\$50
	Forensic Engineering	National Academy of Forensic Engineers (NAFE)	www.nafe.org	Council of Engineering and Scientific Specialty	Outside of FSSP (313 Board Certified)	\$125	N/A	\$200 - \$300
	Civil Engineering	American Society of Civil Engineers (ASCE)	www.asce.org	ANSI	Outside of FSSP			
Toxicology	Forensic Toxicology	American Board of Forensic Toxicology	www.abft.org	FSAB	410	\$150	N/A	\$100
Anthropology	Forensic Anthropology	American Board of Forensic Anthropology	www.theabfa.org	FSAB	79	\$250	\$300	\$100 Annual Dues only
	Forensic Psychology	American Board of Forensic Psychology	www.abfp.com		299: (Outside of F.S.S.P.)	\$125	\$450	N/A

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	Forensic Psychiatry	American College of Forensic Psychiatry	www.forensicpsychonline.com		Outside F.S. Service Practitioners			
	Forensic Psychiatry	American Board of Psychiatry and Neurology	www.abpn.com	American Board of Medical Specialties	Outside F.S. Service Practitioners	\$700	\$2,300	\$150
	Forensic Nursing	International Association of Forensic Nurses	www.forensicnurses.org		1500+; (Outside of F.S.S.P.)	\$275/IAFN Member; \$400/Non- Member	\$400/IAFN Member; \$525/Non- Member	\$116
Odontology	Odontology - Bite Mark	American Board of Forensic Odontology	www.abfo.org	FSAB	160	\$400	\$1,000	\$230

APPENDIX B: Forensic Discipline/Subdisciplines without Certification Bodies

ILAC Guide 19 Categories of Testing	Discipline/Sub-Discipline
Audio, Video and Computer Analysis	Digital Evidence - Audio
Firearms and Toolmarks	Serial # Restoration
Firearms and Toolmarks	Trajectory Reconstruction
Marks and Impression	Impression - Tire tread
Trace Evidence	Glass
Trace Evidence	Explosives
Trace Evidence	Soils
Trace Evidence	Botanical Material
Trace Evidence	Gun Shot Residue
Trace Evidence	Lubricants

APPENDIX C: Comparison of Certification Body Requirements

Requirement	CB#1	CB#2	CB#3
Degree		X	X
Experience	X	X	X
Written Exam (initial)	X	X	X
Practical Exam (initial)	X	X	X
Oral Demonstration (initial)	X*		X**
Continuing Education	X	X	X
Retesting	X		X

* transcript or moot court

** specific to practical exam

APPENDIX D. Additional Considerations for Implementation

Additional Considerations For Implementation Include:

- Certifying bodies have varying fee schedules.
- Educational programs or preparatory courses should be developed to help practitioners prepare for certification examinations.
- Certification bodies will need to develop programs or policies to address practitioners with more than one certification (i.e., continuing education credit hours could be used towards multiple recertifications).
- There may be human resource challenges such as revising position descriptions, certifying existing employees, and modifying employment policies and procedures. Policies and procedures need to be in place if practitioners are unsuccessful in obtaining certification or do not meet the minimum certification requirements. Further, policies and procedures need to be developed to address those practitioners that can immediately achieve certification versus those that will have to wait for a certification program to be developed, particularly if incentives are being offered.
- Licensure is not a substitution for certification, primarily because it is only recognized at the state level.
- A state or local government or agency may attempt to substitute their own certification that is not accredited.
- Budgetary constraints may impact the ability to obtain and maintain certification