



NATIONAL COMMISSION ON FORENSIC SCIENCE

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

Views of the Commission Accreditation and Recognition of Forensic Science Certification Bodies

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| 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, forensic units, 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 ten 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 International Accreditation Forum (IAF) Multilateral Recognition 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 over 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) 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).

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 fifty practitioners.¹ 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, accreditation of forensic science certification bodies does not exist. The Forensic Specialties Accreditation Board (FSAB) was created in 2000 as a voluntary program to assess, recognize 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. American National Standards Institute (ANSI) is the only accrediting body located in the United States recognized through IAF MLA signatory status as meeting ISO/IEC 17011 that offers accreditation under ISO/IEC 17024. Accreditation under ISO/IEC 17024 ensures 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

¹ Swift, Roy A. "Increasing the Credibility and Quality of Certification through Accreditation." Presentation to the Accreditation Certification IWG. May 5, 2011

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 FSSP's may be impacted in that the direct and indirect cost to the certifying bodies may be passed onto the individuals seeking certification or their parent organizations. In addition, the FSSPs will have to implement new policies and procedures if practitioners are not successful in obtaining 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.

An accredited forensic science certification body consisting of paid staff assures the forensic science practitioner that the certification process meets international standards for application, examination, surveillance and re-certification.

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 |
| 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 & 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 | | 1041 | \$200/ IAI Members; \$300/Non- Members | n/a | Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members |
| Fingerprints | Ten print fingerprints | International Association for Identification | www.theiai.org | | 117 | \$200/ IAI Members; \$300/Non- Members | n/a | Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members |

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|-----------------------------------------------|-----------------------------------------|-------------------------------------------------------|-----------------------------------|-------------------------------------|---------------------------------------------------------------------|-------------------------------------------------|----------------------------|-----------------------------------------------------------------------|
| Scene Investigation | Blood stain pattern | International Association for Identification | www.theiai.org | | 39 | \$200/ IAI Members; \$300/Non- Members | n/a | Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members |
| Scene Investigation | Crime scene-4 levels | International Association for Identification | www.theiai.org | | 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 Video | International Association for Identification | www.theiai.org | | 23 | \$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 | | 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 | | 57 | \$200/ IAI Members; \$300/Non- Members | n/a | Recert every 5 yrs: \$200/IAI Members; \$300/Non- Members |
| Scene Investigation | Evidence | Evidence Photographers International Council | www.evidencephotog raphers.com | | 55 | \$300 | n/a | \$139 |
| Marks and Impressions | Footwear | International Association of Identification | www.theiai.org | | 105 | \$200/ IAI Members; \$300/Non- Members | \$300 | \$200/IAI Members; \$300/Non- Members |

| 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 |
|---------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------|-------------------------------------|---------------------------------------------------------------------|-------------------------------------------------|----------------------------|---------------------------------------------------|
| Audio, Video and Computer Analysis | Video | International Association of Identification | www.theiai.org | | 23 | \$200/ IAI Members; \$300/Non- Members | \$300 | \$200/IAI Members; \$300/Non- Members |
| Audio, Video and Computer Analysis | Forensic Artist | International Association of Identification | www.theiai.org | | 34: Outside F.S. Service Practitioners | \$200/ IAI Members; \$300/Non- Members | \$300 | \$200/IAI Members; \$300/Non- Members |
| Marks and Impressions | Footwear/ Fingerprints | Canadian Identification society | www.cis-sci.ca | | NA for U.S.A. | \$150 | n/a | \$150 |
| | Evidence Handling | International Association of Property and Evidence | www.IAPE.org | | 1400+; Outside F.S. Service Provider | \$150 | n/a | \$100.00 |
| Firearms and ballistics | Firearms | Association of Firearms & Toolmarks Examiners | www.afte.org | | 116 | n/a | \$250 | \$25 |
| Marks and Impressions | Toolmarks | Association of Firearms & Toolmarks Examiners | www.afte.org | | 46 | n/a | \$250 | \$25 |
| | Gunshot Residue | Association of Firearms & Toolmarks Examiners | www.afte.org | | 39 | n/a | \$250 | \$25 |
| Audio, Video and Computer Analysis | Digital Evidence - Digital Forensics Certified Practitioner and DFCA | Digital Forensics Computer Board | www.dfcb.org | | 178 | \$250.00 | \$100 | |

| 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 |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------|---------------------------------------------------|
| Audio, Video and Computer Analysis | Digital Evidence - 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 - Certified Digital Forensic Examiner (CDFE), Certified Digital Media Collector (CDMC), Certified Computer Crime Investigator (CCCI) | DOD Cyber Crime Center | www.dc3.mil/dcita/d citaCertification.php | | Training source | | | |
| Audio, Video and Computer Analysis | Digital Evidence - Certified Forensic Computer Examiner (CFCE) | International Association of Computer Investigation Specialists | www.iacis.com | | 1963 | \$750 | n/a | \$150 |
| Audio, Video and Computer Analysis | Digital Evidence - Certified Electronic Evidence Collection Specialist Certification (CEECS) | International Association of Computer Investigation Specialists | www.iacis.com | | 26 | \$750 | n/a | \$100 |
| Audio, Video and Computer Analysis | Digital Evidence - 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 Institute of Forensic Engineering Sciences | www.iifes.org | FSAB | 16; Outside of F.S. Service Provider | \$300 | n/a | \$50 |

| 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 |
|-----------------------------------------------|-----------------------------------------|-----------------------------------------------------|---------------------------------|----------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|---------------------------------------------------|
| | Forensic Engineering | National Academy of Forensic Engineers (NAFE) | www.nafe.org | Council of Engineering and Scientific Specialty | Outside of F.S. Service Provider (313 Board Certified) | \$125 | n/a | \$200 - \$300 |
| | Civil Engineering | American Society of Civil Engineers (ASCE) | www.asce.org | ANSI | Outside of F.S. Service Provider | | | |
| 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. Service Provider) | \$125 | \$450 | n/a |
| | Forensic Psychiatry | American College of Forensic Psychiatry | www.forensicpsycho nline.com | | Outside F.S. Service Practitioners | | | |
| | Forensic Psychiatry | American Board of Psychiatry & 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. Service Provider) | \$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

| Guide 19 Categories of Testing | Discipline/Sub- discipline |
|------------------------------------|----------------------------|
| Audio, Video and Computer Analysis | Digital Evidence - Audio |
| Audio, Video and Computer Analysis | Digital Evidence - Video |
| Firearms and Toolmarks | Serial # Restoration |
| Firearms and Toolmarks | Trajectory Reconstruction |
| Marks and Impression | Impression - Tire tread |
| Scene Investigation | Photographer |
| 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 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.