OSAC 2025-N-0002
Standard for Qualifications for Forensic Anthropology Practitioners

Forensic Anthropology Subcommittee
Medicine Scientific Area Committee (SAC)
Organization of Scientific Area Committees (OSAC) for Forensic Science

OSAC Proposed Standard

OSAC 2025-N-0002
Standard for Qualifications for Forensic Anthropology Practitioners

Prepared by
Forensic Anthropology Subcommittee
Version: 2.0
May 2025

Disclaimer:

This OSAC Proposed Standard was written by the Forensic Anthropology Subcommittee of the Organization of Scientific Area Committees (OSAC) for Forensic Science following a process that includes an open comment period. This Proposed Standard will be submitted to a standard developing organization and is subject to change.

There may be references in an OSAC Proposed Standard to other publications under development by OSAC. The information in the Proposed Standard and underlying concepts and methodologies may be used by the forensic science community before the completion of such companion publications.

Any identification of commercial equipment, instruments, or materials in the Proposed Standard is not a recommendation or endorsement by the U.S. Government and does not imply that the equipment, instruments, or materials are necessarily the best available for the purpose.

Foreword

Anthropology is a broad discipline dedicated to the study of humanity in both the past and present. Forensic anthropology is a specialized subdiscipline focused on the search, recovery, and analysis of human remains within the context of the medicolegal death investigation system.

Currently, uniform qualifications do not exist for forensic anthropologists, leading to variability in competency to practice. This standard was developed to provide minimum qualifications for forensic anthropology education, training, certification, ethics, and professionalism in the United States of America.

This document supplements ASTM E2917-24 Standard Practice for Forensic Science Practitioner Training, Continuing Education, and Professional Development Programs. This standard is of value to 1) forensic anthropology students and practitioners as they acquire and maintain their knowledge, skills, and certification; 2) institutions and/or organizations (within and outside of academia) in their development of student and professional educational, training, and certification programs; and 3) forensic anthropology service providers and consumers in their evaluation of forensic anthropology competency.

Keywords: *forensic anthropology; education; training; qualifications*

Table of Contents

Standard for Qualifications for Forensic Anthropology Practitioners

1 Scope

This standard describes the minimum qualifications for forensic anthropologists in professional practice, including education, training, experience, certification, ethics, and professionalism in the United States of America.

This standard does not prescribe or endorse any specific educational curriculum or training program, nor does it supersede any requirements from certification or licensing bodies.

2 Normative References

The following reference is indispensable for the application of the standard.
ASTM Standard E2917-24, *Standard Practice for Forensic Science Practitioner Training, Continuing Education, and Professional Development Programs.*

3 Terms and Definitions

For purposes of this document, the following terms and definitions apply.

3.1
chain of custody
A chronological record of the handling and storage of an item from its point of collection to its final return or disposal.

3.2
competency
A forensic science practitioner's acquisition and demonstration of necessary specialized knowledge, technical skills, and abilities to successfully perform examinations and analyses prior to independent practice.

3.3
continuing education
The formal mechanism through which a forensic science practitioner increases or updates knowledge, skills, or abilities (KSAs), reinforces knowledge or learns of the latest research, developments, or technology related to their profession.

3.4
education
Formal academic coursework from an accredited school, college, or university, that counts towards an academic degree.

3.5

ethical conduct

Behavior that conforms to relevant published standards of professional conduct (e.g., follows applicable Codes of Ethics for the discipline).

3.6

experience

Direct observation of and participation in the practice of a discipline.

3.7

expertise

Knowledge, skills, and abilities to perform tasks with minimum competency or greater.

3.8

forensic science service provider (FSSP)

An organization or individual that provides forensic science services.

3.9

Fourier-transform infrared spectroscopy (FTIR)

A technique used to obtain an infrared spectrum from a solid, liquid, or gas emission or absorption.

3.10

human remains

Human soft, osseous and dental tissues, and/or samples thereof (e.g., hair, fingernails, cuttings for DNA or isotopic testing, extracts derived from a primary source).

3.11

internship

An in-depth educational or training program that offers a period of supervised practical experience in a forensic science setting.

3.12

medicolegal authority

A person or agency charged by law with conducting death investigations for the purpose of certifying deaths (e.g., Coroners, Medical Examiners, Justices of the Peace).

3.13

professional development

The mechanism through which a forensic science practitioner improves personal skills, successfully handles increasing responsibility, makes contributions to the profession, and reinforces ethical behaviors.

3.14

proficiency testing

Evaluation of participant performance against pre-established criteria using inter-laboratory comparisons.

3.15

qualifications

The combined education, training, and experience of an individual.

3.16

quality management

The coordinated activities to direct and control an organization concerning quality. Direction and control with regard to quality generally include the establishment of a quality policy and quality objectives, quality planning, quality control, quality assurance, and quality improvement.

3.17

Stable isotope analysis

Identification and measurement of stable isotopes (alternative stable forms of organic and inorganic elements with different molecular weights) used to reconstruct dietary and migration patterning.

3.18

training

Formal, structured process of teaching and assessment outside of academic coursework, often at a laboratory or other non-educational institution, but also includes continuing education opportunities. Often results in a certificate or formal documentation of completion.

3.19

technical record

All pertinent items created or used to support findings of a forensic anthropological examination. Technical records may be field and/or laboratory notes documenting tests undertaken, photographs and medical imaging forming the basis for analysis or technical conclusions, test records, antemortem medical and dental records, and other documentation (e.g., bench notes, inventories, observations, diagrams, sketches, charts).

3.20

X-ray diffraction (XRD)

A technique using X-rays to determine elemental composition and phases of a material.

3.21

X-ray fluorescence (XRF)

A technique using X-rays to determine elemental composition of a material.

4 Qualifications

Forensic anthropologists shall have discipline-specific expertise to conduct forensic anthropological examinations. The following represent minimum qualifications for forensic anthropology education, training and experience, certification, continuing education and professional development, and adherence to ethical and other professional standards.

4.1.1 Education

Forensic anthropologists shall have a graduate degree in anthropology from an accredited university. This degree should be a Ph.D. with an educational curriculum that includes a broad foundation in anthropology and a focus in forensic anthropology. The discipline of forensic anthropology does not currently have a standardized curriculum comparable to other forensic specialties such as medicine, dentistry, genetics, or toxicology. Therefore, the academic transcripts of forensic anthropologists are variable. To ensure educational programs are meeting the needs of future forensic anthropology practitioners, the competency areas outlined in Annex A shall be addressed in formal coursework, regardless of course title**.** If some competencies are not acquired through formal coursework, see Section 4.1.2.

4.1.2 Training and Experience

Forensic anthropologists shall supplement their education with discipline-specific training and experience, as outlined in ASTM Standard E2917 (“Standard Practice for Forensic Science Practitioner Training, Continuing Education, and Professional Development Programs”).

Forensic training may be obtained through internships, postgraduate fellowships, continuing education coursework, and other types of professional mentoring (see Annex B).

Experience is an important component of building and maintaining competency as a forensic anthropology practitioner. Experience shall include both practical and theoretical aspects of the discipline. For example, it is recommended that forensic anthropologists have experience working with medicolegal authorities, including observation of casework in a medicolegal setting (e.g., medical examiner/coroner facility) and observation of courtroom testimony when possible and appropriate.

Although the length and depth of training and experience are dependent on the scope and setting of work to be performed, they shall focus on addressing the competency areas listed in Annex A.

All training and experience should be from accredited educational and training programs and supervised by a certified forensic anthropologist, when possible. Forensic anthropology practitioners shall demonstrate and document training and related experiences. Training and experiences should be documented in a training log verified by a subject matter expert.

4.1.3 Certification

In addition to the minimum qualifications established in Sections 4.1.1 and 4.1.2, forensic anthropology practitioners shall obtain certification from an accredited body that assesses expertise and competence in forensic anthropology. Certification is a necessary component of professional development, in part because it provides an objective means of demonstrating competence to practice. It is a key indicator to stakeholders (e.g., employers, medicolegal community, legal practitioners, families of decedents, and the public) that an individual is a competent practitioner in the area(s) in which they practice. It also mandates adherence to a code of ethics and a recertification program.

Certification assesses competency to practice. Competency in a discipline is assessed through the demonstration of the requisite knowledge, skills, and abilities in areas specific to that discipline (see Annex A). It is typically established by passing certification and/or competency exams.

4.1.4 Continuing Education and Professional Development

All forensic anthropology practitioners shall remain current in their discipline through continuing education and professional developmental activities, with the goals of maintaining competency and broadening their knowledge, skills, and abilities. These activities are available in multiple forms and should include professional involvement in formal and/or informal programs and activities, such as:

- Research, including publication in peer-reviewed volumes and/or presentation at professional meetings
- Teaching of forensic anthropology, forensic science, and associated topics (e.g., archaeology, anatomy, osteology, introduction to the forensic sciences)
- Attendance and active participation at professional meetings, seminars, and workshops
- Professional service, including participation in professional forensic committees in the discipline
- International initiatives in forensic anthropology
- Short courses or other continuing education opportunities at an advanced educational/training level
- Presentation of invited lectures
- Visiting scientist or scholar positions
- Internships/fellowships/postdocs
- Mentoring and peer-review

- Reading peer-reviewed journals containing forensic anthropology research
- Participation in communities of practice in forensic anthropology.

All continuing education and professional development shall be documented.

4.1.5 Ethics and Professionalism

Forensic anthropologists, as forensic science service providers (FSSPs), shall conform to a code of professional responsibility. This includes strict adherence to a code of ethical conduct. As forensic scientists, forensic anthropologists shall adhere to the National Code of Professional Responsibility for Forensic Science and Forensic Medicine Practitioners (see Annex C for website address). Forensic anthropologists who are members of professional forensic science organizations shall also conform to their codes of ethics.

5 Documentation of Qualifications

Forensic anthropology practitioners shall maintain documentation of all qualifications, including education, training, certification, and continuing education and professional development.

Forensic anthropology qualifications shall also be documented within Quality Management programs governing forensic anthropologists' work, including proficiency testing, competency testing, and memoranda indicating training completion and/or ability to perform supervised/independent casework. Developing and maintaining SOPs discussing training and proficiency will assist with this process.

6 Unacceptable Practices

Forensic anthropology practitioners shall not:

- misrepresent education, training, qualifications, or experience
- fail to maintain certification in the discipline
- fail to seek/maintain current and accurate records of education, training, or certification in the discipline
- violate codes of ethical conduct and professional responsibility for the practice of forensic science.

Annex A

Competency Areas for Forensic Anthropology Practice

Forensic anthropologists, at a minimum, shall be competent in the following areas:

- Human osteology, musculoskeletal anatomy, comparative osteology
- Bone biology, human variation, skeletal growth and development
- Laboratory methods for processing human remains (e.g., maceration)
- Determining medicolegal significance of remains
- Evaluation of commingled assemblages
- Estimation of the biological profile
- Personal identification comparative methodology (e.g., evaluating medical and/or dental imaging)
- Skeletal trauma and the role of bone biomechanics in trauma interpretation
- Evaluation of microscopic, histological representations of bone
- Evaluation of pathological conditions and anomalies of the skeleton
- Taphonomic modifications and estimating the postmortem interval/time since death
- Field search, recovery, and scene and evidence documentation and handling
- Evidence handling (e.g., chain of custody) and documentation (e.g., creation and management of technical records)
- Professional standards and ethical conduct in forensic anthropology
- Medicolegal system, including legal terminology, expert witness testimony, relevant court rulings, and familiarity with medicolegal authorities and jurisdictions
- Statistics (univariate and multivariate)

Annex B

Recommended Areas of Education, Training, and Experience

Forensic anthropologists are encouraged to have education, training, and/or experience in the following areas:

- General knowledge of forensic science disciplines and their relevance to and impact on case analysis
- Bone histology (e.g., sampling and preparation) and light microscopy
- Biomolecular and chemical methods of skeletal analysis (e.g., XRF, XRD, FTIR, stable isotope, DNA)
- Bone and cartilage tool mark characteristics for classification
- Photography (e.g., effective lighting/exposure, orientation/distance, and scale/case number placement)
- Laboratory management
- Quality management including quality assurance
- Laboratory accreditation
- Geographic Information System (GIS)
- Unidentified decedent databases (e.g., NamUs, NCIC, NCMEC)
- Human Factors (e.g., cognitive bias and its effect on forensic anthropology).

Annex C

Informative References

1) Bartelink EJ, Boyd, DC, France D, Pokines JT, Prince Zinni D. The American Board of Forensic Anthropology turns 40: historical perspectives and current trends in certification for forensic anthropology. Forensic Anthropology 2020;3(2):103-111.

2) Bolhofner KL, Seidel AC. Expertise and the expert witness: contemporary educational foundations of forensic anthropology. In: Fulginiti LC, Hartnett-McCann K, Galloway A, editors. Forensic anthropology and the United States judicial system. Chichester UK: Wiley, 2019, pp. 71-88.

3) Boyd DC, Bartelink EJ, Passalacqua NV, Pokines JT, Tersigni-Tarrant MT. The American Board of Forensic Anthropology's certification program. Forensic Anthropology 2020;3(2):112-119.

4) Fleischman JM, Pierce ML, Crowder CM. Transparency in forensic anthropology through the implementation of quality assurance practices. In: Fulginiti LC, Hartnett-McCann K, Galloway A, editors. Forensic anthropology and the United States judicial system. Chichester UK: Wiley, 2019, pp. 53-68.

5) Galloway A. Simmons TL. Education in forensic anthropology: appraisal and outlook. J Forensic Sci 1997;42:796-801.

6) Hartley S, Winburn AP. A hierarchy of expert performance as applied to forensic anthropology. J Forensic Sci 2021;66:1617-1626.

7) Langley N, Tersigni-Tarrant MT. Core competencies in forensic anthropology: a framework for education, training, and practice. Forensic Anthropology 2020;3(2):76-81.

8) Langley N, Tersigni-Tarrant MT. Education, training, and competencies in forensic anthropology. Forensic Anthropology 2020;3(2):65.

9) Love JC, Langley N. Exploring educational needs beyond technical competency: laboratory management, court testimony, and vicarious trauma. Forensic Anthropology 2020;3(2):82-90.

10) Nakhaeizadeh S, Hanson I, Dozzie N. The power of contextual effects in forensic anthropology: a study of biasability in the visual interpretations of trauma analysis on skeletal remains. J Forensic Sci 2014;59(5):1177-1183.

11) Nakhaeizadeh S, Morgan RM, Rando C, Dror IE. Cascading bias of initial exposure to information at the crime scene to the subsequent evaluation of skeletal remains. J

Forensic Sci 2018;63(2):403–11.

12) National Commission on Forensic Science. National Code of Professional Responsibility for Forensic Science and Forensic Medicine Service Providers. Recommendation to the Attorney General, March 22, 2016. https://www.justice.gov/ncfs/file/839711/dl Accessed 05 July 2024.

13) Passalacqua NV, Langley NR, Pilloud MA, Tersigni-Tarrant M-T A. Evaluating expertise in forensic anthropology. J Forensic Sci 2023; 68(4):1111-1120.

14) Passalacqua NV, Pilloud MA. Education and training in forensic anthropology. Forensic Anthropology 2020;3(2):66-75.

15) Passalacqua NV, Pilloud MA, Congram D. Forensic anthropology as a discipline. Biology 2021;10(8):691-708. https://doi.org/10.3390/biology10080691.

16) Passalacqua NV, Mulholland S, Pilloud MA, Klales A. The value of forensic anthropology in undergraduate anthropology programs. American Anthropologist 2021;123(3):603-616. DOI: 10.1111/aman.13638.

17) Passalacqua NV, Pilloud MA. Ethics and professionalism in forensic anthropology. London: Elsevier, Academic Press, 2018.

18) Pinto DC, Pierce ML, Wiersema JM. A model for forensic anthropology training. Forensic Anthropology 2020;3(2):91-96.