Archaeological Science and Lab Methods Training Course

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Archaeological Science and Lab Methods Training Course is designed to equip professionals, researchers, and students with the latest scientific techniques in archaeology. This course bridges traditional excavation practices with modern analytical methods, fostering a comprehensive understanding of artifact analysis, dating techniques, and laboratory methodologies. Participants will gain hands-on experience in state-of-the-art laboratories, utilizing advanced tools for materials characterization, geochemical analysis, and digital documentation, ensuring they are well-prepared to contribute to high-impact archaeological research and cultural heritage preservation.

In an era where technological advancements drive archaeological discoveries, mastering laboratory techniques is essential. This course emphasizes precision, scientific rigor, and practical application, offering a unique combination of theoretical foundations, laboratory experimentation, and real-world case studies. By integrating trending methods such as isotopic analysis, 3D scanning, and bioarchaeology, participants will develop critical skills for modern archaeological investigation, positioning themselves at the forefront of the field and advancing the preservation and interpretation of global cultural heritage.

Programme Curriculum

Archaeological Science and Lab Methods Training Course

Introduction

Archaeological Science and Lab Methods Training Course is designed to equip professionals, researchers, and students with the latest scientific techniques in archaeology. This course bridges traditional excavation practices with modern analytical methods, fostering a comprehensive understanding of artifact analysis, dating techniques, and laboratory methodologies. Participants will gain hands-on experience in state-of-the-art

laboratories, utilizing advanced tools for materials characterization, geochemical analysis, and digital documentation, ensuring they are well-prepared to contribute to high-impact archaeological research and cultural heritage preservation.

In an era where technological advancements drive archaeological discoveries, mastering laboratory techniques is essential. This course emphasizes precision, scientific rigor, and practical application, offering a unique combination of theoretical foundations, laboratory experimentation, and real-world case studies. By integrating trending methods such as isotopic analysis, 3D scanning, and bioarchaeology, participants will develop critical skills for modern archaeological investigation, positioning themselves at the forefront of the field and advancing the preservation and interpretation of global cultural heritage.

Course Duration

5 days

Course Objectives

1. Master advanced archaeological laboratory techniques for artifact and material analysis.
2. Understand chronometric dating methods including radiocarbon, dendrochronology, and luminescence dating.
3. Apply geochemical and isotopic analysis for provenance and migration studies.
4. Develop skills in 3D scanning and digital documentation for archaeological artifacts.
5. Learn bioarchaeological methods for human and faunal remains analysis.
6. Gain proficiency in microscopy and imaging technologies for microartifact examination.
7. Conduct soil and sediment analysis for environmental reconstruction.
8. Apply statistical and computational models for archaeological data interpretation.
9. Understand conservation and preservation techniques for lab-handled artifacts.
10. Execute laboratory quality control and safety protocols.
11. Integrate GIS and spatial analysis in archaeological investigations.
12. Evaluate archaeological case studies using multidisciplinary approaches.
13. Prepare research outputs with scientific reporting and publication standards.

Target Audience

1. Archaeology graduates and postgraduates
2. Museum and heritage professionals
3. Field archaeologists and excavation teams
4. Laboratory technicians and research assistants
5. Cultural resource management (CRM) specialists
6. Students in anthropology and history programs
7. Conservation and preservation professionals
8. Academics and researchers in archaeological science

Course Modules

Module 1: Introduction to Archaeological Science

- Overview of archaeological laboratory methods
- Principles of archaeological analysis
- Ethical considerations in archaeology
- Interdisciplinary approaches in research

- **Case Study:** Laboratory analysis of Bronze Age artifacts

Module 2: Chronometric Dating Techniques

- Radiocarbon dating and calibration
- Dendrochronology and tree-ring analysis
- Optically stimulated luminescence (OSL) dating
- Relative vs. absolute dating methods
- **Case Study:** Dating prehistoric settlement layers

Module 3: Artifact and Material Analysis

- Ceramic and lithic analysis techniques
- Metal and alloy characterization
- Organic residue analysis
- Microscopy for artifact study
- **Case Study:** Chemical profiling of ancient pottery

Module 4: Geochemical and Isotopic Studies

- Stable isotope analysis in archaeology
- Trace element analysis for provenance studies
- Mass spectrometry applications
- Sample preparation and handling
- **Case Study:** Migration patterns from isotopic data

Module 5: Bioarchaeology and Human Remains

- Skeletal analysis techniques
- Pathology and paleopathology
- DNA extraction and genetic studies
- Forensic archaeology applications
- **Case Study:** Health and diet reconstruction from skeletal remains

Module 6: Soil, Sediment, and Environmental Archaeology

- Soil micromorphology techniques
- Pollen and phytolith analysis
- Geoarchaeological sampling methods
- Reconstructing past landscapes
- **Case Study:** Environmental reconstruction of ancient settlements

Module 7: Digital Documentation and 3D Archaeology

- Photogrammetry and 3D scanning
- Digital artifact reconstruction
- GIS mapping and spatial data analysis
- Virtual heritage applications
- **Case Study:** 3D modeling of historical sites

Module 8: Laboratory Best Practices and Data Management

- Quality control and laboratory safety

- Sample storage and preservation
- Data recording and interpretation
- Scientific reporting and publication standards
- **Case Study:** Standardizing lab procedures for multi-site research

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com