



### **Advanced Osteological Bioarchaeological Techniques and Analysis in the Prehispanic Pyramid of Huallamarca (Lima, Perú)**

#### **1. General Information**

The **Sanisera Archaeology Institute for International Field Schools** offers an annual international archaeology program. Since then it has organized courses **for students who come from all over the world to study abroad and who are interested in anthropology, bioarchaeology, osteology or archaeology.**

The labwork focuses on the in-depth analysis of human skeletal remains recovered from **The Pyramid** located in the town of Lima (Peru) dated between the **11th - 15th centuries AD**. The goal is to use **advanced osteological techniques** to understand the lifestyle of the people who lived on this site.

The Inca building it is a truncated pyramid made up of three overlapping articulated platforms whose access was through a side ramp located on the northeast side of the monument. Regarding its occupational sequence, three discontinuous periods of occupation are observed:

- At the end of the **Early Horizon** (1000 BC - 100 BC) the pyramid was built as a local temple to carry out ritual work, however, with the continuous formation of new urban settlements of the Lima culture in the Valley, it was progressively displaced until its disused as a religious building.
- The second phase dates from the **Late Intermediate** (600 AD and 1200 AD) corresponding to **Ichma period**. They present the cultural material funerary contexts assigned to the "Early Ichma" style, based on burials in the form of funerary bundles.
- Finally, with the Inca presence, **Late Horizon** (1476-1532), the northeast platform presents storage spaces for food and textiles, deposited in large ceramic jars.

**The 598 skulls were dated** based on their morphology and typology once compared with other local cultures. In this way it is estimated that its wide range of antiquity is composed **between 1,100 and 1400 AD**.

Regarding the skeletal remains in the collection are unbeatable for the student because they are in **an excellent state of preservation** and also belong to articulated, practically complete individuals, including deformed skulls, individuals partially mummified and individuals from funerary bundles.

Bioanthropology internships will serve to complete the ongoing osteological research study.

Participants **will learn the techniques of analyzing and recording information from human skeletal remains in an archaeological context.** In this lab-based course, both lecture and experiential learning will be used to enable students to gain confidence in the identification and analysis of various skeletal conditions.

We will cover skills in basic demographics such as the **techniques to determine age and sex of a skeleton, but will also progress to more advanced methodologies in osteological analysis.** Students will learn skills such as: **correctly measuring and recording skeletal elements according to set international standards , distinguishing between pathological and non- pathological bone and assessing patterns in pathological lesions, identifying marks on the skeleton that indicate how muscles were used during the person's life (including determining left or right handedness), and assessing nutritional status from bones and teeth.** Additionally, participants will learn how to bring these different sources of information together to re-create the biological life history of the individuals buried at this site.

The bone collection is deposited in the **Museum of the site of Huallamarca, Lima** (Peru). In this museum, the students will carry out the practices of this bioarchaeology course.

## **2. What you will learn**

### *2.1. In the Laboratory*

- Complete osteological analysis of an individual funerary unit
- Assessment of disarticulated remains and computation of minimum number of individuals
- Analyse individuals with intentional deformed skulls.
- Analyse individuals partially mummified.
- Application of standard techniques of bone measurement, age estimation, sex estimation, classification of dental pathology and tooth wear
- Identification of fragmentary bones
- Utilization of anatomical terminology to describe and discuss skeletal elements
- Recording osteological information on complex forms
- Recognition of non-metric traits and pathological bone

### *2.2. Theory*

- Development and application of osteological methods
- Identifying trauma in archaeological bone
- Challenges in paleodemography and paleoepidemiology
- Estimating ancestry of human skeletal remains

## **3. Directed at**

This Sanisera Field School course does not include excavation, but **centers exclusively on the study and teaching of osteology using the remains recovered from the**

**prehispanic pyramid of Huallamarca, Lima, Perú, dated between the 11th – 15th centuriesAD.**

Participants will learn to draw conclusions and reconstruct aspects of the population's demographics such as pathologies, illnesses, etc. Because this course is specifically centered on biological anthropological concepts, this course is limited to 8 participants in order to best assimilate and apply anthropological concepts.

**Previous knowledge or experience in archaeology or computer systems is not required.**

#### **4. Field School life & language**

The fieldwork runs 5 hours a day with time dedicated to the study of human osteology by the analysis of the skeletal remains. For every seven course days there are two days off.

**The course is taught in English.**

#### **5. Certificates**

At the end of the Field Program, students will receive a certificate of participation stating the hours and activities of the course.

Participants that perform exceedingly well in the course may receive a letter of recommendation from our organization upon request.

#### **6. Sessions & Cost**

<b>Sessions</b>	<b>Dates</b>	<b>Cost</b>
<b>Session #1</b>	<b>2023   September 08 - September 22</b>	<b>\$ 2850</b>
<b>Session #2</b>	<b>2023   October 13 - October 27</b>	<b>\$ 2850</b>

#### **7. Course fee**

- Course tuition.
- Accident insurance at the Archaeological Museum of the pyramid of Huallamarca.
- Certificate of participation.
- Accommodation in the Student Residency of Lima, Perú very close to the museum and in one of the best districts of the city with high security and comfort.
- Free daily access to the Archaeological Museum of the pyramid of Huallamarca, place where the laboratory practices will be done.
- Scrupulous daily cleaning of the entire residence by professionals with hygienic products against Covid.
- Following the protection measures, the staff will ensure that the use of the mask covering the nose and mouth is mandatory throughout the day, whether during field work, laboratory activities or visits. In the common spaces of the residence it will

also be mandatory. If any participant does not follow these rules, they will be expelled from the course.

- Each participant upon arrival at the facilities will sign a responsible statement in accordance with the preventive measures of COVID and that in case of discomfort or symptoms that both he and the staff consider may be harmful to the rest of the participants, they must go to a medical assistance center to diagnose your condition.

**Airfare not included from the student home to/from Lima, Perú.**

**Meals are not included, although we will recommend some cafés and restaurants that do not exceed the average of 12 \$ /day in meals.**

**The visit to the famous site of Machu Picchu is recommended during the rest days of the course. Our teachers can help you organize the trip; however, the costs of the excursion are not included in the course fee.**

**Entry tickets to museums and historical buildings are not included either.**

## **8. Spaces available**

The course is limited to 8 participants per session. Reservations are only effective when payment of the registration fee is received. If for any reason the course is cancelled, payment is returned according to the field school refund policy.

## **9. Information and Reservations**

For more information, contact: Email: [info@archaeology.institute](mailto:info@archaeology.institute)

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