



**PONTIFICIA UNIVERSIDAD CATÓLICA DEL PERÚ - PUCP**  
**FIELD SCHOOL PROGRAM IN PERU**  
**BIOARCHAEOLOGY IN SAN JOSÉ DE MORO: HUMAN OSTEOLOGY PROGRAM**  
**BEGINNER**  
**2016 SEASON**

**GENERAL INFORMATION**

<b>Course:</b>	<b>Bioarchaeology in San José de Moro - Beginner</b>
<b>Location:</b>	Chepén, La Libertad, Perú
<b>Time period:</b>	One month/4 weeks
<b>Number of hours:</b>	180 hours.
<b>Professors:</b>	Prof. Elsa Tomasto (PUCP)
<b>Associated Professor:</b>	<b>Dr. Luis Jaime Castillo (PUCP)</b> Mag. Luis Muro (Stanford University)
<b>Professor's Assistants:</b>	Mellisa Lund Valle
<b>Coordinator:</b>	Julio Saldaña ( <i>jmsaldana@pucp.pe</i> )

**SUMMARY**

San Jose de Moro is a small village located on the Jequetepeque valley of the north coast of Peru. The modern town sits on top of one of the most important Pre Columbian cemeteries and ceremonial centers of the Moche or Mochica culture.

Since 1991, an international group of field archaeologists and bio archaeologists from PUCP and other universities from all around the world have been conducting excavations in San José de Moro and other sites of the region. These investigations, led by Dr. Luis Jaime Castillo, have recovered one of the largest collections of burials in Peru, which allow us to learn about the

customs and traditions of the Moches, as well as their political and social complexity. The most outstanding discoveries of San José de Moro Archaeological Program (SJMAP) have been a series of elite chamber tombs containing the remains of Mochica priestesses. In the monumental fortresses of Cerro Chepén and San Ildefonso, and in settlements and ceremonial centers dating from the same Late Moche period as SJM, research focuses on mapping and excavations of standing architecture, 3D modeling using advanced photogrammetry methods, paleoethnobotanical studies, etc.

As part of the PASJM Field School, the Bioarchaeology Field School students will live a unique experience of taking part of the research process at one of the most complex and important archaeological sites on the Peruvian north coast. The routine bioarchaeological work begins with the careful recording of skeletons at the field, but this is only the initial part of the process. A bioarchaeologist spends a lot of time at the laboratory, reconstructing, describing and recording the traits on the bones that will give information about the biological profile and osteobiography of each individual, in order to understand the whole population. According to this, in this field school bio-beginners will be trained on the basics of the discipline: a deep and thoroughly knowledge of the human skeleton. With a dynamic combination of laboratory practices and lectures, the students will learn the morphological characteristics and normal variation of each bone that forms the human skeleton and the traits that allow the construction of the biological profile. Also they will be acquainted with some of the methods that the discipline uses to construct osteobiographies. At the end of the season, and depending on the advances and needs of the excavation areas, the bio-beginners will participate as assistants in the recording and recovering of human remains.

## OUTCOMES

By the end of the program the BFS will be able to:

1. Carry out the preventive conservation of human bone
2. Identify complete and fragmentary elements of the human skeleton
3. Identify and describe the traits used to construct biological profiles from bones
4. Identify and describe trauma in human bone
5. Learn the basics of archaeological excavation and registering of burials in the field

## REQUIREMENTS

The program accepts graduate and undergraduate students in the fields of anthropology, archaeology, biological sciences, medicine and related fields. No previous field work experience or previous knowledge of human osteology is required. All pedagogic material will be provided by the program; nevertheless students can bring their textbooks and tools if they want to. A laptop will be needed for the preparation of reports. No knowledge of Spanish is required since all educational materials and activities will be conducted in English.

## METHODOLOGY

Since a thoroughly knowledge of the human skeleton is the basic of the discipline, the Bio-beginners will work with fragmentary human bones from the very start, participating actively in the preventive conservation of skeletons excavated in previous seasons or those that will be excavated in this one. These practices will be alternated with lectures that will explain the characteristics of each bone, its normal variation and diagnostic traits. With the dynamic combination of lectures and practice, in a short time the students will be ready to lay fragmentary skeletons in a correct anatomical position and perform reliable bone inventories.

By the second week a series of lectures referring to the construction of biological profiles and osteobiographies will be offered. The students will be organized in groups and three skeletons will be assigned to each group in order to describe the skeletons, establish their sex and age at death and identify some pathologies and anomalies. As a culmination of the learning process, each group will make the comparative analysis of the assigned funerary contexts, combining information from the bones with the field information that is kept in our archives. The information recovered and elaborated by the BFS students will become part of the archives and publications of the PASJM.

Evaluation will be continuous. There will be four quizzes orientated to the identification of bone fragments. Also a written report about the assigned funerary contexts will be required. The report should contain information regarding the state of preservation of the skeleton, biological profile, pathologies, traumas or other anomalies, archaeological context and an interpretation based on all this information. Since bioarchaeologists have to work in continuous dialogue with other specialists, the general attitude and ability to work under pressure will also be evaluated.

This learning experience will be guided by leading Peruvian professionals from the Pontificia Universidad Católica del Perú who have ample experience in archaeological and forensic investigation in Peru and also have participated in international forensic missions.

## SCHEDULE OF ACTIVITIES

The following schedule is a general guide. All the issues will be studied, but the order may vary, depending on the learning idiosyncrasy of the group.

Date	Quiz	Lecture	Field Trip / Others
Wed 1		General introduction Bone and related tissues The skull: parts, sutures, frontal, parietal bones, occipital, temporal bones Preventive conservation of human remains	
Thu 2		The sphenoid, small bones of the skull and face, maxilla, mandible and zygomatic bone	
Fri 3		The human dentition	
Sat 4	1		
Mon 6		The ribs and vertebrae, the sternum	
Tue 7		The scapular and pelvic girdles	
Wed 8			Visit to Cerro Chepén
Thu 9		The limbs	
Fri 10		Excavation techniques	
Sat 11	2		
Mon 13		Sex estimation, stature	
Tue 14		Age estimation	
Wed 15			Visit to San Ildefonso
Thu 16		Paleopathology and trauma	
Fri 17			
Sat 18	3		
Mon 20		Biological distance	
Tue 21		Forensic anthropology	
Wed 22		The study of mummies	
Thu 23		DNA, Chemical studies in bone	
Fri 24	4		Delivery of final reports
Mon 27		End of Field Season	

## EVALUATION

Final Grade for the Course is based on 100 points. Grading scale: A (90-100%); B (80-89%); C (70-79%); D (60-69%); F (0-59%).

Assignment	Point Value	Course Percentage
Quizzes	40	40%
Ability to work under pressure	10	10%
Final report	50	50%

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