

FORENSIC & BIOARCHAEOLOGY OF MEDIEVAL MASS GRAVES AT THE CHELVA MONASTERY (SPAIN)

Course ID: HIS 489

May 30-Jun 26, 2027

Academic Credits: 8 Semester Credit Units (Equivalent to 12 Quarter Units)

School of Record: Culver Stockton College

Excavations during the initial two weeks will take place inside two underground burial cists. The area is constricted and students with claustrophobia need to carefully consider participating in this field school.

DIRECTOR:

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PROGRAM DESCRIPTION

Across time and space, many civilizations bury their dead in collective, mass graves. From the ancient civilizations of Peru through Egypt and even the biblical Israelites, shared ancestral burial sites are common. This creates highly complex burial grounds where numerous human remains and associated artifacts are mixed together. The excavation, documentation and interpretation of such sites is highly complex, and this field school focuses on training students to study such sites.

This field school takes place at the site of the Medieval Monastery of Chelva, established in 1390 CE. According to written records, between 1551-1558 CE, the Viscounts of Chelva – important leaders of the Iberian period – were buried under the alter of the church. During the summer of 2025, excavations within the church revealed two large burial chambers with burials of multiple humans in each.

This field school has two parts. For the initial two weeks, students will learn how to excavate the complex burial sites, carefully documenting stratigraphy and spatial relationships between the many human remains. For the latter two weeks of the program, students will work at a lab,

carefully studying and documenting recovered human remains, carrying out the inventory and cataloguing of artifacts recovered from the burial cists. Students will learn how to identify each bone, to determine age, gender, possible cause of death and a range of other indicators within the forensic archaeology framework.

IMPORTANT DISCLAIMER

The Anthropocene Research Center was established to support field training in a range of sciences at sites within the U.S. & across the world. Traveling and conducting field work involves risk. Students interested in participating in any ARC program must weigh the potential risk against the value of education provided by the program of their choosing.

Risk is inherent in everything we do, and the ARC takes risks seriously. A committee of leading scholars review each field school location prior to approval. Once a program is accepted, the ARC continually monitors conditions at the program's site and so we can provide an experience that is as safe as possible.

The ARC does not provide trip or travel cancellation insurance. Students are encouraged to explore such insurance policies on their own. Post Covid 19, most basic policies do not cover trip cancellation due to pandemics. If you wish to purchase an insurance policy that covers such contingencies, explore Cancel for Any Reason (CFAR) plans. [Insuremytrip.com](https://insuremytrip.com), [Squaremouth.com](https://squaremouth.com) or [Travelguard.com](https://travelguard.com) are possible websites where students may explore different insurance policies.

Students should be aware that conditions in the field are different than those experienced at home, dorms or college towns. Students will be exposed to the elements, live in rustic accommodation, and expect to engage in daily physical activity.

We do our best to follow schedule and activities as outlined in this syllabus. Yet local permitting agencies, political, environmental, personal, and/or weather conditions may force changes. This syllabus, therefore, is only a general commitment. Students should allow flexibility and adaptability as research work is frequently subject to modification.

All students must consult medical professionals to ensure they are fit to participate in an ARC field program. ARC is not qualified to provide medical advice. For all other concerns, please consult with ARC staff members or program director(s) – as appropriate.

COURSE OBJECTIVES

Our program is designed to train students and professionals. Experience from this program may benefit individuals interested in forensic anthropology, forensic archaeology and bioarchaeology.

While some experience working with human remains will be helpful, beginners are welcome. The first two days of the program will focus on training in ethics, international field and laboratory work protocols in forensic anthropology, human rights and their legal context in conflicts. Each student will be trained in the techniques of forensic anthropology methods.

The two main objectives of this training are:

- a. To develop and extend skills in the identification and analysis of skeletal human remains.
- b. To provide the theoretical and practical knowledge to study and investigate real cases and produce scientific and technical reports.

This field school is aimed to be practical and applied. Four weeks will be dedicated to field excavation and human remains excavation inside crypt of the Franciscan Church in Chelva and analysing human remains in the lab. The field and laboratory work will be complemented with

workshops and visits to museums and sites and lessons focused on field work, exhumation, and post-excavation work.

Each student will be assigned determinate skeletal human remains, which they will have to document for the entire process. Students will have the guidance, assistance and help of staff members.

A seminar will be held each Friday afternoon, where we will discuss work completed during the week, methods, findings and questions. Students will be asked to give a short presentation (around 7 minutes) in which they describe their experiences at the field school.

Saturdays and Wednesdays are dedicated to excursions to important archaeological and cultural sites in the area. Sundays are rest & recuperating days.

OSTEOLOGY AND HUMAN ANATOMY

- ❖ Identification of human skeletal remains
- ❖ Morphology and variation of the skull
- ❖ Human muscle-skeletal anatomy
- ❖ Identification of the immature skeleton, individual bones.
- ❖ Identification and study of cremated bones. Quantitative and analytical methods
- ❖ Osteometry and anthropometry Application of methods, measurements and instruments. Quantification and comparison. Use of standards

BIOLOGICAL ANTHROPOLOGY

- ❖ Age estimation
- ❖ Sex estimation
- ❖ Estimation of stature, body size, robustness, etc.
- ❖ Estimation of origin, ethnicity, ancestry
- ❖ Palaeodemographics, life expectancy, qualitative differences, sex, age, socio-economic status, occupation, location, environment
- ❖ Stress and lifestyle markers
- ❖ Paleopathology, identification of bone disease, causes of death, identification of abnormalities identification of abnormalities in the skeleton.
- ❖ Mummified remains or extraordinary preservation of human evidence

FIELD ANTHROPOLOGY AND THE ARCHAEOLOGY OF DEATH

- ❖ Stratigraphic excavation: principles and the Harris matrix. Methodological Archaeological excavation, recording and documentation.
- ❖ Excavation and exhumation of human remains in mass graves and the process of recording skeletal remains.
- ❖ Archaeotatology, Physical Anthropology, Forensic Anthropology.
- ❖ Taphonomic processes. Principles of taphonomy and diagenesis in skeletal remains.
- ❖ Collective or mass burials
- ❖ Individual primary burials
- ❖ Relations between the internal and external environment of the corpse
- ❖ Burials of infants who died in the first months of life or ante vitae
- ❖ Secondary burials
- ❖ Contexts and types of cremations. Method for the study of burnt remains in situ. Micro-excavation techniques of burnt remains. Cleaning of human remains. Proper storage of human remains
- ❖ Deaths in catastrophes, epidemics, war conflicts, disasters.

- ❖ Evolution of evidence of human remains. Findings in habitat soils. Funerary caves, megaliths, cemeteries.
- ❖ The ritual dimension of burial
- ❖ Museums, exhibition and didactics of human remains.

RECORDING AND GRAPHIC RECONSTRUCTION OF BONES AND SKELETONS

- ❖ Techniques and methods of graphic field recording 1: field drawing, topography, total station, 3D scanner, photography and drones.
- ❖ Techniques and methods of graphic field recording 2. Photography, photogrammetry and scanner.
- ❖ Techniques and methods of graphic recording in the laboratory: drawing, photography and scanning of human remains.
- ❖ Data processing in the laboratory
- ❖ Reconstruction and recreation of burial and gesture.

FORENSIC ANALYSIS AND COMPLEMENTARY STUDIES

- ❖ The deontology of death and professional practice
- ❖ Judicial expertise. protocols, excavation and study of mass graves, civil war, conflicts.
- ❖ Chemical analysis of skeletal remains. Contribution of stable isotopes to osteo-archaeology.
- ❖ Molecular analysis and DNA
- ❖ Radiological study of anthropological remains (radiology, tomography).
- ❖ Development of analytical methods in osteo-archaeology
- ❖ Inventory and cataloguing of artefacts, such as ceramics and objects from the burial deposit

LEARNT SKILLS

We are aware and strongly support students who seek employment in the Cultural Resource Management sector – whether with private CRM companies or in government compliance agencies. CRM employers seek to understand the skills students learn at the field school, so listing (and ranking) those should help students secure CRM employment. To that end, we are listing all the skills students will learn during this program. At the end of the field school, students will get a Certificate of Completion, where each skill will be ranked at one of three levels:

- ✓ **Basic:** Can perform the skill/task with some supervision.
- ✓ **Competent:** Can perform the skill/task without any supervision.
- ✓ **Advanced:** Can perform the skill/task and teach others how to do it.

Students will be trained in the following skills:

Skill	Skill Definition
Excavation	Stratigraphic excavation: principles and the Harris matrix. Methodological Archaeological excavation, recording and documentation. Excavation and exhumation of human remains in mass graves and the process of recording skeletal remains
Human remains Curation	Ability to safely register, document and store a wide range of human remains types in curation facilities following state and federal laws
Human remains Documentation	Ability to measure, record, photograph and classify various human remains types in the lab/post ex setting
Human remains Identification	Ability to identify archaeological human remains, from both pre contact and historical context
Human remains Processing	Understand how to assign human remains to accepted cultural/geological spheres, across space (classification) & time (seriation)

Basic Conservation & Preservation	Ability to conduct initial field conservation and preservation of different human remains types, features & architecture
Bioarchaeology	Ability to excavate, document & study human remains
Data Recording	Ability to use printed or digital sheets to document & record field data
Photography ^{oo}	Ability to take clear images of various features, human remains & soil colors at various light and field depth conditions

ACADEMIC GRADING MATRIX

Students will be graded based on their work as follows.

% of Grade	Activity
30%	Stratigraphic excavation: principles and the Harris matrix. Methodological Archaeological excavation, recording and documentation. Excavation and exhumation of human remains in mass graves and the process of recording skeletal remains
25%	Lab work, analyse and recording human skeletal remain. Cataloguing: Washing, sorting, labelling, storage
10%	Excavation diary
10%	Friday Seminar/presentations
10%	Teamwork, flexibility, adaptability, involvement, initiative.
15%	Interaction with staff and directors, discuss doubts and questions, suggest interpretations.

COURSE SCHEDULE

Arrival day is Sunday, the first day of the program.

The initial two days of the program will be dedicated to discussions and study of the cultural, methodological and theoretical aspects of the project. Weekly lectures will be held every Wed, prior to dinner. Seminar will be held each Friday afternoon to discuss project progress, theoretical and methodological issues related to work at the site.

Saturdays are dedicated to field trip. The scheduled excursions will include the following:

1. City of Valencia, Almoina Museum and Ethnomuseum, Nacional Museum of ceramics
2. Peña Cortada Aqueduct
3. City of Llíria, archaeological sites and necropolis.
4. City of Valencia, Ethnomuseum, Nacional Museum of ceramics

Sunday is a day off.

Excursions can be rescheduled from Saturday to Sunday where appropriate

The last day of the program is a Saturday. Students should plan to depart according with the transportation disponibility.

GENERAL PROGRAM SCHEDULE

Week 1	
Day/Time	Activity
Sunday 8:00pm	Arrival Dinner
Monday 9:00 -5:00pm	Lectures
Tuesday 8:00-5:00pm	Lectures/work on field excavation
Wednesday 8:00-5:00pm	Work on field excavation and lab
Thursday 8:00-5:00pm	Work on field excavation and lab
Friday 8:00-5:00pm	Work on field excavation and lab

Friday 6:30pm-8:00pm	Seminar
Saturday 9:00am-2pm	Excursion
Sat 4:00pm-forward	Free afternoon
Sunday	Free day
Week 2 (Mon-Sat)	
Day/Time	Activity
M-F 8:00am-5:00pm	Work on field excavation and lab
Wednesday 6:30pm-8:00pm	Lectures
Friday 6:30pm-8:00pm	Seminar
Saturday 9:00am-2:00pm	Excursions
Sat 4:00pm-forward	Free afternoon
Sunday	Free day
Week 3 (Mon-Sat)	
Day/Time	Activity
M-F 8:00am-5:00pm	Work on field excavation and lab
Wednesday 6:30pm-8:00pm	Lectures
Saturday 9:00am-2:00pm	Excursions
Sat 4:00pm-forward	Free afternoon
Sunday	Free day
Week 4 (Mon-Sat)	
Day/Time	Activity
M-F 8:00am-5:00pm	Work on field excavation and lab
Wednesday 6:30pm-8:00pm	Lectures
Saturday 9:00am-2:00pm	Excursions
Sat 4:00pm-forward	Free afternoon
Sunday	Departure

The Director and organizing institutions of the program reserve the right to modify the schedule for scientific needs or for unforeseeable circumstances.

TYPICAL WORKDAY

Time	Activity
7:00am	Breakfast
8:00am	Work begins at the excavation and lab
10:00-10:30am	Morning break
1:30-2:30pm	Lunch
2:30pm	Work on the excavation and lab
5:00pm	End of workday
6:30pm-8:00pm	Wednesday Lecture/Friday seminar
8:30pm	Dinner

ATTENDANCE POLICY

The required minimum attendance for the successful completion of the field school is 90% of the course hours. Any significant delay or early departure from an activity will be calculated as an absence from the activity. An acceptable number of absences for medical or other personal reasons will not be considered if the student catches up on the field school study plan through additional readings, homework or tutorials with program staff members.

PREREQUISITES

None. This is hands-on, experiential learning and students will study on-site how to conduct forensic archaeology research. Forensic work requires patient, respect and understanding of the capacity of humans for extreme violence. It demands discipline and attention to detail.

PROGRAM ETIQUETTE

Chelva is a town in the *comarca* (an intermediate level of administrative subdivision between municipalities and provinces) of Los Serranos in the Valencian Province. Two rivers flow through Chelva – The Chelva & Turia Rivers. The origin of modern Chelva is dated to the Moors, who establish the town in the 11th century CE.

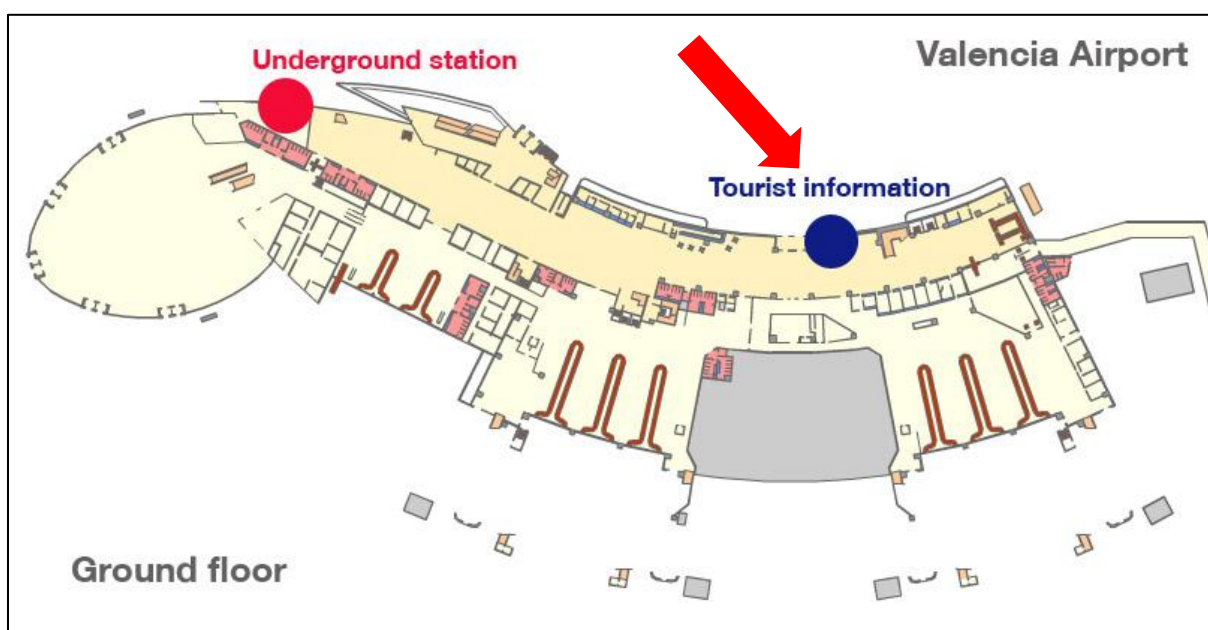
Students at this field school represent the project both on and off site. Misbehaviour by any project member reflect badly on the entire project and may prevent the renewal of research permits. Please remember that you ALWAYS represent the project in this small town.

Students who violate Spanish authorities' forensic work regulations, disrespect Spanish law or culture, or disrespect the dead will be subject for removal from the project. Students are expected to observe and to learn, to enrich themselves with the diversity of cultures and different pace, values and ethics of a small Spanish town.

TRAVEL & MEETING POINT/TIME

We suggest you hold purchasing your airline ticket until six (6) weeks prior to departure date. Natural disasters, political changes, weather conditions and a range of other factors may require the cancelation of a program. The CFS typically takes a close look at local conditions 6-7 weeks prior to program beginning and makes a Go/No Go decision by then. Such time frame still allows for the purchase of deeply discounted airline tickets while protecting students from potential loss of airline ticket costs if CFS is forced to cancel a program.

We will meet students on Sunday, the first day of the program, at 5:00pm at the Valencia Airport (VLC). Meeting point is by the Tourist Information Booth at the Arrival Hall. Students will then be transported to Chelva by car, a trip of about one hour.



If you missed your connection or your flight is delayed, please call, text or email project director immediately. A local emergency cell phone number will be provided to all enrolled students.

VISA REQUIREMENTS

There are no special visa requirements for U.S. citizen travelling to Spain, if they do not stay longer than 3 months. Passport's expiration date should exceed the stay by at least 3 months.

Citizens of other countries are asked to check the Spanish embassy website page at their home country for specific visa requirements.

EQUIPMENT LIST

The site is permanently covered, so we are not affected by sun or rain.

1. Passport or ID card. All European citizens should bring their health card, or health insurance card, if applicable
2. Student/University ID
3. Mosquito repellent and after-bite cream
4. If you are taking any medication, remember to bring it with you.
5. Stationery for personal use (notebook, pens etc)
6. Bring your laptop computer as we will be using a digital dossier for the course.
7. Appropriate adaptor for all electronic devices.
8. Consider purchasing an international plan for your phone or purchase a local SIM card when you arrive.
9. We recommend that you wear light and comfortable clothing. You should bring a jacket and/or windbreaker, as well as very comfortable shoes. During excavations, you can wear long or short sleeves shirts, pants or shorts.
10. You don't need to bring any instruments or tools for the excavation. We will provide you with all the tools and instruments you will need for this program.
11. Bring some nice/'dressier' cloths for times when you go out for dinner.
12. Personal First Aid Kit (available in most pharmacies) including. Sterile gauze pads, waterproof bandages, large bandages 8cm x 6cm, Ace bandage 5cm x 4.5m, and medical tape 1.25 x 5m, Eye Wash 20ml, iodine and hydrogen peroxide. Below is an example of a kit available at a pharmacy with most of the supplies: http://www.boots.com/en/Boots-St-John-Ambulance-Essential-First-Aid-Kit_1258543/
13. A small backpack (for your food, bottle of water, wet wipes, camera, papers etc.)
14. Please join us in our efforts to reduce the use of disposable plastics pieces during our program. We kindly ask you to bring your personal meal set – plate, cup, spoon, fork & knife.
15. A good attitude for work, study and research.

MEALS & ACCOMMODATION

All staff and student will be staying 14th century Franciscan convent The rooms are individual simple, comfortable, and welcoming with free WiFi. The convent has large rooms, bathrooms, showers, library, dining room, a fully equipped kitchen, conference room, recreation and outdoor dining area, as well as a barbecue area.

The project provides breakfast and lunch throughout the week, except for lunch on the trip day (normally Saturday) and free day (normally Sunday). Please let us know of any dietary restrictions (vegetarian/vegan) so that we may inform the restaurant in advance.

Lunch will always be at a local restaurant in the centre of Chelva. Meals include a starter, main course, dessert, coffee/tea, soft drinks and water.

Dinner is not included, but the convent has a fully equipped kitchen where students can prepare and cook their own meals as they wish. Chelva has supermarket and groceries, offering a wide variety of high-quality food.

PRACTICAL INFORMATION

- **International dialling code: +34**
- **Money/Banks/Credit Cards:** As a major touristic destination, Teruel has a wide availability of banks where you can use your ATM and credit card.

- **ATM Availability:** There is a wide availability of banks where you can use a credit card and ATMs
- **Local Language:** Spanish is the official language of the Country. English and Spanish are the languages of the program.
- **Measure units:** degree Celsius (°C), meter (m.), gram (gr.), liter (l)

ACADEMIC CREDITS & TRANSCRIPT

Attending students will be awarded 8 semester credit units (equivalent to 12 quarter credit units). Students will receive a letter grade for attending this field school based on the assessment matrix (above). This program provides a minimum of 80 direct instructional hours. Students are encouraged to discuss the transferability of credit units with faculty and the registrar at their home institutions prior to attending this program.

Students will be able to access their transcripts through our School of Record – Culver-Stockton College. C-SC has authorized the National Student Clearinghouse to provide enrollment and degree verification (at <https://tsorder.studentclearinghouse.org/school/select>). Upon completion of a program, students will get an email from C-SC with a student ID that may be used to retrieve transcripts. The first set of transcripts will be provided at no cost; additional transcripts may require payment. If you have questions about ordering a transcript, contact the C-SC office of the registrar at registrar@culver.edu.

REQUIRED READINGS

PDF files of all mandatory readings will be provided to enrolled students via a shared Dropbox folder.

Convent of Saint Francis of Chelva

Juan José Ruiz López. 2023. The Franciscan Convent of Chelva from the archaeological point of view.

Ubelaker, H. Douglas. 1978. Human Skeletal Remains: Excavation, Analysis, Interpretation. Chicago-Aldine.

Bass, W. 1995. Human Osteology: A Laboratory and Field Manual. 4th Edition, Missouri Archaeological Society, Columbia.

DeGrazia, D. 2017. The Definition of Death. In The Stanford Encyclopaedia of Philosophy, ed. E.N. Zalta. Stanford: Stanford University. <https://plato.stanford.edu/archives/spr2017/entries/death-definition/>

Squires, K., Errickson, D., Márquez-Grant, N. (2019). Introduction. In: Squires, K., Errickson, D., Márquez-Grant, N. (eds). Ethical Approaches to Human Remains. Springer, Cham. Pg 1-15. https://doi.org/10.1007/978-3-030-32926-6_1

White Tim D., Black Michael T., Folkens Pieter A. 2012. Human Osteology. Elsevier Academic Press.

RECOMMENDED READINGS

FORENSIC PHYSICAL ANTHROPOLOGY Proceedings 2002-2011. The Proceedings of the American Academy of Forensic Sciences is an official publication of the American Academy of Forensic Sciences (AAFS) and includes various areas of the forensic sciences such as pathology, toxicology, physical anthropology, psychiatry, odontology, jurisprudence, criminalistics, questioned documents, digital sciences, engineering sciences and other disciplines. The proceedings herein are from the Physical Anthropology section for the years 2002 to 2011.

RECOMMENDATIONS IN FORENSIC ANTHROPOLOGY SPANISH ASSOCIATION OF FORENSIC ANTHROPOLOGY AND ODONTOLOGY June 2013 Coordinator: F Serrull.

Muñoz-Encinar, L. (2019). Unearthing gendered repression: an analysis of the violence suffered by women during the civil war and Franco's dictatorship in Southwestern Spain. World Archaeology. Vol 51(5), 759-777.

Herrasti, L., Márquez-Grant, N., & Etxeberria, F. (2021). Spanish Civil War: the recovery and identification of combatants. Forensic Science International. Vol 320:110706.