

NEANDERTHALS & MODERN HUMAN ADAPTIVE STRATEGIES AT COVA GRAN DE SANTA LINYA, SPAIN

COURSE ID: HIS 489

Jun 21-Jul 19, 2025

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

School of Record: Culver Stockton College

DIRECTORS:

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PROGRAM DESCRIPTION

Where did we, humans, come from and where are we, contemporary people, heading to? These important and intimately related questions have become increasingly relevant as technological [r]evolution, along with profound political, economic, and cultural changes impact our daily lives. Leading scholarship on the issue has become broadly read and widely popular – Yuval Noah Harari’s *Sapiens: A Brief History of Humankind*, Gerald Dimond’s *The World Until Yesterday* and Graeber & Wengrow’s *The Dawn of Everything*, to name just a few.

This program is dealing with our beginning, with the emergence of modern humans as seen from Southern Europe. It also deals with relationships & interaction with our closest relatives – *Homo neanderthalensis*. While our work is highly focused and limited in space, the unique level of preservation and depth of occupation history at Cova Gran offers an exceptional opportunity to study our ancestors, their interactions with the environment, with other hominins and with each other.

By 50,000 years ago, groups of hominins arrived at the Cova Gran rock shelter, building hearths and leaving behind well preserved bone, lithics and other evidence of human activity. These occasional visits lasted for thousands of years – throughout the Middle/Upper Paleolithic (at Cova Gran, 50,000-40,000 years ago). A complex stratigraphy of built hearths allows us to carefully study the evolution of human relationships to their environment, to specialized activities and to changes in technology. During the 2024 season, one part of the team will excavate at Sector R, where the Paleolithic visitors left their material evidence.

Limited excavations during Covid yielded spectacular results in Sector V. Partial skeletal remains of *Homo Sapiens* – primarily long bones – were recovered at the site and dated to 15,000 years ago. This is a rare find, as we know very little about European human populations of the time (we know a lot more about the anatomy and lifestyle of Neanderthals from the region). As these populations were likely replaced by migrants from Anatolia and the Near East during the Neolithic “revolution” (ca, 7,000 years ago in our region) we know very little about the indigenous *H. sapiens* who originally migrated from Africa to Europe around 50,000 years ago. For the 2024 season, another part of the team will excavate in this area – Sector V – trying to find specific bones with enough preserved DNA materials to study and understand the paleogenomic and paleoanthropological relationship of this individuals with other *H. Sapiens* populations spread and isolated in Eurasia at the same period.

To find the best path forward we must understand where we came from. We must understand the forces that shaped our biology and culture to become what we are today. The Cova Gran project is a narrow, but deep window into the past, allowing us to explore and reflect on such issues. Cova Gran unique preservation and extremely long cultural occupation provides for the extended documentation, study, and interpretation of human evolution at the regional level. It is a critical and significant data point for the global understanding of our human origin and for our ability to make informed decisions about our collective future.

Students MUST remember that while our research is informed by big questions, field work is highly detailed, careful and slow. Expect lively discussions of exciting issues, but DO NOT expect a definite answer. Archaeological knowledge works gradually, by building evidence upon evidence, so patience and perseverance are crucial for any quality research work.

IMPORTANT DISCLAIMER

The Center for Field Sciences 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 CFS 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 CFS takes risks seriously. A committee of leading scholars review each field school location prior to approval. Once a program is accepted, the CFS continually monitor conditions at the program’s site and so we can provide an experience that is as safe as possible.

The CFS 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 cancelation 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://www.insuremytrip.com), [Squaremouth.com](https://www.squaremouth.com) or [Travelguard.com](https://www.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 a CFS field program. CFS is not qualified to provide medical advice. For all other concerns, please consult with CFS staff members or program director(s) – as appropriate.

COURSE OBJECTIVES

This program is an immersive, practical experience in archaeological fieldwork involving hands-on experiential learning: students will study how to conduct archaeological research. Archaeology involves physical work and exposure to the elements and thus requires a measure of acceptance that this will not be the typical university learning environment. You will get sweaty, tired and have to work in the outdoors. Students are required to come equipped with sufficient excitement and adequate understanding that the archaeological endeavor requires fieldwork experience.

The main goals for this program are:

- Provide students with practical working knowledge of **archaeological field methods**, including survey, excavation, laboratory analysis, artifact cataloging, and conservation.
- Introduce students to the **intellectual challenges presented by archaeological research**, including research design, the interpretation of data, and the continual readjustment of hypotheses and field strategies in response to information recovered in the field.

From a methodological perspective, fieldwork includes three main aspects:

Excavation: The goal of the excavation is the retrieval of artifacts, ecofacts and features within context. Participants will be trained in the specific excavation and analysis tasks as well as in the general objectives of the excavation and its research design.

Lab Work: Lab work is a key part of our archaeological strategy and includes inventory, classification and initial study of the artifacts, bones and archaeological structures found at the site. Project staff will train all participants in the study of the material retrieved during the excavation. Each day, we will discuss the activities to be performed and the results that are being obtained to plan for the work ahead and to fully involve participants in the project.

Lectures: Activities will be complemented with lectures. Lectures will be 45-60 minutes each and presented by staff. Lecture titles and themes are listed below. The schedule may be subject to change, depending on the weather and research activities.

LEARNT SKILLS

We are aware that many students may not seek academic careers but will pursue employment in the private sector. To that end, we are following the example set by Twin Cairns with their Skills Log Matrix™ (<https://twincairns.com/skills-log-matrix/>). Students will be trained in the following skills:

Skill	Description
Artifact Identification	Ability to identify archaeological artifacts and ecofacts, from both Neanderthals and Anatomically Modern Humans contexts.

Artifact Processing	Understand how to assign artifacts to accepted cultural/geological spheres, across space (classification) & time (seriation)
Basic Conservation & Preservation	Ability to conduct initial field conservation and preservation of different artifact types and degrees of fragility
Data Recording	Ability to use personal digital assistants (PDA), geo-spatial positioning items and other technical elements to record field data
Excavations/General Principles	Know how to excavate in cultural or natural layers, document and record all excavation activity
Photography	Ability to take clear images of various feature, artifact & soil colors at various light and field depth conditions
Screening	Ability to use general & geological screens to identify, collect and record small scale finds
Soil Identification	Ability to identify, describe and record different types of soil and depositions
Stratigraphy	Ability to identify, measure and describe stratigraphic layering of a site
Artifact Documentation	Ability to measure, record, photographed and classify various artifact types in the lab/post ex setting
Flotation	Able to use flotation machine to collect flora and fauna
Paleoethnobotany	Ability to excavate, document and study ancient flora remains
Map & Plan Making-Digital	Ability to understand, discuss and interpret complex GIS photographic imagery & patterns
Total Station	Know how to properly set a Total Station, take back and fore points, collect geospatial data/points that can be used to generate digital topographic maps
Tool-use	Ability to operate with medium hand tools (pickaxe, trowel...) and small hand tools (dentist tools, wooden sticks...) to recover archaeological materials
Scientific environment	Ability to get independence at fieldwork and lab work and develop critical thinking in scientific research

COURSE SCHEDULE

Course structure may be subject to change at the director's discretion.

Fieldwork schedule week 1-4

Monday to Friday:

8:00-9:00am	Breakfast
9:00am-12:00pm	Lab work, lectures & discussion in Sant Llorenç de Montgai facilities
12:00-2:30pm	Lunch & Free time
2:30-8:00pm	Fieldwork at Cova Gran
8:00-8:30pm	Drive back to field house
9:00pm	Dinner

On Fridays, between 4-8pm, we will visit sites of interest – both natural and cultural – in the area around la Noguera.

Saturday & Sunday: Days off, free time

In case of rainy days, lectures and lab work will replace field work.

ACADEMIC GRADING MATRIX

The general framework of evaluation is presented below:

70 % Field Participation & Collaboration – This encapsulates daily participation and progress in learning techniques of excavation, survey and lab work. Students will be trained to carry out accurate, careful archaeological work, use basic field equipment, and to comprehensively record data. Ability to carefully observe and follow instructions regarding field procedures, preparing forms, identifying artifacts, processing screen residue, and overall attentiveness in class are all important. Each student is expected to develop a solid grasp of recording

procedures (provenience, soil attributes, excavation notes, computer database in the field and in the lab, etc.). Equally important is overall good citizenship and cooperation as part of the archaeological research team. Archaeology requires commitment to promptness; cooperation in loading and unloading gear at the beginning and end of each field day; anticipating field tasks; helping fellow team members with recording, measurements, excavation, and lab tasks; helping to maintain group morale.

30% Final essay– Students will present a paper with a maximum length of 10 pages, describing their participation in the project, and the meaning of Cova Gran to contextualize human settlement in Western Europe. It is highly recommended that students keep a field diary as a valuable resource in completing this assignment. Students will be assessed on their ability to organize the information and their comprehension of the readings.

SKILLS MATRIX LEVELS

The school instructors will evaluate the level each student has achieved on the list of skills provided above. Each skill will be graded on one of the following 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.

ATTENDANCE POLICY

The required minimum attendance for the successful completion of the field school is 85% 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 archaeological research. Field work involves physical work and exposure to the elements and thus requires a measure of understanding that this will not be the typical university learning environment. You will have to work outdoors and will get sweaty and tired. Students are required to come equipped with sufficient excitement and an adequate understanding that fieldwork requires real, hard work, in the sun and wind. The work requires patience, discipline, and attention to detail.

PROGRAM ETIQUETTE

The staff will promote an atmosphere combining freedom and responsibility during the program. All participants are adults and are responsible for their own person and actions. Students are always seen as representative of the project by local community members and must act accordingly.

The village of Sant Llorenç de Montgai is a safe environment. We are living among friends from this small, rural, calm community of fewer than 150 inhabitants. Local people know and like the foreign students that are present in the village through different archaeological programs developed since 2001. To ensure a continuation of these relationships, appropriate and respectful behavior towards the habitants of Sant Llorenç de Montagi is mandatory. If any issues arise, communicate immediately to the staff.

This project does not tolerate any kind of harassment or discrimination for reasons of gender, language, ideology, race, or sexual orientation. Students experiencing or witnessing such behavior should immediately contact designated project staff members.

EQUIPMENT LIST

Tools used in the excavation and lab will be provided by the project. For personal items, students should bring the following:

- Shower towel
- Shower sandals
- Hat
- Canteen
- Sunscreen
- Light jacket or raincoat
- Light cotton work pants
- Long & short sleeve cotton shirts
- Tennis shoes (not rigid boots)
- Socks
- Insect repellent
- Sunglasses with UV protection
- Beach towel & swimsuit
- Personal medication (as needed)

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 make 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.

Students will be met by program staff at the Bar-Cafeteria at Lleida-Pirineus RENFE railway station on the first day of the field school (June 19th, Saturday) at 7:00pm (19:00). Trains to Lleida-Pyreneus depart frequently from Barcelona-Sants RENFE railway station at Barcelona. Trains from the Barcelona-El Prat airport to the Barcelona-Sants RENFE railway station depart every 30 minutes. The train schedule from the Barcelona-Sants RENFE railway station to Lleida-Pirineus RENFE railway station can be found at <http://www.renfe.com/EN/viajeros/index.html>.



Figure 1: Lleida Pirineus trains station

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

VISA REQUIREMENTS

Spain forms part of the Schengen Visa Agreement. US citizens may enter Spain for up to 90 days for tourist or business purposes without a visa. Stiff fines may be imposed for overstaying the 90-day period. Your passport should be valid for at least three months beyond the period of your stay.

MEALS & ACCOMMODATION

Sant Llorenç de Montgai is a small village located in a scenic landscape by the Sant Llorenç Water Reservoir. This is a quiet rural community composed mostly of retired local farmers. Summers are usually sunny and warm (between 95-105°F). Direct exposure to the sun could be dangerous and regular hydration and the use of strong sun cream are necessary. Occasionally, strong summer storms may happen. The area has some mosquitoes, which are annoying but not dangerous (they do not transmit malaria or other illnesses).

Participants will live at the Alberg LaCova guest house. This rural house has shared rooms (6-8 people) and community areas. The house, bathrooms and rooms will be regularly cleaned. The Alberg provides sheets – sleeping bags are not necessary. There is Wi-Fi and a laundry machine for students to wash their clothes. Students will take turns and help maintain clean community spaces such as the dining room and dormitories.

The program will provide two large meals a day – lunch and dinner. These meals will include different local dishes composed of a mix of vegetables, meat, and fish, with fresh fruit. Vegetarian and participants with celiac allergies are welcome but may face limited and repetitive food options.

Balaguer-Lleida is the regional town and there are 2-3 daily commuter train to there from the Sant Llorenç train station (<http://lleidalapobla.fgc.cat/home>). Students may travel to Balaguer-Lleida for ATM, supermarket and other shopping for items not found at Sant Llorenç. If necessary, staff will transport participants to Balaguer-Lleida (medications, medical visits, etc).

The health system in the Catalunya region offers medical assistance to foreign visitors for a fee. The fee will be covered by the CFS health insurance. Look at the CFS website for details.

PRACTICAL INFORMATION

International dialing code: + 34

Money & Banks: The Euro is the local currency. ATM machines are available in Balaguer (10 km).

Credit & Debit Cards: Because of the COVID-19 pandemic, all businesses now accept credit & debit card payments. This situation may change as the Spanish, and/or Catalunya government directive to local businesses.

Local Language: Sant Llorenç de Montgai is in Catalunya and Catalan is the usual language in the village, but everyone speaks Spanish as well. Project staff speak fluent English.

Measure units: degree Celsius (°C), meter (m.), gram (gr.), liter (l)

ACADEMIC CREDITS & TRANSCRIPTS

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 160 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 transcript 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.

- Mora, R., et al. 2011. Chrono-stratigraphy of the Upper Pleistocene and Holocene archaeological sequence in Cova Gran. *Journal of Quaternary Science* 26: 635–644.
- Mora, R., et al. 2014. A key sequence in the Western Mediterranean Prehistory: Cova Gran de Santa Linya (Pre-Pyrenees in Lleida). In: *Pleistocene and Holocene hunter-gatherers in Iberia and the Gibraltar strait*: 162-166. Burgos.
- Martínez-Moreno, J., et al. 2015. From site formation processes to human behaviour: Towards a “constructive” approach to depict palimpsests in Roca dels Bous. *Quaternary International*.
- Mora, R., et al. 2018. Contextual, technological and chronometric data from Cova Gran: Their contribution to discussion of the Middle-to-Upper Paleolithic transition in northeastern Iberia. *Quaternary International*.

RECOMMENDED READINGS

Neanderthals, anatomically modern humans, hunter-gatherer lifestyle and other issues dealt with in the project have an immense bibliography. As general introductory readings, we suggest the following general books that it can easily be found at your local university library.

- ✓ Binford, L. 1983. *In Pursuit of the Past: Decoding the Archaeological Record*. Thames & Hudson.
- ✓ Mithen, S. J. 2003. *After the Ice: global human history-20,000-5,000 BC*. Weidenfeld & Nicolson.
- ✓ Stringer, C., Gamble, C. 1993. *In search of Neanderthals*. Thames & Hudson.
- ✓ Stringer, C., Andrews, P. 2006. *The complete world of Human Evolution*. Thames & Hudson.
- ✓ Harari, Yuval Noah; 2014. *Sapiens: A Brief History of Humankind*. Random House.
- ✓ Wragg Sykes, Rebecca; 2020. *Kindred: Neanderthal Life, Love, Death and Art*. Bloomsbury Sygma.