



HIGH ALTITUDE HUMAN/ENVIRONMENT INTERACTIONS: ARCHAEOLOGY OF THE BIG BELT MOUNTAINS, MONTANA (US)

Course ID: HIS 489

June 6–28, 2027

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

School of Record: Culver Stockton College

DIRECTORS:

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INTRODUCTION

The Montana Big Belt Mountains Archaeological Field School will introduce students to archaeological field methods and research design in one of the most beautiful settings in western United States. The research will be conducted within the Helena - Lewis & Clark National Forest 40 miles northeast of Helena, Montana. Our fifteen years of previous research has revealed numerous potentially significant archaeological sites which represent periodic occupation through the last 10,000 years.

The class is designed to train students in the basics of archaeological excavation and survey techniques. We will be excavating two high altitude multicomponent campsites with occupation from a few hundred to 9,000 years ago, as well as surveying surrounding areas. Our previous research identified two major drought periods, 2,000 and 8,000 years ago. We will be targeting these drought time periods to explore the relationship between paleoenvironmental change and prehistoric population adaptations.

The campsite is remote without cell service and two hours to the nearest town. Weather conditions can vary from over 100° F to working in snow. Students should be prepared for full days of digging and/or hiking carrying equipment long distances in remote areas. While the research sometimes involves demanding working conditions, the camaraderie, beautiful landscapes, and fascinating archaeology make for a unique field school experience.

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

This field school will introduce students to basic archaeological field methods and research design directed through fieldwork of the local archaeological record. Students will participate in pedestrian surveys and testing/excavation of sites. Field exercises are supplemented by lectures in the field and in the evenings. Special emphasis will be placed on examining how archaeologists decipher the archaeological record to understand human prehistoric behavior.

Skills taught during archaeological survey include reading and producing topographic maps, understanding basic concepts of sampling (including block and lineal surveys), use of compass and GPS units, and recording new precontact sites. Recording sites will not be restricted to cultural materials, but will also include vegetation, landforms, soils, and geology. This is also an opportunity to discuss when surveys are most commonly used and the nuances of Section 106 compliance of the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), and Montana State Environmental Policy Act (SEPA).

In addition to surveys, we will be testing/excavating two high altitude sites. Students will learn to layout an excavation grid, understand systematic sampling of sites, learn excavation techniques with shovels, trowels, line levels and specialty equipment, and understand all levels of documentation including profile and plan mapping, level and unit forms, feature forms, photographs, etc.

Throughout the class we will be discussing use of the scientific method, including formulating a research question, theory, framing hypothesis connected to theory, data gathering methods, data analyses and drawing conclusions. All steps facilitate the use of critical thinking, analytical reasoning and problem solving. Students will discover that field work is inherently changing and adaptive strategies are needed. These skills are crucial for all divisions of archaeology, including Cultural Resource Management (CRM), academia, federal and state level jobs, and nonprofit organizations (NGO).

LEARNT SKILLS

We 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
Topographic maps	Ability to read and use topographic maps
Compass and GPS	Proficient use of compass and global positioning systems (GPS)
Excavation grid layout	Ability to layout excavation grid
Systematic sampling	Capable of conducting systematic sampling of sites with shovel probes
Prehistoric site identification	Identify prehistoric sites, artifacts and features in the archaeological record
Pedestrian survey	Ability to conduct pedestrian survey (linear and block)
Record and map sites	Ability to complete site forms and map sites
Excavation	Understand the basics of archaeological excavation techniques
Documentation	Proficiency of documentation including level forms, unit forms, profile mapping, plan mapping, lithic characteristics, artifact catalog, feature forms
Site preservation	Understand the significance of preservation of cultural sites
Local chronology	Have a working knowledge of local chronology
Tribal history	Explore and understand the diversity of Tribal history

Tribal diversity	Discover an awareness of cultural diversity and how diversity is often adaptable
Artifact processing	Ability to identify, collect and record a wide range of artifact types, understanding their relative fragility within different site types and conditions
Policy	Have a rudimentary understanding of Section 106 compliance of the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), and State Environmental Policy Act (SEPA)

COURSE SCHEDULE

Fieldwork will be conducted with two ten-day sessions with a two-day break in-between.

Day	Activity
June 6, 4:00-6:00pm	Welcome dinner, setup camp, safety orientation
June 7-16 (1 st Ten Day Session)	Survey, excavation, testing
June 17-18 (2 days off)	Rest, go to town
June 19-27 (2 nd Ten day session)	Survey, excavation, testing
June 28, 12:00pm	Break camp, back to town

** Course structure may be subject to change upon directors' discretion.*

TYPICAL WORKDAY

Students will follow this daily schedule during work at this field school:

Time	Activity
6:30-7:30am	Breakfast
8:00am	Work begins
12:00-12:30pm	Lunch
4:00pm	End fieldwork, artifact catalog, complete days paperwork
5:00pm	Complete work, back to camp
5:30-6:00pm	Dinner
6:30pm (Wed)	Lectures

ACADEMIC GRADING MATRIX

Students are required to participate in all components of the field school. Grades are determined as follows:

- ❖ **50%:** Quality of fieldwork (effectively use excavation tools, mapping, etc.)
- ❖ **30%:** Field records (field notebooks, level forms, profile maps, etc.)
- ❖ **20%:** Attitude (cooperation, outlook, self-initiative, maintain positive attitude)

ATTENDANCE POLICY

The required minimum attendance for the successful completion of the field school is 95% 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 a 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

There are no prerequisites for this field school, but students need to remember the campsite is remote without convenient facilities. Students will be expected to help with camp chores, such as hauling firewood, cleaning meal dishes, refilling water jugs, etc.

Field work and the weather can be physically challenging, so a positive attitude and sense of adventure are essential. While the research sometimes involves challenging working conditions, the friendship, beautiful landscapes, and captivating archaeology make for a unique field school experience.

PROGRAM ETIQUETTE

Camp life means close quarters and requires respect of personal space and other's privacy. Students are expected to follow camp etiquette and safety, such as no food in tents and quiet hours after 10pm.

Alcohol and marijuana are not allowed. Students found to be in possession or control of prohibited substances will be removed and may be subject to disciplinary actions.

Harassment of any type will not be tolerated and may lead to expulsion without a refund.

TRAVEL & MEETING POINT

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 ARC 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 competitively priced airline tickets, while protecting students from potential loss of ticket costs if the ARC is forced to cancel this program.

Students will meet with project staff members on June 6 at 12:00pm at the Helena Regional Airport (HLN). We will meet in the baggage claim as there is only one baggage carousel.

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.



Figure 1: Helena Airport (HLN) baggage claim area

EQUIPMENT LIST

Camping

- Tent (sealed seams, large full fly sheet)
- Sleeping Bag (rated to at least 20°F/-5°C). Do not underestimate this. Some nights can (no, WILL) be pretty chilly!
- Sleeping pad
- Water bottle, at least a liter

- Headlamp/flashlight
- First aid kit
- Daypack/backpack
- Solar shower

Footwear and Clothing

- Good hiking boots or shoes
- Comfortable pants for hiking (quick dry material is a good option)
- Smart wool socks (if they get wet your feet stay warm)
- Long sleeve and short sleeve shirts
- Base layers
- Rain jacket
- Down or synthetic jacket
- Beanie and Gloves
- Sunglasses
- Hat

***Plan on wearing layers since the mornings can be cold and afternoons hot.**

Other Items

- Sunscreen
- Lip balm
- Insect repellent
- Rain pants
- Camp towel
- Biodegradable soap/shampoo
- Notebook and pencil

VISA REQUIREMENTS

This is a domestic program; no visa is required for US citizens.

MEALS & ACCOMMODATIONS

Students and directors will be camping adjacent to the site, not in an established campground. Students will need to provide their own tent (with a FULL rain fly), sleeping bag (suitable for temperatures down to 20° F (-5° C), sleeping bag mat, towel and other personal items. Running water is not available but washing tubs with clean water will be available for washing. The site has a single vault toilet. The site does not have electricity, and flashlights will be essential (the night sky is phenomenal!).

Food will be prepared by the project cooking staff and will include well balanced, nutritious meals. Given how remote the site is, this program will not be able to accommodate any special diets (Kosher, Halal, vegan, etc.).

During the two-day break between sessions, students will be driven to Helena and will be able to spend the whole day there. Students will be picked up in the evening and return to the campground for the night.

For laundry, students may wash their own clothes in buckets and dry on cloth lines installed by the project manager. Alternatively, students may elect to do their laundry in Helena's laundromats during the two-day break.

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 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 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 Google Drive folder.

Baumler, Mark, David Schwab, Stephen Aaberg, William Eckerle, and Richard Faflak

1996 Investigations of Foothill-Mountain Prehistory in the Northern Madison Range, Southwestern Montana: The Flying D Ranch Archaeological Project. *Archaeology in Montana* 37(1):41-65.

Bender, Susan and Gary Wright

1988 High-Altitude Occupations, Cultural Process, and High Plains Prehistory: Retrospect and Prospect. *American Anthropologist* 90(3):619-639.

Binford, Lewis

1980 Willow Smoke and Dogs' Tail: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1):4-20.

Black, Kevin

1991 Archaic Continuity in the Colorado Rockies: The Mountain Tradition. *Plains Anthropologist* 36(133):1-29.

Cronk, Lee

1991 Human Behavioral Ecology. *Annual Review of Anthropology*, 25-53.

Davis, Leslie, Michael Wilson, David Baten, Mathew Root, T. Weber Greiser, Ann Johnson, Carl Davis, Danile Smith, Stephen Aaberg, and Patricia Dean

2010 Bowman Spring Occupation Site, Big Belt Mountains, West-Central Montana Rockies: Archaeology and Prehistory. *Archaeology in Montana* 5(1):1-35.

Travis, Lauri

2015 Late Holocene Climate Change in the Big Belt Mountains, Central Montana, USA. *The Holocene* 25(12):1944-1956.

RECOMMENDED READINGS

Bird, Douglas and James F. O'Connell

2006 Behavioral Ecology and Archaeology. *Journal of Archaeological Research* 14: 143-188.

Davis, Carl M.

2019 *Six hundred generations: An archaeological history of Montana*. Simon and Schuster.

Greiser, Sally, T. Weber Greiser and Susan Vetter

1985 Middle Prehistoric Period Adaptations and Paleoenvironment in the Northwestern Plains: The Sun River Site. *American Antiquity*, 51(1), 220-220.

Kelly, Robert L.

2013 *The lifeways of hunter-gatherers: the foraging spectrum*. Cambridge University Press.

Kornfeld, Marcel, Mary Lou Larson, David J. Rapson and George C. Frison

2001 10,000 Years in the Rocky Mountains: The Helen Lookingbill Site *Journal of Field Archaeology*, 28(3/4):307-324

Kornfeld, Marcel, George C. Frison, and Mary Lou Larson

2010 *Prehistoric Hunters-Gatherers of the High Plains and Rockies*. Third ed. Left Coast Press, Inc. Walnut Creek, CA

MacDonald, Douglas

2012 *Montana Before History: 11,000 Year of Hunter-Gatherers in the Rockies and Plains*. Missoula, MT: Mountain Press Publishing Company.