



DRONES FOR ARCHAEOLOGISTS: INTENSIVE ONE WEEK PROGRAM

Course ID: HIS 489

August 16-21, 2026

Academic Credits: 2 Semester Credit Units (Equivalent to 3 Quarter Units)

School of Record: Culver Stockton College

This program provides for housing only. Students are responsible for their own food. The Hat Ranch has a full kitchen, and students will be able to purchase food supplies at Williams.

This program does not administer or pay for your official FAA Part 107 Certification Exam. We run a practice exam at the end of the program, so you are prepared for the actual exam.

DIRECTOR:

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INTRODUCTION

Drones are an essential tool in contemporary archaeological practice, both in academic research and Cultural Resource Management (aka CRM). Drones help to save funds allocated for surveys and to provide excellent spatial information for site detection and regional study. Flying a drone is relatively simple when you know how to do it. In fact, you can learn how to do that in just a few hours. In this one-week bootcamp style program, you will gain hands-on experience learning basic and advanced flight maneuvers, collecting accurate and relevant data and understanding advantages and limitations of different types of drones and sensors. You will gain the skills to become a certified and professional drone pilot. During the program, you will be introduced to at least three drone types (small drones, quad and hexacopters, Blue Drones, etc) and different sensors (cameras, Infrared, LiDER and more). You will learn how to collect data.

Upon completion, you will have the tools you need to take the FAA Part 107 certification exam. You will be able to conduct safe and responsible sUAV fieldwork and become a professional archaeological drone operator.

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://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 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

In this intensive field school, you will master the technical and regulatory fundamentals, understanding drone advantages and limitations according to FAA Part 107 regulations. You will learn how to carry out a non-destructive UAV survey for specific archaeological applications.

The course will take place in Northern Arizona, a little over an hour from the Grand Canyon. Participants will participate in pre-field bootcamp-style learning activities before moving into the field to test their hands-on skills. Participants will work in aerial survey crews of two or three people, rotating among various types of equipment and applying different aerial survey techniques.

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. To that end, we are listing all the skills students will learn during this program. In addition to transferable

university credit, students will get a Certificate of Completion, and each skill will be ranked at one of three levels at the end of the field school:

- ✓ **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	Description
Compliance-Consultation	Ability to understand the interests and conduct consultation with all relevant stake holders, especially those of indigenes communities
Data Recording	Ability to use printed or digital sheets to document & record field data
Monitoring	Monitor constructions site and identify danger to cultural or natural heritage
Photography	Ability to take clear images of various features, artifact & soil colors at various light and field depth conditions
Project Management	Understand the logistics, time management, product and HR needs of field projects
GIS	Can confidently operate Geographical Information System software
Drone Survey	Able to fly a drone and design systematic land coverage, documentation & survey
Map Reading	Ability to read a topographical map, can navigate by compass to and from provided locations
Map/Plan Making, Digital	Ability to use digital tools (Total Station, differential GPS, etc.) to create maps and plans of a site

COURSE SCHEDULE

Week 1

Time	Activity
Sunday 6:00-8:00pm	Arrival Dinner, Meet & Greet
Monday 8:30-4:30pm	Lecture/Workshop: Welcome and Getting Started with FAA Part 107 Rules & IACRA registration; Lecture/Workshop: Crew & Resource Management, Weather & Flight Planning
Tuesday 8:30-4:30pm	Lecture/Workshop: Environmental Awareness & Safety, Obstacle Detection & Emergency Procedures & Pre-Flight and Field: Crew Coordination & Communication & Equipment & Basic Maneuvers
Wednesday 8:30-4:30pm	Lecture/Workshop: Map reading workshop, Airspace & VFR Charts and Field: Airspace Navigation & Archaeological Site Survey Practice (30 m and above)
Thursday 1:30-4:30pm	Lecture/Workshop: Airspace Navigation and Field: Near-Earth Site Feature Survey (15 m an below)
Friday 8:30-4:30pm	Lecture/Workshop: Airspace/VFR Charts; Field: Team Site Survey
Asynchronous Exam	Part 107 Practice Exam (1)

** Course schedule may be subject to change upon directors' discretion based on weather conditions or other limiting factors.*

TYPICAL WORKDAY

The first week is dedicated to Part 107 instruction and practical training in the field.

Time	Activity
8:00am	Equipment pickup & depart for fieldwork
10:00-10:15am	Morning break
12:00pm-1:00pm	Lunch break

2:00-2:15pm	Afternoon break
4:00-5:00pm	Return to lab, end of day

** In case of inclement weather days, lectures and lab work will be performed.*

ACADEMIC GRADING MATRIX

Students will be graded based on their work as follows.

50%: Attend and participate each scheduled day, lecture and field work

30%: An exam taken at the end of the session, testing students on required readings and flight maneuvers.

20%: Keep a field notebook that will be submitted at the end of the course

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 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 a hands-on, experiential learning opportunity and students will study on-site how to conduct archaeological research under the direction of a range of specialists in the field. 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 in physically demanding environments, and students must plan ahead for both cold and hot weather conditions. Students are required to come equipped with sufficient excitement and an adequate understanding that fieldwork requires real, hard work, in the sun and wind and perhaps even snowy conditions. The work requires patience, discipline, and attention to detail.

MEALS & ACCOMMODATIONS

Students and staff will stay at the historic [Hat Ranch](#) at Williams AZ. This program provides for housing only. Students are responsible for their own food. The Hat Ranch has a full kitchen, and students will be able to purchase food supplies at Williams. Students who do not own cars will be driven by project vehicles to Williams twice during the program – once on Sunday (arrival day) and a second time on Tus (third day of the program).

VISA REQUIREMENTS

This is a domestic program, and no visa is needed for U.S. Citizens.

Non-US Citizens are asked to check the United States embassy website at their home country for specific visa requirements.

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.

There will be two meeting points for this program:

1. If you fly to Flagstaff Pulliam Airport (FLG), we will meet you at the baggage claims area on the first day of the program (Sun) at 4:00pm
2. If you drive to the field school, make your way to the [Hat Ranch](#) at Williams AZ and arrive on the first day of the program (Sun) by 5:30pm.

If you missed your connection or your travel is delayed, please call, text or email the project director immediately. Local emergency cellular phone contact information will be provided to all enrolled students.

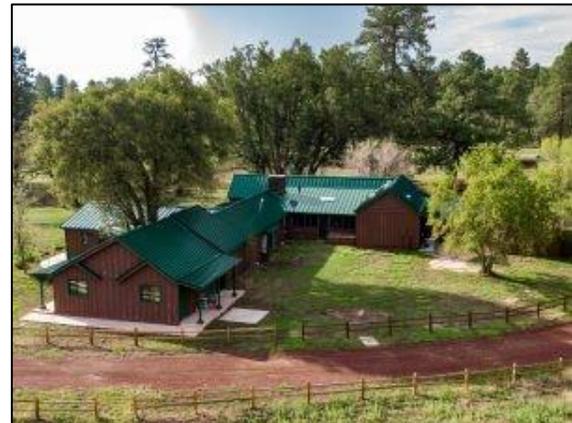
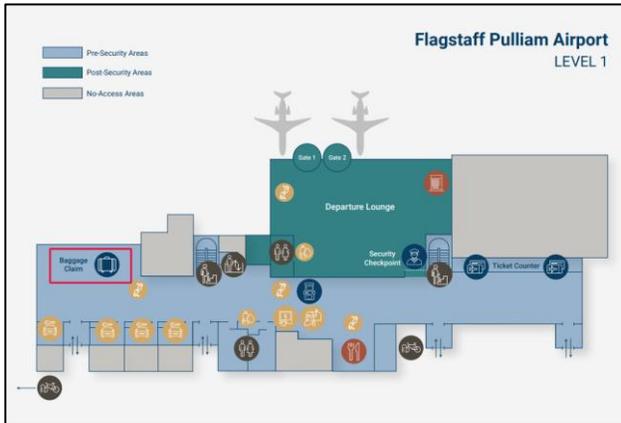


Figure 1: Flagstaff airport plan with meeting area by baggage claim

Figure 2: View of the historic Hut Ranch

PROGRAM ETIQUETTE

Life in the communities around Flagstaff is focused on the outdoors. No excessive or underaged alcohol consumption, and absolutely no marijuana consumption is allowed in the project. Students are expected to obey local laws and are encouraged to observe a 9:00 pm tuck-in time Monday-Friday in order to start field and lab work early each day.

EQUIPMENT LIST

- A pair of sturdy working shoes (thick-soled sneakers or light-weight hiking shoes) and a comfortable pair of shoes for walking in semi-rugged terrain.
- Clothing suitable for outdoor work: a wide-brimmed hat and sturdy lightweight clothing with long sleeves and long pants (to protect against the equatorial sun, insects, and thorns).
- Comfortable house clothes for relaxing after field work.
- Both lightweight jacket and heavy coat as weather conditions change rapidly in northern Arizona. (primarily winter session)
- One or two reusable water bottles to pack into the site.
- Sunscreen.
- A small backpack for your water bottle, snacks, cellular, etc.
- A positive attitude towards work, fun, study, and discovery!

PRACTICAL INFORMATION

International dialing code: 001 (if dialing from outside the US)

Money/Banks/Credit Cards: USD\$

ATM availability: ATM machines are available throughout Williams

Local Language: English

Measure units: degree Fahrenheit (°F), foot/yard/mile, pound (lb), quart/gallon.

Field units: Meter (m.), Gram (gr.)

Time zone: Local time is Mountain Standard time.

ACADEMIC CREDITS & TRANSCRIPT

Attending students will be awarded 8 semester credit units (equivalent to 6 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 200 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

Campana, Stefano. "Drones in archaeology. State-of-the-art and future perspectives." *Archaeological Prospection* 24.4 (2017): 275-296.

Field, Sean, Matt Waite, and LuAnn Wandsnider. "The utility of UAVs for archaeological surface survey: A comparative study." *Journal of Archaeological Science: Reports* 13 (2017): 577-582.

Pecci, Antonio. "Digital survey from drone in archaeology: potentiality, limits, territorial archaeological context and variables." *IOP Conference Series: Materials Science and Engineering*. Vol. 949. No. 1. IOP Publishing, 2020.

Themistocleous, Kyriacos. "The use of UAVs for cultural heritage and archaeology." *Remote Sensing for Archaeology and Cultural Landscapes: Best Practices and Perspectives Across Europe and the Middle East*. Cham: Springer International Publishing, 2019. 241-269.