CONSERVATION OF ANCIENT ROMAN GLASS AT DEBELT, BULGARIA

Course ID: HIS 489

June 20-July 4, 2026

Academic Credits: 4 Semester Credit Units (Equivalent to 6 Quarter Units)

School of Record: Culver Stockton College

This program offers an optional two day excursion to Istanbul (Turkey). Interested students should contact Balkan Heritage Foundation directly for details & cost.

DIRECTORS:

Dr. Daniela Cherneva, Chief instructor, Balkan Heritage Foundation Affiliate Conservator (bhfsadmissions@gmail.com)

Ms. Biljana J. Peeva, Restorer of Pottery and glass Artefacts at the National Institution Stoby (bhfsadmissions@gmail.com)

INTRODUCTION

This program is focused on the conservation of Roman glass. The program will begin by understanding the rich history of ancient glass, its origin and the technology needed for its production. The program will then proceed to instruct students in modern techniques of glass conservation, restoration, documentation and study. Both the theoretical and laboratory elements

of this program will be taught at the research center associated with the Roman site of Deultum (see more about the site below).

This field school includes three modules. The first is practical work in conservation of glass, initially of replicas and then work on Roman artifacts from the collection of the National Archaeological Reserve at Deultum. The second module covers the theoretical and methodological elements of glass conservation and consists of lectures presenting the archaeological context of glass artifacts and the best methods used for their preservation. conserved vessels and to conservation process of glass vessels. The third module introduces students to the regional context of Roman presence and includes site visits to the ancient coastal towns of Nessebar (UNESCO World Heritage Site), and a sightseeing tour of Sozopol (including study visits to its archaeological museums).

Develton (Thracian: Debelton, "two-swamp area") was founded as an emporium of Apollonia Pontica in the 7th century BCE. From the 6th century to the 4th century BC, the settlement served as an important place of trade between Thracians and Greeks. Develton was annexed to the Roman Empire in 46 CE and became part of the province of Thrace and its name changed to Deultum. At the Battle of Deultum in the summer of 377 CE (during the Gothic War of 376–382), an Eastern Roman army was defeated by a Gothic raiding party outside Deultum, and the city was sacked. Deultum was later rebuilt on a smaller scale, and, in the second half of the 5th century CE, new walls were constructed, and all unprotected buildings were demolished to ensure hostile forces did not use them as cover. These walls were destroyed by Slavs and Avars at the end of the 6th century CE.

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 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, Squaremouth.com or 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

By the end of the program the participants will:

- Be introduced to the basic methods for conservation and documentation of ancient glass.
- Be able to develop basic skills in ancient glass conservation and documentation.
- Have first-hand experience with ancient Mediterranean/European History and Archaeology.
- Meet professionals, who work in the areas of Classical Archaeology and Glass Conservation and Documentation.
- Contribute to the preservation of research of archaeological collection of the National Archaeological Reserve Deultum.

LEARNT SKILLS

We strongly support students who seek employment in the Cultural Resource Management sector – whether with private CRM companies on 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
Photography	Ability to take clear images of various artifacts at various light and field depth conditions
Artifact Documentation	Ability to measure, record, photograph and classify glass artifacts in a lab setting
Artifact Analysis	Ability to perform preliminary analysis and condition assessment of glass artifacts: observation under low and high magnification, sampling and samples, instrumental analyses. Creation of an informed conservation treatment proposal based on the results from these analyses.
Basic Conservation & Restoration	Ability to perform both mechanical and chemical cleaning of glass artifacts, reassemble fragmented objects, do in-filling and create detailed documentation of the process.
Photography	Ability to take clear images of various artifacts at various light and field depth conditions

COURSE SCHEDULE

Date	Activity
1st Day	Arrival and check-in by 7:30 pm. 8:00 pm – Traditional Bulgarian welcome dinner
2nd Day	**Morning**: Presentation of the Balkan Heritage Field School and collaborative universities & institutions, the project and the participants. Icebreakers. Site's sightseeing and an orientation walk. **Afternoon**: Lectures

3rd Day Onward	**Morning**: Workshop/Lab **Afternoon**: Workshop/Lab & lectures
Saturday	Visit to Nessebar (UNESCO World Heritage Site) & Sozopol
Sunday	Day off
Departure Day	Departure. Check-out by 11:30 am

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

TYPICAL WORKDAY

Students will follow this daily schedule during the three weeks of lab work.

Time	Activity
7:30-8:30am	Breakfast
8:30am-1:00pm	Workshops on conservation of Roman Glass
1:00-3:30 pm	Lunch and free time
3:30- 7:30 pm	Lectures and workshops on conservation and documentation of Roman Glass
7:30- 9:00 pm	Dinner

ACADEMIC GRADING MATRIX

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

- **60% - Lab work**: Students will be assessed on the quality of their lab work (i.e., their ability to effectively use conservation methods and instruments to treat cultural artifacts) Students are expected to be able to link the lectures and readings to their laboratory work.
- **25% - Lab Records, demonstrated diligence and Active participation**: Students are required to record their work in a notebook that must be submitted to the project at the end of the field school. The notebook must include scaled sketches, procedures and other notes taken while working on assigned objects.
- **15% - Attendance**.

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.

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. Arrive at Sofia International Airport (SOF) on the first day of the program (Sun) by 12:30 pm. A Group transfer will be arranged from Sofia airport for an additional fee (will be announced up to three weeks before arrival) to the archaeological base at National Archaeological Reserve –

Deultum in Debelt, Bulgaria. Travel time is about 5 hours.

Arrive at the archaeological base at National Archaeological Reserve – Deultum by 7:30 pm on the first day of the program. The archaeological base is located 13 miles/22 km from Burgas. The nearest airport is the Burgas International Airport (BOJ). The transfer from the airport to Debelt may be arranged by request and will be organized by the program directors. Students who fly to Sofia (Bulgaria's capital) may take a train or bus to the Black Sea coast.

Figure 1: The main terminal at Burgas Airport

Figure 2: The Archaeological Base, part of the National Archaeological Reserve - Deultum

VISA REQUIREMENTS

There are no visa requirements for U.S. citizen travelling to Bulgaria, 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 embassy website page at their home country for specific visa requirements.

MEALS & ACCOMMODATIONS

Accommodation will be at the archaeological base at the National Archaeological Reserve - Deultum, which is located 22 km from Burgas. It has comfortable rooms with two to three beds. Free use of wi-fi, washing machine, and kitchen. Bed linen and towels are provided. Wi-Fi is available on the first floor of the lobby area.

There is a restaurant in the village, where participants will have all their lunch and dinner meals served.

PREREQUISITES

There are no prerequisites for participation in this field school but note that conservation work requires good manual dexterity skills and ability to carry out delicate bench work. Students will receive hands-on training in conservation work and will spend most of the time learning how to conserve ceramics in a lab setting.

Students will be taught how to use a variety of laboratory procedures and equipment – from microscopes to analytical instruments. Conservation work is slow and may be tedious. It requires patience and focus. This is an introductory course so we will cover all the very basic elements of conservation ethnographic work.

PROGRAM ETIQUETTE

Bulgaria, one of Europe's oldest countries, boasts a diverse and extensive history spanning many centuries, influenced by various civilizations. From the ancient Thracians to the Roman Empire and the Byzantine era, Bulgaria's past reflects its resilience and cultural richness. Its strategic location as a crossroads between East and West has shaped its identity, evident in its architecture, cuisine, and traditions. Today, Bulgaria stands as a vibrant nation blending its storied past with modern aspirations, welcoming visitors to explore its timeless landscapes and captivating history. Bulgarians take pride in their heritage and achievements, and we kindly ask for your respect towards their customs, traditions, and culture.

EQUIPMENT LIST

- Participants should bring a standard white lab coat.
- Participants should bring light clothes to wear under lab garments.
- Raincoats for probable rainy and windy days
- Comfortable shoes - visiting some of the sites requires walking on country roads and medieval cobblestone streets
- Wide-brim hat
- A small backpack (for your water bottle, snacks, camera, etc.)
- Swimming suits and sunscreen
- Medication - only prescription medicines you may need. It is not necessary to bring
- non-prescription medicine from your country since you can buy all basic non-prescription drugs in Bulgaria.
- A converter to EU-type electricity if needed.
- Participants are encouraged to bring a laptop with at least 6 GB free disk space, a mouse and a USB flash drive.
- A good attitude towards work, fun, study and adventures ;)

PRACTICAL INFORMATION

International dialing code: The Bulgaria international phone code is +359.

Money/Banks/Credit Cards: As of January 1st, 2026, Bulgaria's currency is the Euro. Most shops/supermarkets in the cities accept major credit cards (except for American Express, which is not always accepted). However, credit cards are not commonly used for small purchases (for example, coffee at a café).

ATM Availability: There are several ATM machines at Debelt.

Local Language: The native language is Bulgarian. Bulgaria sees many international tourists and many Bulgarians, especially young folks, speak at least some English.

Measurement units: degree Celsius (ºC), meter (m.), gram (gr.), liter (l)

ACADEMIC CREDITS & TRANSCRIPT

Attending students will be awarded 4 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 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

Bray, Ch. (2001). Dictionary of Glass, Materials and Techniques. Pennsylvania Press.

Chantal Fontaine-Hodiamont (2019). Antique glass: Principles of conservation, displaying and maintenance

Cherneva, D. (2014). Archaeological glass from a mound in Pamuklia (Bulgaria),1st -2nd century AD: Identification, damage phenomena and conservation, Poster, 17th Triennial Conference ICOM CC. Melbourne, Australia.

Davison, S. (2006). Conservation and Restoration of Glass. Oxford, Pp.1-242.

RECOMMENDED READINGS

Grossmann R. A. (2006) Ancient Glass: A Guide to the Yale Collection;

Koob, S.P. (2010) An experimental treatment for severely Crizzled Glasses, Interim Meeting of the ICOMCC Working Group, October 3–6, Corning, New York, U.S.A, 2010, 128-132.

Koob, S. P. (2006). Conservation and Care of Glass Objects. London.

Lampropoulos V. et al. (2007) Study of corrosion patterns and Conservation procedures of Roman glass vessels of 1st century AD, International Journal of Conservation Science 8 (1), 2007, 48-67.

Petrović M. (2022) Experience in the conservation and restoration of archaeological glass at the Archaeological Museum of Istria in Pula, Roman Pottery and glass manufactures, Archaeopress p. 362–366.

Perović Š. (2015) The Museum of Ancient Glass in Zadar (Croatia). In Proceedings of the 9th International Symposium on Archaeometry, p. 91-96, Institute of Archaeology, University of Zagreb.

Чуковска Л., Јанкуловска Пеева Б., Шијакова Т. (2023) Физичко-хемиски испитувања со примена на SEM-EDS и конзервација на пет стаклени садови од археолошкиот локалитет Стоби, Патримониум МК, година 16, број 21 / 2023. (PHYSICO-CHEMICAL EXAMINATIONS USING SEM-EDS AND CONSERVATION OF FIVE GLASS VESSELS FROM THE ARCHAEOLOGICAL SITE STOBI IN R.N. MACEDONIA)