INTRODUCTION TO CONSERVATION & RESTORATION OF ROMAN POTTERY & GLASS: STOBI, NORTH MACEDONIA

Course ID: TBA
June 6 – June 26, 2020

Academic Credits: 4 Semester Credit Units (Equivalent to 6 Quarter Units)
School of Record: Connecticut College

DIRECTORS:
Ms. Bilyana Jankulovska, Senior Conservator, National Institution Stobi, Republic of N. Macedonia

PROJECT COORDINATORS:
Dr. Angela Pencheva, Project coordinator (Stobi), Balkan Heritage Foundation Director (angelapbh@gmail.com)

INSTRUCTORS:
Mr. Alexander Manev – Drawing technician, Balkan Heritage Foundation and PhD candidate at Department of Classical Archaeology, National Institute of Archaeology and Museum, Bulgarian Academy of Sciences (Sozopol)
Dr. Eva Todorova – Drawing technician, National Institute of Archaeology and Museum, Bulgarian Academy (Stobi)

This program is a short introduction to archaeology field conservation. It is designed to present students with the fundamentals of conservation and restoration work and a taste for the rigors of field work. Students interested in a full session conservation field school should consider applying to Macedonia & Bulgaria Conservation field school.

INTRODUCTION

This course is focus on the conservation and restoration of Roman and Late Roman pottery and gives basic introduction to treatment, conservation and restoration of glass objects.
It consists of three weeks and will take place at the site of Stobi, Republic of N. Macedonia. Stobi was an important Roman city and reached its zenith of power during the 1st – 3rd centuries CE.

The main goal for this program to provide theoretical and hands-on training experience on pottery and glass conservation. It does so through the exposure of students to the conservation techniques and specifics of two different materials, enabling them to evaluate and appreciate similarities and differences in conservation problems, approaches, methods, technique, design and material choice applied on different types of artifacts.

The pottery and the glass vessels for the workshop in Republic of N. Macedonia come from the excavations of the Roman and Early Byzantine city of Stobi and are provided by the National Institution Stobi (NI Stobi). These are mainly locally produced Roman and Late Roman ceramic shapes.

Students begin their training with replicas of ancient vessels and then progress to originals once they reach an acceptable level of skill, accuracy and precision. Most students will be able to master conservation and restoration efforts within the course of this field school and expect to complete work on 2-5 artifacts by the end of the program, depending on the initial state of objects' conservation, the necessity of conservation treatment and the individual performance of the student.

Upon successful completion of the course, they will be prepared to take part in projects for conservation, restoration and documentation of archaeological pottery, under the supervision of professional conservators and restorers.

**ACADEMIC CREDIT UNITS & TRANSCRIPTS**

**Credit Units:** Attending students will be awarded 4 semester credit units (equivalent to 6 quarter credit units) through our academic partner, Connecticut College. Connecticut College is a private, highly ranked liberal arts institution with a deep commitment to undergraduate education. Students will receive a letter grade for attending this field school (see grading assessment and matrix). This field school provides a minimum of 120 direct instructional hours. Students are encouraged to discuss the transferability of credit units with faculty and registrars at their home institution prior to attending this field school.

**Transcripts:** An official copy of transcripts will be mailed to the permanent address listed by students on their online application. One more transcript may be sent to the student home institution at no cost. Additional transcripts may be ordered at any time through the National Student Clearinghouse: [http://bit.ly/2hvurkl](http://bit.ly/2hvurkl).

**PREREQUISITES**

None. This is hands-on, experiential learning and students will work in the lab and learn how to conduct conservation, restoration and documentation work. These activities involve patience, careful work and concentration, and thus require a measure of acceptance that is not found in the typical university learning environment. Students are required to come equipped with sufficient excitement and the understanding that conservation and restoration endeavor requires hard work, patience, discipline, close concentration and attention to detail.

The Conservation & Restoration Field School will host students and professionals from all over the world. With such an international team, it is vital that all students respect the IFR code of conduct, each other’s cultures, and local organizational, social and cultural rules and laws.
DISCLAIMER – PLEASE READ CAREFULLY

Our primary concern is with education. Traveling and conducting field research involves risk. Students interested in participating in any IFR program must weigh whether the potential risk is worth the value of education provided. While risk is inherent in everything we do, we take risk seriously. The IFR engages in intensive review of each field school location prior to approval. Once a program is accepted, the IFR reviews each program annually to make sure it complies with all our standards and policies, including student safety.

The IFR does not provide trip or travel cancellation insurance. We encourage students to explore such insurance on their own as it may be purchased at affordable prices. Insuremytrip.com or Travelguard.com are possible sites where field school participants may explore travel cancellation insurance quotes and policies. If you do purchase such insurance, make sure the policy covers the cost of both airfare and tuition. See this Wall Street Journal article about travel insurance that may help you decide whether to purchase such insurance.

We do our best to follow schedule and activities as outlined in this syllabus. Yet local permitting agencies, political, environmental, personal 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 change.

You should be aware that conditions on the Balkans are different than those you experience in your home, dorms or college town. Note that South European (subtropical) climate dominates in the region, making summers hot (30-40°C). Rainy and chilly days in this season are rare but not unheard of.

If you have any medical concerns, please consult your doctor. For all other concerns, please consult with the project director – as appropriate.

COURSE OBJECTIVES

The objective of this program is to prepare students to take part in archaeological ceramics conservation and restoration activities. The activities in this program will include the following:

1. Introduction to fundamental ethical principles of conservation and restoration. These include among others the principles of reversibility, compatibility, re-treatability and authenticity, and the principle of minimal intervention. Detailed documentation process and basic requirements for conservation materials are also discussed.
2. Introduction to the aesthetic principles of conservation: partial or complete restoration of the original appearance of the object without eliminating the impact of time on it, preserving the artistic values of the artifact, hiding or pointing out restored parts.
3. Presentation of the main causes for deterioration, especially upon excavation.
4. Introduction to preliminary pottery and glass analyses and condition assessment of the finds: observations under low and high magnification, sampling and samples, instrumental analyses. Results as a base for informed conservation treatment proposal.
5. Training through practical exercises: basic conservation and restoration activities: damage assessment and classification, conservation plan, mechanical and chemical cleaning, desalination and consolidation of pottery shards, reassembling fragmented objects, in-filling, retouching, and detailed documentation.
6. Introduction to conservation documentation, including its visual, historical, and technical aspects as well as conservation treatment performed on the object.
7. Introduction to post conservation monitoring process.
8. Introduction to technological characteristics and technology of ancient pottery and glass and their changes through time.
9. To prepare students to create, organize and maintain artifacts and conservation databases.
10. Collection and keeping both data and metadata about objects and their documentation safe.
11. Introduction to the archaeological and historical contexts of the restored materials – sites, cultures, research problems, etc.
12. Introduction to health and safety requirements in a conservation lab.

COURSE SCHEDULE

Both workshops’ schedules consist of four modules:

**MODULE I** - Theoretical module (25 hours for both workshops). Covers the following topics:

1. Roman and Late Roman pottery and glass history and technology. This will include production technology, physical and chemical properties, shape & design.
2. Conservation documentation. Lectures focusing on visual documentation, including regular photography, software manipulation (Corel Draw) and data & metadata documentation of visual record, technical photography.
3. Analytical methods used to determine the chemical composition and the physical properties of artifacts, the damaging processes influencing the artifacts’ condition upon excavation.
5. Lectures focusing on the historical and archaeological context of the treated materials.

**MODULE II** – Practicum (approx. 75 hours for both workshops). Consists of four components:

1. Workshops dedicated to materials and production, which include the full production of replica vessels and explore the challenges related to production technology as practiced in the past.
2. Workshops dedicated to pottery and glass photographic and graphic technical documentation.
3. Workshops dedicated to ceramics and glass conservation.

**MODULE III** - Excursions accompanied by lectures, presentations and study visits to sites of historical/archaeological significance such as the town of Bitola (Archaeological Museum) and the Heraclea Lyncestis excavation site, the town of Ohrid (Ancient Lychnidos, UNESCO World Heritage Site) in Republic of N. Macedonia, Pella and Vergina (UNESCO World Heritage Sites) in Greece.

**MODULE IV** – Homework (est. 10 hours for both projects) will be assigned to all students, which will consist of editing and processing students’ conservation documentation (journal, conservation forms, drawings, photos, etc.) and preparing presentations and reports.

All IFR field school begins with safety orientation. This orientation includes proper behavior at the field area, proper clothing, local cultural sensitivities and sensibilities, potential fauna and flora hazards, review IFR harassment and discrimination policies and review of the student Code of Conduct.

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<thead>
<tr>
<th>Date</th>
<th>Morning</th>
<th>Afternoon</th>
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<tbody>
<tr>
<td>Day 1</td>
<td></td>
<td>Arrival by 7 pm at the National Institution for Management of the Archaeological Site of Stobi, 1420 Gradsko, Republic of N. Macedonia - Traditional Macedonian welcome dinner</td>
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| Day 2 | **Orientation.** Presentation of National Institution Stobi, Balkan Heritage Foundation – Institute for Field Research Joint Program, the Field School agenda and goals, the team and participants, some practicalities | **Lecture:** From the Field to Storage: review of basic methods for recovering, “first aid” consolidation in situ, cleaning, lifting and packing for transportation, labeling, documenting and storing ceramic and glass artifacts  
**Stobi sightseeing tour** |
<table>
<thead>
<tr>
<th>Day</th>
<th>Lecture</th>
<th>Lecture: History of Stobi and Macedonia in Roman and Late Roman period (2nd century BCE – 6th century CE)</th>
<th>Lecture: Material Science and Technology. Clay properties and changes during firing. Lecture &amp; Workshop: typology and chronology of Roman and Late Roman pottery with examples from Stobi. Sorting and selecting different types of Roman and Late Roman pottery shards. Lecture: Deterioration of ceramics objects. Soluble salts, porosity, firing; choosing the most appropriate conservation treatment for each object. Workshop: Cleaning and sorting of Roman and Late Roman pottery shards. Study Excursion &amp; Workshop: Visit to a local traditional pottery workshop in the town of Veles. Experimenting with pottery making.</th>
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<tbody>
<tr>
<td>Day 5</td>
<td>Lecture &amp; Workshop</td>
<td>Introduction to technical photography.</td>
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surrounding the in-fill. Documentation – finishing touches.

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<tr>
<th>Day 7</th>
<th><strong>Workshop</strong>: Conservation and restoration of Roman and Late Roman Objects. Conservation treatment of original objects. General instructions. Assigning selected number of objects to each participant. Specifics of working with original objects. Removal of unwanted material (soil, salts, etc.) and extraction of cleaning agents. Assembly of the fragments with appropriate adhesive, removal of excess of adhesive. In-fills and their additional processing.</th>
<th><strong>Lecture &amp; Workshop</strong>: Technical drawing documentation. Entire vessels.</th>
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<tr>
<td>Day 8</td>
<td><strong>Excursion</strong>: Guided visit to Bitola and the ancient city of Heraclea Lyncestis</td>
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<tr>
<td>Day 9</td>
<td><strong>Excursion</strong>: Guided visit to Ohrid: Ancient Lychnidos (UNESCO World Heritage Site) and Ohrid lake</td>
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<tr>
<td>Day 10</td>
<td><strong>Workshop</strong>: Conservation and restoration of Roman and Late Roman Vessels. Conservation treatment of original objects. Continued (the exact activities depend on the number of assigned objects and the complexity of each object; as well as on the individual progress of each participant. All activities are closely supervised by and discussed with professional conservator)</td>
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<tr>
<td>Day 11</td>
<td><strong>Workshop</strong>: Conservation and restoration of Roman and Late Roman Objects. Conservation treatment of original objects. Continued (the exact activities depend on the number of assigned objects and the complexity of each object; as well as on the individual progress of each participant. All activities are closely supervised by and discussed with professional conservator)</td>
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<tr>
<td>Day 12</td>
<td><strong>Workshop</strong>: Conservation and restoration of Roman and Late Roman Objects. Conservation treatment of original objects. Continued (the exact activities depend on the number of assigned objects and the complexity of each object; as well as on the individual progress of each participant. All activities are closely supervised by and discussed with professional conservator)</td>
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<tr>
<td>Day 13</td>
<td><strong>Workshop</strong>: Conservation and restoration of Roman and Late Roman Objects. Final conservation treatment of original objects. Continued (the exact activities depend on the number of assigned objects and the complexity of each object; as well as on the individual progress of each participant. All activities are closely supervised by and discussed with professional conservator)</td>
<td><strong>Workshop</strong>: Archaeological Documentation – Digitalization of pottery graphic documentation. <strong>Workshop</strong>: Accomplishing the conservation documentation for the conserved vessels.</td>
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The course structure may be subject to change on the director’s discretion.

**TYPICAL WORK DAY**

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>7:00 – 8:00</td>
<td>- Breakfast</td>
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<tr>
<td>8:30 - 13:00 / 13:30</td>
<td>- Workshop for Conservation and Restoration of Ancient Pottery/Glass</td>
</tr>
<tr>
<td>13:30 - 15:30 / 17:00</td>
<td>- Lunch and siesta</td>
</tr>
<tr>
<td>15:30/17:00 – 19:00/19:30</td>
<td>- Lectures and workshops</td>
</tr>
<tr>
<td>19:30/20:00 – 21:00</td>
<td>- Dinner</td>
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**GRADING MATRIX**
Students will be graded based on their work as follows.

<table>
<thead>
<tr>
<th>% of Grade</th>
<th>Activity</th>
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<tbody>
<tr>
<td>20%</td>
<td>Roman and Late Roman Pottery Conservation</td>
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<tr>
<td>20%</td>
<td>Conservation of ancient Glass</td>
</tr>
<tr>
<td>15%</td>
<td>Attendance</td>
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<tr>
<td>15%</td>
<td>Technical drawing of pottery &amp; digitizing of the graphic documentation</td>
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<tr>
<td>10%</td>
<td>Final Presentation</td>
</tr>
<tr>
<td>20%</td>
<td>Final Exam</td>
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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 a medical or other personal reasons will not be taken into account if the student catches up on the field school study plan through additional readings, homework or tutorials with program staff members.

EQUIPMENT LIST

- Work clothes
- A set of walking and hiking shoes.
- Clothing suitable for outdoor activities (consider weather conditions from hot and sunny to rainy and chilly).
- Wide brim hat for the study trips.
- Medication - It is not necessary to bring over-the-counter medicine from your country since you can buy all common types in the R. of N. Macedonia e.g. aspirin, anti-insecticides, sunscreen, etc.) It is recommended that you bring your individual prescription medicines, if any.
- Don’t forget to bring a converter to an EU type electricity wall-plug if needed.
- It is recommended that participants bring PCs having at least 5 GB free disk space and a mouse. Operating system recommended: Windows.
- A good attitude for work, fun, study and discoveries.

ACCOMMODATION

Participants will stay at renovated air-conditioned cabins at the archaeological base next to the ancient ruins of Stobi. Students will be housed in rooms with 2-3 beds each. Each cabin has four bedrooms, a living room and two bathrooms with showers. A washing machine and Wi-Fi are available for free.

The closest village to Stobi is Gradsko (4 km), where there are a couple of food & beverage shops, a pharmacy, an ATM and a medical office. The closest supermarkets, drug-stores, pharmacies, banks with ATM and hospitals are in the towns of Negotino, 12 km away, Kavadartsi, 17 km away, and Veles, 23 km away.

MEALS

Three meals (fresh, homemade food) per day are covered by the tuition fee. Meals, except for lunch packages during the excursion, usually take place at the field house premises in Stobi. This field school can accommodate vegetarians, vegans and individuals with lactose-intolerance diets. Kosher and gluten-free restrictions are impossible to accommodate in these locations.

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 field school. The IFR typically takes a close look at local conditions 6-7 weeks prior to program beginning and make Go/No Go decisions by then. Such time frame still allows the purchase deeply discounted airline tickets while protecting students from potential loss if airline ticket costs if we decide to cancel a program.

**Arrival:** Please arrive on June 6, 2020, by 7:00pm at the National Institution for Management of the Archaeological Site of Stobi, 1420 Gradsko, Republic of N. Macedonia (+389 43251 026). Transfer to Stobi from the airports in Skopje (R. of N. Macedonia) or Thessaloniki (Greece) may be arranged by request. Individual or group transfers' price may vary from 36-120 USD depending on both distance and number of passengers. *(The prices may slightly vary due to the USD rate fluctuations.)* The trip takes approximately 1.5 hours depending on traffic. It is recommended to exchange/withdraw some Macedonian Denars and buy a bottle of water and visit the restroom before the trip.

If you missed your connection or your flight was delayed/canceled, call, text or email the project staff (email: bhfs.admissions@gmail.com). Local contact information will be provided to enrolled students.

**VISA REQUIREMENTS**

Citizens of EU, EEA, USA, Canada, Japan, Republic of Korea, Australia and New Zealand **do not need a visa** to visit N Macedonia for up to 90 days.

Citizens of all other countries may need a visa. The Balkan Heritage Foundation can send an official invitation letter that should be used at the relevant embassy to secure a visa to the program.

Note that if you plan to visit Turkey during your stay in the Balkans you will need a visa. The Turkish government facilitates the process for tourists by providing the option for obtaining an e-visa at [https://www.evisa.gov.tr/en/](https://www.evisa.gov.tr/en/).

For more information about border crossing visit the Balkan Heritage Field School web site at [http://www.bhfieldschool.org/countries/macedonia](http://www.bhfieldschool.org/countries/macedonia) and the links provided there.

**HEALTH AND SAFETY**

Safety and health orientation will take place at the beginning of the program. Stobi’s neighboring towns Negotino and Kavadartsi (12/17 km away) offer medical care, first aid and pharmacies. Good personal hygiene and relaxation after a day’s hard work are good preventatives for the summer flue.

**PRACTICAL INFORMATION**

**Macedonian dialing code:** +389

**Time Difference in the R. of N. Macedonia** (Summer time): UTC/GMT +1 hours (April through September)

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

**Money/Banks/Credit Cards:**

The N. Macedonian currency is the Macedonian DENAR (MKD). N. Macedonian banks accept all credit cards and travelers’ checks. Usually banks are open from 8:00am to 6:00pm from Monday to Friday and from 8:00am to noon on Saturday. You can see N. Macedonian notes and coins in circulation at: [www nbrm mk/?ItemID=C2B15406ABC3BC46B2525F66092FB01D](http://www nbrm.mk/?ItemID=C2B15406ABC3BC46B2525F66092FB01D)

Euros or other foreign currency is not normally accepted outside of casinos and big hotels (where the exchange rate is really low). The exchange of foreign currency is possible in N Macedonia both in banks and numerous exchange offices. Most of them don’t collect commission fee and have acceptable exchange rates (+/- 0.5-1.5% of the official rate). However, those located in shopping areas of big cities, resorts, railway stations, airports etc. can overcharge variable amounts. Ask in advance how much money you will get!
ATMs are available all over N Macedonia and POS-terminals are in most bank offices.

If you plan to use your credit/debit card, please inform your bank on your intention before departure. Otherwise it is possible that your bank will block your account/card for security reasons when you try to use it abroad. Unblocking your card when abroad may cost you lots of phone calls and money.

**ELECTRICITY**

The electricity power in N Macedonia is at 220 - Volts A.C. (50 Hertz). Don’t forget to bring a voltage converter if necessary!

Outlets generally accept 1 type of plug: Two round pins. If your appliances plug has a different shape, you may need a plug adapter.

![Electric Outlet]

**Emergency in N. Macedonia**

National emergency number is **112**
Police: **192**
Fire brigade: **193**
Ambulance: **194**
Road assistance: **196**

**REQUIRED READINGS**

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

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


Ceramics. - In Proceedings of the University of Chemical Technology and Metallurgy, Sofia, 2011.


**RECOMMENDED READINGS AND WEB SITES**


https://www.academia.edu/1385048/Assembling_an_Archival_Marking_Kit_for_Paleontological_Specimens


Society for Historical Archaeology. 2006. *Conservation FAQ’s* 


**WEB SITES**

- National Park Service. 2001 *NPS Museum Handbook* - there are general sections that discuss packing and shipping and then there are appendices on specific materials. Each section is available as a PDF that can be downloaded  
  https://www.nps.gov/museum/publications/MHI/mushbkl.html