



National Institution Stobi



CONNECTICUT
COLLEGE

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

Course ID: ARCH 365BD

June 4–June 24, 2022

FIELD SCHOOL DIRECTORS

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PROJECT COORDINATORS

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INSTRUCTORS

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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.

OVERVIEW

This course is focused 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 is 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 the 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 highly ranked liberal arts institution with a deep commitment to undergraduate education. Students will receive a letter grade for attending this field school (see assessment, below). This field school provides a minimum of 180 hours of experiential education. 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's home institution at no cost. Additional transcripts may be ordered at any time through the National Student Clearinghouse:

<http://bit.ly/2hvrkl>.

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 involve risk. Students interested in participating in IFR programs must weigh whether the potential risk is worth the value of education provided. While risk is inherent in everything we do, we do not take risk lightly. The IFR engages in intensive review of each field school location and programming prior to approval. Once a program is accepted, the IFR reviews each program annually to make sure it still complies with all our standards and policies, including those pertaining to 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](http://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.

We do our best to follow a schedule of activities, methods, training, and programming as outlined in this syllabus. However, this schedule can be easily disrupted by any number of unforeseen circumstances, including revised decisions by local permitting agencies, political unrest, and changes in the weather. While this schedule represents the best of the director(s) intentions, we—students and staff alike—need to be adaptable and tolerant of necessary alterations. This adaptability is an intrinsic part of all field research.

You should be aware that conditions on the Balkans are different from 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 proposals.
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 the 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.

LEARNING OUTCOMES

Students participating in this field school will develop basic/further practical skills (depending on the participant's initial level of qualification) in ancient pottery and glass conservation and documentation, leaving them better prepared for future conservation projects. They will have certain knowledge of the history and archaeology of Stobi and ancient Macedonia during the Roman and Late Roman periods, as well as the forms, types and technology of Roman and Late Roman pottery and glassware. During the outlined activities participants will learn skills transferable outside of excavations, such as analytical thinking, teamwork, the ability to meet deadlines and adapt to outside conditions, which will aid them when seeking employment in any work field.

ASSESSMENT

Students will be graded based on their work as follows.

% Of Grade	Activity
20%	Roman and Late Roman Pottery Conservation
20%	Conservation of ancient Glass
15%	Attendance
15%	Technical drawing of pottery & digitizing of the graphic documentation
10%	Final Presentation
20%	Final Exam

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 reason 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.

TRAVEL, ROOM & BOARD, & SAFETY LOGISTICS

COVID Disclaimer. The logistics outlined below for this IFR field school were written according to the most current and accurate information available to IFR. We recognize that the best practices for preventing the transmission of the coronavirus may change in the coming months. The IFR will be revisiting program-specific plans periodically throughout the enrollment period and will update program details according to new developments, new travel protocols, and updates to local policies.

An IFR field school is designed to provide positive, constructive experiences for communities, students, and researchers. Amid the COVID-19 pandemic, the following protocols have been developed based on the assumption that any participant in an IFR field school may be an asymptomatic carrier of SARS COVID-19 and any of its variants. Our goal, with these protocols, is to reduce the possibility for COVID-19 transmission among participants, staff, and local community members. IFR depends on the complete and sustained commitment of all students to stay healthy and to help others stay healthy. On enrollment, students commit to comply with all aspects of the IFR COVID-19 avoidance policy as well as any/all policies specific to their respective IFR field school.

PRIOR TO TRAVEL

We ask that all students participating in IFR programs be **fully vaccinated** prior to travel. Furthermore, all eligible vaccinated students are **required to have received a vaccination booster**.

Students must arrange a test for current infection for COVID-19 through a RT-PCR test for themselves in their home location within 72 hours prior to the start of the program and upload proof of a negative result to their IFR application portal.

After demonstrating they tested negative, students must take all precautions possible to ensure they remain COVID-19 free prior to and during travel to the field school. Students should plan to travel in the safest manner that they are able (e.g., avoid flights with long layovers and multiple connections). In addition, we require the following from all students: use of a face mask during travel to, from, and on airlines, ferries, trains, buses, and the like; regular washing of hands; and, in so far as possible, maintain social distancing of 6 feet / 2 meters in airports and other spaces.

On arrival at Skopje International Airport, students will need to take a PCR test at the airport labs and then self-quarantine at a recommended airport hotel overnight. Students are responsible for these costs—the PCR test and the hotel room— and should make a room reservation prior to travel. Please see below for more information.

VISA REQUIREMENTS

Citizens of EU, EEA, USA, Canada, Japan, Republic of Korea, Australia and New Zealand **do not need a visa** to visit R. of 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.

For more information about border crossing visit the Balkan Heritage Field School web site at

<http://www.bhfieldschool.org/countries/macedonia> and

<http://www.bhfieldschool.org/countries/bulgaria> and <http://www.bhfieldschool.org/information/visa-help> and the links provided there.

Citizens of other countries are asked to check the embassy website page at their home country for specific visa requirements.

TRAVEL (TO AND DURING THE PROGRAM)

Under normal circumstances, we suggest you hold off purchasing your airline ticket until six (6) weeks prior to the departure date. Natural disasters, political changes, weather conditions and various other factors may force the cancelation of a field school. The IFR monitors local conditions 6–7 weeks prior to the beginning of each program and makes a decision accordingly. This approach allows sufficient time to still purchase deeply discounted airline tickets. This year, due to ongoing uncertainties regarding the travel regulations related to COVID-19, IFR will assess the local conditions closer to the travel date (5–6 weeks prior to the program beginning) and will make Go/No Go decisions then. You are required to participate in the mandatory orientation meeting when we will discuss the latest travel information and regulations. We also suggest you consider postponing the purchase of your airline ticket until *after* the program orientation.

Please frequently consult the website of the US Embassy in North Macedonia for the most up-to-date travel restrictions/protocols <https://mk.usembassy.gov/covid-19-information>

If a student is held at the border for health reasons, they should contact the program director or appointed staff member for their field school at the numbers provided in their orientation materials.

There are two options for arrival:

1. On arrival at Skopje Airport in North Macedonia, conduct a COVID-19 PCR test [on arrival at the airport](#) and get self-quarantined for the period before the pickup, at the [Hotel Square**](#). (These rules may be changed. The BHFS will provide ongoing updates on COVID-19 rules and restrictions in N. Macedonia to all enrolled students). Students are responsible for these costs—the PCR test and the hotel room—and should make a room reservation prior to travel. All students with negative PCR test results will be picked up from the hotel by a shuttle and delivered to the recently renovated air-conditioned cabins at the archaeological site of Stobi. The distance is approx. 80 km, and the ride will take approx. 1 hour. The project cost covers the shuttle price.
2. On arrival at Thessaloniki Airport in Greece, arrange in advance a pickup with BHF logistic coordinator to the town of Kavadarci (approx. 160 km from Thessaloniki) in North Macedonia conduct a COVID-19 PCR* test (<https://genea.mk/>- app. 27 USD) on arrival at the airport and get self-quarantined for the period before the pickup, at the [Hotel Feni**](#) (these rules may be changed. The BHFS will provide ongoing updates on COVID-19 rules and restrictions in N. Macedonia to all enrolled students). Students are responsible for these costs—the PCR test and the hotel room—and should make a room reservation prior to travel. All students with negative PCR test results will be picked up from the hotel by a shuttle and delivered to the recently renovated air-conditioned cabins at the archaeological base. The distance from Kavadarci to Stobi is 19 km and the ride will take approx. 20 min. The project cost covers the shuttle price.
3. If you missed your connection or your flight is delayed, please call, text or email the field school director / project staff immediately (email: bhfs.admissions@gmail.com). A local emergency mobile phone number will be provided to all enrolled students.

While the COVID pandemic persists, any leisure travel during the program and entailing use of buses, trains, and/or airplanes must be approved by the program director(s) prior to booking and departure.

LOCAL PROTOCOLS, REGULATIONS, & EXPECTATIONS

For current entry requirements for the R. of N. Macedonia, please check: [US Embassy in N. Macedonia](#)
These requirements may change in the following months according to the COVID-19 situation in the country. .

The program will not include activities that promote extra-contact with people outside of the team and project venue. Interaction with the local community must be limited to situations where everyone can maintain the required 6-foot/2-meter physical distance, wear masks, and ideally be outside.

In case of a COVID-19 outbreak, the affected students/staff members will be quarantined in hotel "Pamela" (<https://www.hotelpamela.mk/>) in the nearby city of Negotino (16 km from Stobi). The admission cost does not cover this potential expense.

Interaction with the local community must be limited to situations where everyone is masked when indoors and/or can ideally be outside.

HEALTH AND SAFETY

Safety and health orientation will take place at the beginning of the program. Cities around Stobi offer good medical facilities, first aid, and pharmacies. Proper personal hygiene and resting after a hard day of field work are good prevention methods against the summer flu.

FACE MASKS / FACE COVERINGS

All students, faculty and staff are expected to wear face masks when in indoor spaces shared with others. Wearing face masks, combined with vaccination, are among the most effective ways of minimizing the spread of the coronavirus.

The objective of wearing a mask is to capture potentially infectious droplets from the wearer. Therefore:

- Masks or respirators that are equipped with an "exhalation valve" are not permitted, unless covered by another mask.
- Neck fleeces (gaiter masks) are considered the least effective form of face masks and are not permitted. (The material found in gaiters tends to break down large droplets into smaller particles that are more easily carried away in the air.)
- Folded bandanas and knitted masks are ineffective and are not permitted.
- Masks must be worn so as to cover both the mouth and nose. If your mask becomes loose, it can be tightened by twisting the ear loops.

ACCOMMODATIONS

Participants stay at the recently renovated, air-conditioned cabins at the archaeological base camp next to the ancient site of Stobi. Students will be housed in rooms with 2–3 beds each. Each cabin has 4 bedrooms, a living room, and 2 bathrooms with showers. A washing machine and Wi-Fi are available for free. The Stobi cleaning staff will clean and disinfect the rooms & bathrooms and common spaces every day. In the beginning of the field school students will be introduced to the safety protocol for the hotel, the shuttle and the site upon arrival.

The closest village to Stobi is Gradsko (5 km), where there are grocery stores, a pharmacy, an ATM, and medical facilities. The closest big supermarket, drugstores, pharmacies, banks with ATM and hospitals are in the city of Negotino (13 km from Stobi).

Meals: Three meals (fresh, homemade food) per day are covered by the reimbursement fee. Meals usually take place at the field house premises, except for lunch packages during excursions. This field school can accommodate vegetarians, vegans and individuals with lactose-intolerance diets. Kosher and gluten-free diets are impossible to accommodate at this location.

All participants in a field school, students and staff, will wear masks while indoors (i.e., during lectures, during labs, in shared residential spaces, etc.).

Regular hand washing will be a part of the project's daily schedule.

MANAGING COVID-19 CASES & OUTBREAKS

In case of COVID -19 case with mild symptoms the student will be quarantined for 10 days (together with his/hers roommate/s, if any) at hotel "Pamela" (<https://www.hotelpamela.mk/>) in the nearby town of Negotino. He/she will receive food in the room. Their laundry will be processed separately. The admission cost does not cover this potential exence. The closest intensive care unit is located in the town of Negotino (13 min from Stobi).

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.
4. Preventive conservation treatment in situ and subsequent lab conservation treatment of retrieved objects.
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.

Date	Morning	Afternoon
Day 1	<p>Arrive by noon at Skopje Airport in North Macedonia, conduct a COVID-19 PCR* test on arrival at the airport and get self-quarantined for the period before the pickup, at the Hotel Square** (these rules may be changed).</p> <p>If you arrive at Thessaloniki Airport in Greece, arrange in advance a pickup with BHF logistic coordinator to the town of Kavadarci in North Macedonia conduct a COVID-19 PCR* test (https://genea.mk/) on arrival at the airport and get self-quarantined for the period before the pickup, at the Hotel Feni** (these rules may be changed).</p>	
Day 2	<p>All students with negative PCR test results will be picked up from the hotel by a shuttle to Stobi, Gradsko, N. Macedonia.</p>	<p>Presentation of the Balkan Heritage Field School, NI Stobi and collaborating universities & institutions, the project and the participants. Icebreakers and orientation. Sightseeing of the archaeological site of Stobi.</p> <p>Traditional Macedonian welcome dinner.</p>
Day 3	<p>Lecture: Material Science and Technology. Clay properties and changes during firing.</p> <p>Lecture & 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</p>	<p>Lecture: Deterioration of ceramics objects. <i>Soluble salts, porosity, firing; choosing the most appropriate conservation treatment for each object</i></p> <p>Workshop: Cleaning and sorting of Roman and Late Roman pottery shards</p>
Day 4	<p>Lecture: Conservation and restoration of Roman and Late Roman Objects. Basic steps and principles. Ethics and conservation</p> <p><i>Cleaning of ceramic objects: methods of dirt removal, mechanical and chemical methods of salt efflorescence removal, desalination of the ceramic body. Extraction of cleaning and/or desalination agents from the ceramic body. Consolidation – need, methods and materials, requirements. Assembly of the fragments – adhesives and requirements. Methods of temporary fixing. Molds and temporary supports. Gap filling, modeling and finishing touches.</i></p>	<p>Study Excursion & Workshop: Visit to a local traditional pottery workshop in the town of Veles. <i>Experimenting with pottery making</i></p>

	<p>Lecture: Required documentation for pottery and glass conservation.</p> <ul style="list-style-type: none"> • <i>Graphic documentation</i> • <i>Graphic reconstruction</i> • <i>Photographing</i> • <i>Conservation journal</i> • <i>Conservation history list</i> • <i>List of used materials and safety data sheets</i> 	
Day 5	<p>Lecture & Workshop: Introduction to technical photography</p>	<p>Workshop: Conservation and restoration of Roman and Late Roman Objects.</p> <p>Preliminary assembly of fragmented objects – methods of temporary fixing of the loose parts. Final assembly – fitting the fragments together, application of adhesive and cleaning of the excess adhesive around the joints. Methods of temporary mechanical stabilization during adhesive setting.</p>
Day 6	<p>Workshop: Conservation and restoration of Roman and Late Roman Objects.</p> <p>Gap filling – methods. Preliminary processing of break lines and surrounding areas. Temporary protection. Temporary supports for plaster in-fills. Additional modeling of the reconstructions. Cleaning of the areas surrounding the in-fill. Documentation – finishing touches.</p>	<p>Lecture & Workshop: Technical drawing documentation. Pottery fragments</p>
Day 7	<p>Workshop: Conservation and restoration of Roman and Late Roman Objects. Conservation treatment of original objects. General instructions.</p> <p><i>Assigning a 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 adhesive. In-fills and their additional processing.</i></p>	<p>Lecture & Workshop: Technical drawing documentation. Entire vessels.</p>
Day 8	<p>Excursion: Guided visit to Bitola and the ancient city of Heraclea Lyncestis</p>	
Day 9	<p>Excursion: Guided visit to Ohrid: Ancient Lychnidos (UNESCO World Heritage Site) and Ohrid lake</p>	
Day 10	<p>Workshop: Conservation and restoration of Roman and Late Roman Vessels.</p> <p><i>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)</i></p>	<p>Workshop: Conservation and restoration of Roman and Late Roman Vessels.</p> <p>Conservation treatment of original vessels. Continuation: <i>refining the plaster, cleaning the vessel from extra plaster, consolidation</i></p>

Day 11	<p>Workshop: Conservation and restoration of Roman and Late Roman Objects</p> <p><i>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)</i></p>	<p>Workshop: Archaeological Documentation – <i>Digitalization of pottery graphic documentation</i></p>
Day 12	<p>Workshop: Conservation and restoration of Roman and Late Roman Objects.</p> <p><i>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)</i></p>	<p>Workshop: Archaeological Documentation – <i>Digitalization of pottery graphic documentation.</i></p>
Day 13	<p>Workshop: Conservation and restoration of Roman and Late Roman Objects.</p> <p><i>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)</i></p>	<p>Workshop: Accomplishing the conservation documentation for the conserved vessels.</p>
Day 14	<p>Preparation of PowerPoint presentation of the workshop's results.</p>	<p>Presentation of the Workshop results. Discussion with the instructors. Evaluation meeting and conclusion.</p>
Day 15	Day off	
Day 16	Guided visit of Pella and Vergina (UNESCO World Heritage Site), Greece	
Day 17	<p>Lecture. History of Pre-Roman and Roman glass technology. Chemical composition of glass. <i>Forms of natural silica, forms of natural glasses, core formed glass vessels, mosaic glass; mold formed vessels, glass blowing, free blown vessels, mold blown objects, cage cups etc.</i></p>	<p>Lecture. Basic techniques in ancient glass conservation and restoration.</p> <p><i>Deterioration of glass, chemical deterioration, superficial disfigurement, physical damage, cleaning of glass, preliminary assembly, final assembly using medical tape, application of omega clips, application of resin, removal of the omega clips, cleaning of extra resin and adhesive, mold making (using dental silicon and rubber) application of the gap filling resin, refining the additions.</i></p> <p>Lecture. Materials used for cleaning, stabilization and conservation of ancient glass. <i>Choosing consolidants and adhesives for archaeological glass; different resin types, solubility, ageing properties, reversibility, working properties.</i></p>

Day 18	Workshop: Conservation and restoration of Roman and Late Roman Glass Objects. <i>Mechanical and chemical cleaning of selected original glass shards.</i>	Workshop: Conservation and restoration of Roman and Late Roman Glass Objects. <i>Initial documentation of the condition of glass replicas fragments. Assembly of fragments of Roman or Late Roman object with medical tape</i>
Day 19	Workshop: Conservation and restoration of Roman and Late Roman Glass Objects. <i>Final assembly, application of omega clips.</i>	Preparation of PowerPoint presentation of the workshop's results. Presentation of the Workshop Results and Evaluations Farewell dinner and party
Day 20	Departure	

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

TYPICAL WORKDAY

7:00 – 8:00	- Breakfast
8:30 - 13:00 / 13:30	- Workshop for Conservation and Restoration of Ancient Pottery/Glass
13:30 - 15:30 / 17:00	- Lunch and siesta
15:30/17:00 – 19:00/19:30	- Lectures and workshops
19:30/20:00 – 21:00	- Dinner

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.

PRACTICAL INFORMATION

Macedonian dialing code: +389

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

Measure units: degree Celsius (°C), 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 8.00 a.m. to 6 p.m. from Monday to Friday and from 8.00 a.m. to noon on Saturday. You can see N.Macedonian notes and coins in circulation at: www.nbrm.mk/?ItemID=C2B15406ABC3BC46B2525F66092FB01D

In both countries, you cannot pay in Euros or other foreign currency except in casinos and big hotels (where the exchange rate is really unfair)!

The exchange of foreign currencies is practiced not only by banks but also by numerous exchange offices. **NB!** Most of them don't collect commission fees 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 you variable amounts. Ask in advance how much money you will get!

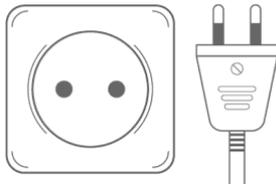
ATMs are available all over both countries, and POS-terminals are in most bank offices.

If you plan to use your credit/debit card, please inform your bank of your intention before departure! Otherwise, it is very 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 both countries is stable 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.



Emergency in R. of 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.

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

Elder, A., S. Madsen, G., Brown, C., Herbel, C., Collins, S., Whelan, C., Wenz, S., Alderson and L. Kronthal. 1997. *Adhesives and Consolidants in Geological and Paleontological Conservation: A Wall Chart*. SPNHC Leaflets, Vol. 1 No. 2. http://www.spnhc.org/media/assets/leaflet2_chart.pdf

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