



CONNECTICUT
COLLEGE

CONSERVATION AND DOCUMENTATION OF ROMAN MOSAICS, STOBI, NORTH MACEDONIA

Course ID: ARCH 365AP

June 1–21, 2024

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

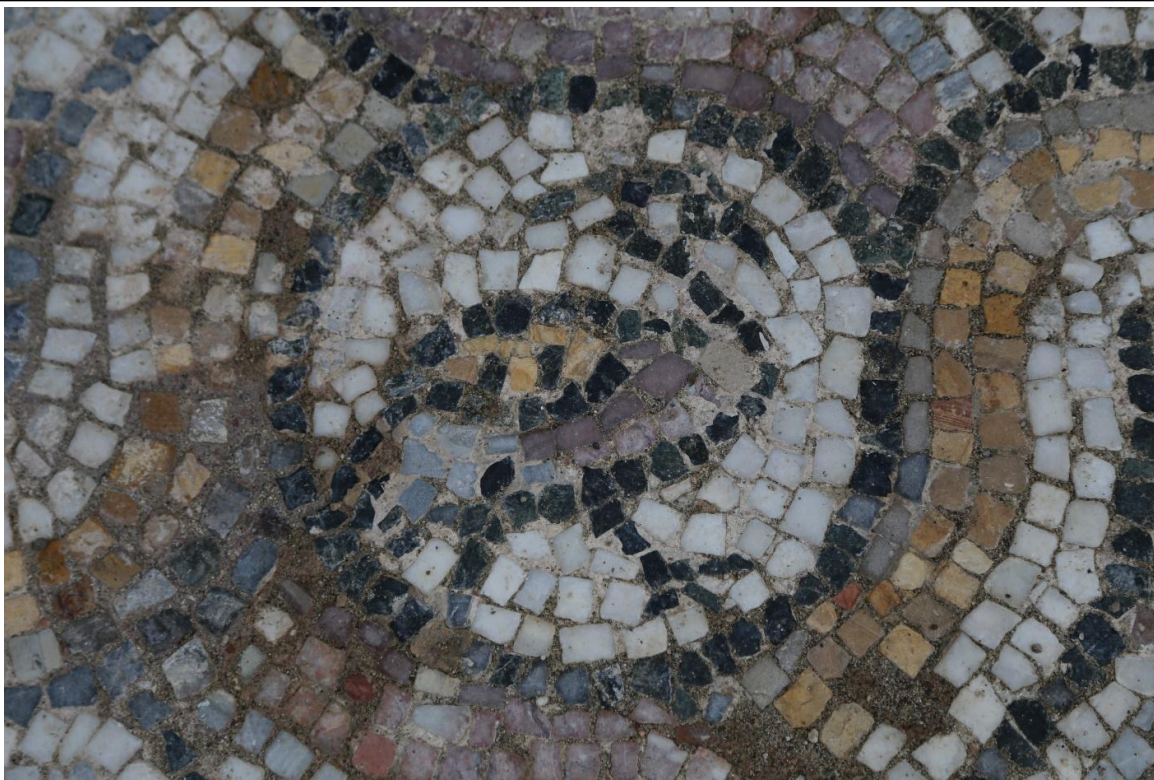
FIELD SCHOOL DIRECTOR(S)

Dr. Angela Pencheva – Workshop director; Visiting professor at the Department of Archaeology and Center for Vocational and Continuing Education, New Bulgarian University, Sofia; Balkan Heritage Program Director (angelapbh@gmail.com)

Tome Filov – Chief Conservator & Chief Workshop Instructor: Senior Conservator (National Institution Stobi, N. Macedonia)

Instructors

Dr. Mishko Tutkovski – Senior Conservator, National Institution Stobi, R. of North Macedonia



OVERVIEW

The course on Conservation and Documentation of Roman Mosaics takes place at the Archaeological site of Stobi, Republic of North Macedonia. The participants are offered a first-hand experience of the everyday challenges of a mosaics conservator, while following the practical experience and the accompanying documentation process. The course is designed for students in Monumental Arts Conservation, Archaeological Conservation, Archaeology, Anthropology, History, Art History, and other related scientific fields.

The course consists of four study modules. The first module focuses on theory. It consists of lectures on the current conservation practice (including preliminary studies, conservation treatment and documentation, etc.), and lectures on the archaeological and historical context of the mosaics on site. The second module is dedicated to hands-on experience – the participants are actively involved in all stages of a conservation project on pre-selected mosaic floors. The third module consists of study excursions to significant historical sites in the region. The last module is set for homework.

The main goal of the program is to provide theoretical and hands-on training experience on mosaics conservation. It also aims at raising awareness of the processes a mosaic floor endures after excavation and the consequences of conservation treatment and maintenance (or the lack of these). The course's emphasis is on Roman and Late Roman mosaics, found in abundance at the Roman city of Stobi, R. of North Macedonia. Participants will either work at the site, on mosaic floors *in situ*, or with mosaic fragments kept in the archaeological storage facilities of NI Stobi. It is suitable for beginners in conservation as well as for experienced students willing to refresh or upgrade and develop their skills and knowledge in the field. Upon successful completion of the course, students would be capable of taking part in projects for conservation of ancient mosaics under the supervision of professional conservators.

The course takes place at the National Institution Stobi's conservation field workshop located at Stobi Archaeological Park, Republic of Macedonia. The lectures, presentations and workshops are delivered and led by instructors, professionally trained in Conservation, Archaeological Graphic Documentation, Field Work, Roman and Late Roman Archaeology, who are affiliated to scientific institutions and organizations.

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](#).

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.

COURSE OBJECTIVES

The objective of this program is to introduce students to core mosaic conservation activities (for mosaics *in situ* and/or mosaic fragments in storage). These will include, but might not be limited to, the following:

1. Introduction to the main causes of deterioration, with focus on these activated by excavation, long-term storage *in situ* with or without proper maintenance.
2. Introduction to the ethical and the aesthetic principles in conservation: reversibility, compatibility, and re-treatability; authenticity, and the principle of minimal intervention.
3. Introduction to the state of the art conservation methodology, principles and techniques, and the respective contemporary materials.
4. Introduction to condition assessment, sampling and basic analyses, used as a basis for informed conservation treatment plan.
5. Practical training that would include, but might not be limited to, activities such as: cleaning and consolidation of the mosaics, application of protective facing, removal of the facing, chemical and mechanical cleaning of the mosaic surface. Please note that there might be other activities, depending on the specific case study.
6. Introduction to basic mosaic documentation activities: description of damage and mosaic condition, measuring, drawing, photographing, digitizing.
7. Introduction to conservation and documentation timing and quality requirements.
8. Introduction to the context of the treated mosaics – history and archaeology of Stobi and the Roman province of Macedonia.
9. Introduction to contemporary conservation standards of work, including health and safety requirements in a conservation workshop or at the site.

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 mosaic conservation and documentation, leaving them better prepared for future mosaic conservation projects. They will have certain knowledge of the history and archaeology of Stobi and ancient Macedonia during the Hellenistic, Roman and Late Roman periods and basic knowledge of mosaic techniques and styles. 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

The students will be graded by supervisors on their work at activities based on their diligence, efforts, the quality of the performed tasks, and attendance at the activities. Students' cooperation and communication skills will also be considered.

% of Grade	Activity
15%	Description of the mosaic condition
20%	Documentation of conservation treatment of mosaics
15%	Cleaning and Consolidation of mosaics
15%	Finishing the conservation process
10%	Digitizing of mosaics' graphic documentation
10%	Final exam
15%	Attendance

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.

COURSE SCHEDULE

All IFR field schools begin with a safety orientation. This orientation addresses local and program protocols concerning student behavior, appropriate attire, local practices and sensibilities that may be unfamiliar, potential fauna and flora hazards, IFR harassment and discrimination policies, and the student Code of Conduct.

The course starts with an introductory and orientation panel concerning the project partnering institutions, the project team, the agenda and the study and grading requirements, as well as emergency procedures, rules of conduct and some administrative details.

MODULE I – Theoretical module (25 hours). Covers the following topics:

1. Roman and Late Roman mosaics: history, techniques, styles and motives
2. Deterioration of mosaics: agents and mechanisms of deterioration, most common damage effects found on mosaics *in situ* and in storage
3. Conservation documentation: Lectures focusing on the activities done *in situ* and in a studio environment, and covering topics on written, graphic and photographic documentation.
4. Conservation treatment: basic methods and techniques. Materials for conservation and selection criteria.
5. Context of the mosaics treated during the program – history and archaeology of Stobi and the Roman province of Macedonia.

MODULE II – Practicum (75 hours). Covers the following topics

1. Workshops dedicated to mosaics materials and production.
2. Workshops dedicated to mosaics conservation.

3. Workshops dedicated to mosaics documentation.

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 (approx. 5 hours) will be assigned to all students and will consist of editing and processing students' conservation documentation (journal, conservation forms, drawings, photos, etc.) and preparing presentations and reports.

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Date	Morning	Afternoon
Day 1	Arrive by noon at Skopje Airport in North Macedonia or at Thessaloniki Airport in Greece, arrange in advance a pickup with BHF logistic coordinator	Traditional Macedonian welcome dinner
Day 2	Presentation of the Balkan Heritage Field School, NI Stobi and collaborating universities & institutions, the project and the participants. Ice-breakers and orientation.	Sightseeing of the archaeological site of Stobi .
Day 3	Lecture and workshop: Preliminary report. <i>Description of mosaic technique and technology.</i> Lecture: Preliminary report. <i>Condition assessment. Technical and photo documentation of the selected mosaics.</i>	Workshop: Technical and photo documentation of the selected mosaics. Lecture: Basic methods of cleaning: purpose, advantages and disadvantages Lecture: Samples: what can they tell us?
Day 4	Workshop: Conservation of Roman mosaics. <i>Mechanical cleaning: removal of grass and soil. Collection of loose tesserae.</i>	Workshop: Conservation of Roman mosaics. <i>Mechanical cleaning: removal of grass and soil. Collection of loose tesserae.</i>
Day 5	Lecture: Protective facing: Need, methods and materials. Workshop: Conservation of Roman mosaics. <i>Securing moving areas: application of facing. Collection of loose tesserae.</i>	Workshop: Conservation of Roman mosaics. <i>Securing moving areas. Collection of loose tesserae.</i>
Day 6	Lecture: Grouting and stabilization of detached and border areas: methods, techniques and materials. Workshop: Conservation of Roman mosaics. <i>Making grouting mixtures and grouting.</i>	Workshop: Conservation of Roman mosaics. <i>Making grouting mixtures and grouting.</i> Lecture: Roman and Late Roman mosaics from Macedonia.
Day 7	Workshop: Conservation of Roman mosaics. <i>Making grouting mixtures and grouting.</i>	Workshop: Documentation and digitization. Turning conservation journals in for feedback.
Day 8	Excursion: Guided visit to Bitola and the ancient city of Heraclea Lyncestis	
Day 9	Excursion: Guided visit to Ohrid: Ancient Lychnidos (UNESCO World Heritage Site) and Ohrid lake	

Day 10	Workshop: Conservation of Roman mosaics. <i>Making grouting mixtures and grouting.</i>	Lecture and workshop: Documentation and digitization. RTI Documentation
Day 11	Lecture: Removal of the facing and adhesive residue: principles, practice, safety Workshop: Conservation of Roman mosaics. <i>Removal of facing materials and thorough cleaning from the adhesive.</i>	Workshop: Conservation of Roman mosaics. <i>Removal of facing materials and thorough cleaning from the adhesive. Assessment of the condition. Update of the documentation.</i>
Day 12	Lecture: Consolidation: Meaning, need, materials and methods. Safety. Workshop: Conservation of Roman mosaics. <i>Consolidation. Mechanical support: edge repairs and lacunae fills.</i>	Workshop: Making mosaics.
Day 13	Workshop: Conservation of Roman mosaics. <i>Consolidation. Mechanical support: edge repairs and lacunae fills.</i>	Workshop: Documentation and digitization.
Day 14	Workshop: Conservation of Roman mosaics. <i>Cleaning the site and preparatory work for the last week.</i>	Workshop: Documentation and digitization. Turning in conservation journals for feedback.
Day 15	Day off	
Day 16	Guided visit to Pella and Vergina (UNESCO World Heritage Site), Greece	
Day 17	Lecture: Retouches and fills: Ethical and aesthetical issues. Methods and techniques. Workshop: Conservation of Roman mosaics. <i>Retouches and in-fills.</i>	Workshop: Conservation of Roman mosaics. <i>Retouches and in-fills.</i>
Day 18	Workshop: Conservation of Roman mosaics. <i>Retouches and in-fills.</i>	Workshop: Conservation of Roman mosaics. <i>Cleaning of the mosaic surface.</i>
Day 19	Workshop: Conservation of Roman mosaics. <i>Cleaning of the mosaic surface.</i>	Workshop: Conservation of Roman mosaics. <i>Cleaning of the mosaic surface. Finishing touches.</i>
Day 20	Workshop: Completion of conservation and documentation tasks. <i>Clean-up of the site and the work stations.</i>	Workshop: Completion of documentation tasks. Turning in written, graphic and photo documentation. Presentation of the Workshop Results and Evaluations
Day 21	Departure	

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

Typical workday

7:00 – 8:30	- Breakfast
8:30 - 13:00 / 13:30	- Lectures and workshops
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

REQUIRED READINGS

PDF files of all mandatory readings will be provided to enrolled students via a shared Dropbox folder. Students are encouraged to download and/or print readings prior to traveling. Course participants are expected to be prepared to engage the discussions led by facilitators, all of whom will be looking for compelling evidence that students have read and thought about the assigned readings prior to the scheduled day on which they are first discussed.

Handbook:

All students will receive a course handbook (in PDF version by e-mail and hard copy upon arrival) with information about the team, and the institutions involved in the project, the site and its historical context, the sites to be visited during the course, the basic methods, practices and techniques to be applied during the lab work, a glossary of terms, etc.

READINGS:

Alberti, L. et al. *Illustrated Glossary: Technician Training for the Maintenance of In Situ Mosaics*, Getty Conservation Institute, Los Angeles, 2013, published online at:
<https://iccm-mosaics.org/publication/illustrated-glossary-technician-training-for-the-maintenance-of-in-situ-mosaics/>

Alberti, L. et al. *Technician Training for the Maintenance of In Situ Mosaics*, Getty Conservation Institute, Los Angeles, 2013, published online at:
http://www.getty.edu/conservation/publications_resources/pdf_publications/tech_training.html

Alberti, L. et al. *Supplemental Manuals for Digital Photographic Documentation*, Getty Conservation Institute, Los Angeles, 2013, published online at:
http://www.getty.edu/conservation/publications_resources/pdf_publications/manuals.html

RECOMMENDED READINGS

Ben Abed, A., M. Demas, T. Roby *Lessons Learned: Reflecting on the Theory and Practice of Mosaic Conservation*, Proceedings of the 9th Conference of the International Committee for the Conservation of Mosaics, 2008, published online at:
http://www.getty.edu/conservation/publications_resources/pdf_publications/lessons_learned_reflecting.html

Biçer-Simsir, B., L. Rainer; *Evaluation of Lime-Based Hydraulic Injection Grouts for the Conservation of Architectural Surfaces*, Getty Conservation Institute, Los Angeles, 2013, published online at:
http://www.getty.edu/conservation/publications_resources/pdf_publications/evaluation_grouts.html

Bruneau, P. - *La mosaïque antique. Lectures en Sorbonne* (Paris: Presses de l'Université de Paris-Sorbonne, 1987).

Caneva, G. et al. *Biology in the Conservation of Works of Art*, 1991, published online at:
<https://www.iccrom.org/publication/biology-conservation-works-art>

Donderer, M. - *Die Mosaizisten der Antike und ihre wirtschaftliche und soziale Stellung* (Erlangen: Universitätsbund Erlangen-Nürnberg, 1989).

Dunbabin, K. M. D. - *Mosaics of the Greek and Roman World* (Cambridge University Press, 1999).

Fischer, P. - *Mosaic: History and Technique* (New York & Toronto: McGraw-Hill, 1971).

Kolarik, R. E. - *The Floor mosaics of Stobi and their Balcan Context* (Diss. Cambridge, Mass. 1981).

Ling, R. J. - *Ancient Mosaics* (London: British Museum, 1998).

Mikulcik, I. - *Стоби. Антички град (= Stobi. An Ancient City)* (Skopje, 2003)

Mosaics 1: Deterioration and Conservation. 1977, published online at:
<https://www.iccrom.org/publication/mosaics-no-1-deterioration-and-conservation>

L'Orange, H. P., P. Nordhagen - *Mosaics from Antiquity to the Early Middle Ages* (London: Methuen, 1966).

Pedeli C., Pulga St. Conservation Practices on Archaeological Excavations. Principeles and Methods. The Getty Conservation Institute, Los Angeles, 2013.

Schmidt, W. GRADOC: graphic documentation systems in mural painting conservation: research seminar, Rome, 16-20 November 1999,
<https://www.iccrom.org/publication/gradoc-graphic-documentation-systems-mural-painting-conservation-research-seminar-rome>

Snively, C. S. - *The Early Christian Basilicas of Stobi. A Study of Form, Function and Location* (Diss. Austin Texas, 1979).

Stanco, F., S. Battiado, G. Gallo - *Digital Imaging for Cultural Heritage Preservation. Analysis, Restoration, and Reconstruction of Ancient Artworks* (New York, 2011).

Wiseman, J. R., D. Mano-Zissi - *Stobi: A City of Ancient Macedonia, Journal of Field Archaeology*, 3, 1976, 269-302.

Roby, T., M. Demas - *Mosaics In Situ: An Overview of the Literature on Conservation of Mosaics In Situ* The Getty Conservation Institute, Los Angeles 2013, published online at:
http://www.getty.edu/conservation/publications_resources/pdf_publications/lit_review.html

PART II: TRAVEL, SAFETY & LOGISTICS

NOTICE OF INHERENT RISK

Traveling and conducting field research can involve risk. 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. Participants should also take every reasonable step to reduce risk while on IFR programs, including following the safety advice and guidelines of your program director, being alert to your surroundings and conditions, letting someone know where you will be at all times, and assessing your personal security.

The IFR does not provide trip or travel cancellation insurance. We strongly encourage participants to consider purchasing this insurance, as unexpected events may prevent your participation or cause the program to be canceled. Insurance is a relatively small cost to protect your educational investment in an IFR program. When comparing trip cancellation insurance policies, 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 unforeseen circumstances, including weather, revisions by local permitting agencies, or conditions onsite. While this schedule represents the intentions of the program, adaptability is an intrinsic part of all field research, and necessary alterations to the schedule may happen at any time.

If you have any medical concerns, please consult with your doctor. For all other concerns, please consult with the program director and staff.

PROGRAM SPECIFIC FIELD CONDITIONS

You should be aware that conditions on the Balkans are different from those you experience in your home, dorms or college town. Note that the 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.

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.

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 not from the USA are asked to check the Macedonian embassy website page at their home country for specific visa requirements.

STUDENT HEALTH

An IFR field school is designed to provide safe, positive, and constructive experiences for participating communities, students, and researchers. We are committed to protocols and practices that support the health and well-being of all involved in our field school projects, including the members of the community in which these projects take place.

We recommend that students adopt best-practices for arriving in a good state of health to protect themselves and their peers' readiness to set about the work of the field school. A thriving field camp environment is a constant exchange of energy, patience, effort, respect, and service. Arriving healthy is every student's first act of service — their first opportunity to behave in a way that respects the safety and wellness of one another.

IFR programs follow the health requirements and guidelines of local health authorities. You may also wish to consult recommendations from the US Centers for Disease Control at:

<https://wwwnc.cdc.gov/travel/destinations/list>

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.

TRAVEL (TO AND DURING THE PROGRAM)

Natural disasters, political changes, weather conditions and various other factors may force the cancellation or alteration of a field school. IFR recommends students only purchase airline tickets that are fully refundable and consider travel insurance in case a program or travel plans must change for any reason. General information for this program is below, but keep in mind we will discuss any updated travel information and regulations during the required program orientation, which could affect travel plans.

Further travel details will be provided during program orientation.

If you missed your connection or your flight is delayed, please call, text or email the field school director immediately. A local emergency mobile phone number will be provided to all enrolled students.

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, drug-stores, 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 not possible to accommodate at this location.

EQUIPMENT LIST

- Comfortable working clothes for both indoor and outdoor activities. Keep in mind the diverse weather conditions (from rainy and cool to sunny and warm)! Don't forget both your raincoats and sunscreen.
- Wide-brim hat.
- A small backpack (for your food, bottle of water, wet wipes, camera, papers etc.)
- Medication - only prescription medicines you may need. All basic non-prescription drugs are available in N. Macedonia.
- A converter to EU type electricity and a wall-plug adapter 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 Macedonian currency is the Macedonian DENAR (MKD). 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 Macedonian notes and coins in circulation at: www.nbrm.mk/?ItemID=C2B15406ABC3BC46B2525F66092FB01D

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. Most of them don't collect a 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 you variable amounts. Ask in advance how much money you will get!

ATMs are available all over the country, 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 while abroad may cost you a lot 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

Emergency in the R. of N. Macedonia

National emergency number is **112**

Police: **192**

Fire brigade: **193**

Ambulance: **194**

Road assistance: **196**