

**PROGRAM OF THE SUMMER SCHOOL “ENVIRONMENT AND ARCHAEOLOGY:
LINKING THE PAST AND THE FUTURE FOR A SUSTAINABLE DEVELOPMENT OF THE
SAMARKAND TERRITORY”**

Acronym of the project: SHARQ (SUMMER SCHOOL SAMARQAND)

Suggested dates and mode of teaching:

- A) online seminars have already been recorded at UNIBO and will be sent to the enrolled Italian students, the Samarkand students and colleagues
- B) 30th May-3rd June 2022: the visit to Samarkand
- C) September 2022 visit to Bologna of a SSU delegation

The program is run by the Department of Agricultural and Food Science (DISTAL), the Department of History and Cultures (DISCI) and the Samarkand Davlat Universiteti (SSU).

ONLINE SEMINARS recorded at UNIBO and sent to the enrolled Italian and Samarkand students and Uzbekistan colleagues:

✓ A: 24 hours in Environmental Science topics_online:

1. Biodiversity for a sustainable environment (6 h)

- a) *The microbial biodiversity in soil and how anthropogenic factors may affect it* (Diana Di Gioia, DISTAL, UNIBO, 2 h)
- b) *Beneficial microorganisms in soil* (Diana Di Gioia, DISTAL, UNIBO, 2 h)
- c) *Application of beneficial microorganisms* (Diana Di Gioia, DISTAL, UNIBO, 2h)

2. Agroecology for a sustainable management of environment potentials (6 h)

- a) *Orchard management for a sustainable fruit production* (Moreno Toselli/ SSU teacher 2h)
- b) *Soil root interaction for an optimal nutrient use efficiency* (Moreno Toselli/SSU teacher 2h)
- c) *Sustainable nutrient management for agricultural crops* (Moreno Toselli/SSU teacher 2h)

3. Agro-biotechnology (6 h)

- a) *Crop domestication: the importance of biodiversity for breeding* (Francesco Spinelli/SSU teacher 2h)
- b) *Applied biotechnologies for the sustainable control of biotic stresses* (Francesco Spinelli/SSU teacher 2h)
- c) *The next-generation plant breeding strategies: selecting the holobiome* (Francesco Spinelli/SSU teacher 2h)

4. Green Economy (6 h)

- a) *Towards sustainable agri-food systems: global challenges to 2030* (Matteo Vittuari, DISTAL, UNIBO, 2 h)

- b) *The policy response for food, farming and the environment* (Matteo Vittuari, DISTAL, UNIBO, 2 h)
- c) *Assessing sustainability and circularity in selected food chains: experiences and case studies* (Matteo Vittuari, DISTAL, UNIBO, 2 h)

ONLINE SEMINARS:

24 hours in Archaeology topics_online:

1. **Method and Theory of Archaeological Research (6 h)**; Andrea Augenti (DISCI / UNIBO)
Antonio Curci
2. **Bio-archaeology (6 h)**; Elena Maini (DISCI / UNIBO)
3. **Landscape Archaeology (6 h)**; Simone Mantellini (DISCI / UNIBO)
4. **Public Archaeology (6 h)**. Tim Williams (University College London, UK)

In situ trips: ARCHAEOLOGICAL AND AGRICULTURAL TRIPS:

✓ B: Analysis of case studies on the Uzbek territory- SAMARKAND

- a) Archaeological site and museum of Afrasiab/ancient Samarkand + National Archaeological museum = 4h
- b) Samarkand Institute of Archaeology, visit to the museum and to the institute, including laboratory for chemical analysis and restoration, etc. = 4h
- c) The Uzbek rangeland, ancient human settlements and abandoned irrigation canals + typical herding + modern farms of intensive horticulture = 4h
- d) Archaeological site of Kafir Kala (approx. 30 min from Samarkand) = 2h, + village with traditional horticulture and architecture = 4h
- e) May 1st Dam, a Soviet hydraulic work that feeds irrigation canals of the whole region, with the local museum and the close archaeological site. The way to the dam crosses the district of Taylak, one of the most important agricultural area of Samarkand with vineyards and wineries.
- f) Visit to farms/factories in the Samarkand territory to explore agricultural solutions adopted in the Uzbekistan territory (to be scheduled with the Samarkand colleagues)

Prof. Muhtor Nasirov of SSU offers the following services:

- lodging availability for student and professors in the new campus dormitory
- one or more translators Russian/Uzbek to English/Italian (either from SSU or Foreigner Language Institute)
- Bus for travels: i.e. Tashkent-Samarkand, Archaeological and Agricultural trips, etc.

- Uzbek professor availability for the selected topics
- possible fund availability for the travel to Italy at the end of the Summer School program

✓ C: *SSU delegation visit to Bologna*