

REGISTRATION

Registration fees: 200 €.

Please, download the registration form:
<http://iuca.unizar.es/idi.php?section=25>
and follow the instructions to complete the course registration.

Financial support to young students.

The Environmental Sciences Institute will give some financial support to young students. The application deadline 2010, 26th September.

Registration deadline: 2010, 19th October.

The entry fee has to be transferred to the bank account before 2010, 19th October.

Bank: Ibercaja.

Account number with IBAN code: ES 82 2085 0111 79 0330788546.

Swift code: CAZRES2Z.

2ND INTERDISCIPLINARY COURSE FOR GRADUATED STUDENTS AND PROFESSIONALS ON CULTURAL HERITAGE

2010, NOVEMBER 2nd - 5th
ZARAGOZA (SPAIN)

Course Coordinator:

Dr. Josefina Pérez-Arantegui (IUCA, University of Zaragoza).

**ENVIROMENTAL SCIENCES INSTITUTE
UNIVERSITY OF ZARAGOZA-SPAIN**

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TO BE HELD IN: Biblioteca María Moliner,
Campus San Francisco,
Universidad de Zaragoza

Colaboran:



FACULTAD DE
FILOSOFÍA Y LETRAS



Organizan:



The course is focused on the development and use of scientific techniques in order to extract archaeological and historical information from the cultural heritage.

The lectures are addressed to students in chemistry, physics, geology, archaeology, conservation science, etc., to acquire a solid knowledge on natural and material sciences applied to the study, safeguarding and authentication of material heritage.

PROGRAM

TUESDAY, 2ND NOVEMBER

11:15: PRESENTATION.

11:30: ANALYTICAL TECHNIQUES IN CULTURAL HERITAGE.
Piero Mirti (*Università di Torino, Italy*).

13:00: Discussion.

15:30: METALS: "Copper production in Prehistory: approaching to early metal technology". Salvador Rovira (*Museo Arqueológico Nacional, Spain*).

17:00: METALS. "Early copper and bronze from an experimental point of view". Salvador Rovira (*Museo Arqueológico Nacional, Spain*).

18:00: Discussion.

WEDNESDAY, 3RD NOVEMBER

9:30: BIOARCHAEOLOGY: "Biomolecular Archaeology - the molecules and isotopes in the archaeological record (bone and pot residues)". Linda Reynard (*University of Oxford, United Kingdom*).

10:30: Coffee break.

11:00: DATATION: "Radiocarbon Dating and Archaeology". Linda Reynard (*University of Oxford, United Kingdom*).

12:00: Discussion.

15:30: GLASS: "Composition, colour and decoration from early vessels to stained windows". Piero Mirti (*Università di Torino, Italy*).

17:00: Discussion.

THURSDAY, 4TH NOVEMBER

9:00: CERAMICS & GLAZES: "Glazed ceramics in the West from 1500 BC to 1500 AD". Michael S. Tite (*University of Oxford, United Kingdom*).

10:30: Coffee break.

11:00: ORGANIC MATERIALS: "Analytical methods based on gas chromatography and mass spectrometry". Francesca Modugno (*Università di Pisa*).

12:30: Discussion.

15:30: ARCHAEOBOTANY: "Plants: cultural and biological heritage". Ernestina Badal (*Universidad de Valencia, Spain*) y Yolanda Carrión (*CIDE - CSIC, Spain*).

17:00: ARCHAEOBOTANY: "Vegetable landscape: climate and cultural changes". Ernestina Badal (*Universidad de Valencia, Spain*) y Yolanda Carrión (*CIDE - CSIC, Spain*).

18:00: Discussion.

FRIDAY, 5TH NOVEMBER

9:30: IMAGES AND CULTURAL HERITAGE: "Realistic image synthesis through simulation of light-matter interaction". Grupo de Informática Gráfica Aplicada, GIGA (*Universidad de Zaragoza, Spain*).

10:30: Coffee break.

11:00: SCIENTIFIC ANALYSIS AND CULTURAL HERITAGE MATERIALS: "Mastering materials - an overview". Michael S. Tite (*University of Oxford, United Kingdom*).

12:00: Discussion.

13:00: CONCLUDING REMARKS.