REGISTRATION

Please use the on-line registration form:
http://eventos.unizar.es/go/CursoSCIENCE-AND-PAST

REGISTRATION PERIOD	DATE	SENIOR REGISTRATION FEE	STUDENT REGISTRATION FEE
Early registration	February 27, 2019	150 €	80 €
Late registration	from February 28, 2017	200 €	100 €

Registration fees include:
- Attendance to course sessions
- Program and course documentation
- Certificate of attendance
- Coffee breaks

TARIFA ESPECIAL
ESTUDIANTES UNIZAR: 20 €

PAYMENT:

Payment (in euro) should be made by bank transfer to:

Bank: Ibercaja
IBAN: ES 82 2085 0111 79 0330788546
Swift code: CAZRES2Z

Please, include clearly your name in the bank transfer boucher

CONFIRMATION OF REGISTRATION:

Your registration will be confirmed when the payment of the registration fee is received (please, send copy of the bank transfer to iuca@unizar.es)

FINANCIAL SUPPORT:

Financial support will be given for a limited number of participants to cover travel expenses in full or partly. Application deadline February 20th 2019.

COURSE COORDINATOR:

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

FURTHER INFORMATION:
Environmental Sciences Institute (IUCA).
University of Zaragoza (Spain)
c/ Pedro Cerbuna, 12. 50009 Zaragoza
Email: iuca@unizar.es
http://iuca.unizar.es Twitter: @IUCAunizar

MARCH 13-15, 2019

University of Zaragoza
(SPAIN)

VENUE: Salón Actos Edificio Matemáticas (Facultad de Ciencias)
Campus San Francisco. University of Zaragoza

ATTENDEES PROFILE

Students, researchers and professionals in **chemistry, physics, geology, biology, archaeology, conservation science, palaeontology**... to acquire a solid knowledge on natural and material sciences applied to the study, safeguarding, conservation and authentication of material heritage

REGISTRATION

http://iuca.unizar.es

Deadline for early registration:
FEBRUARY 27, 2019

Deadline for financial support applications:
FEBRUARY 20, 2019

ORGANIZATION

Environmental Sciences Institute – IUCA
(University of Zaragoza)
Ed. Residencia de Profesores 3º izda.,
C/ Pedro Cerbuna, 12
50009 Zaragoza – Spain
Tel. 34 976 762972
e-mail: iuca@unizar.es
http://iuca.unizar.es
Twitter: @IUCAunizar

Facultad de Ciencias Universidad Zaragoza
iuca
Instituto Universitario de Investigación en Ciencias Ambientales de Aragón Universidad Zaragoza
Universidad Zaragoza 1542

STUDYING AND PRESERVING ORGANIC AND BIOMATERIAL HERITAGE

9th INTERDISCIPLINARY COURSE

The course is focused on the development and use of scientific techniques in order to extract archaeological, historical and conservation information from organic and biomaterials belonging to our cultural heritage. In this edition, special focus will be given on **understand and preserve these type of materials** through an in-depth scientific approach.

The lectures are **addressing to students, researchers and professionals** in chemistry, physics, biology, paleontology, archaeology, conservation science, etc., to acquire a solid knowledge on the state of art of this topic, applied to the study, safeguarding, conservation and authentication of material heritage.

Wednesday, 13th March

11:00. Registration

11:25. Presentation

11:30. From bones and clay to human behaviour. Contributions from the Sima de los Huesos (Atapuerca).

Nohemí Sala (Centro de Investigación sobre la Evolución Humana, CENIEH, Spain)

13:00. Discussion

Lunch

15:00. Ancient DNA: from ultrashort molecules to individuals, populations, species and ecosystems.

Ludovic Orlando (CNRS - Université de Toulouse III, France; Natural History Museum of Denmark, University of Copenhagen, Denmark)

16:30. Molecular and computational methods in ancient DNA research.

Ludovic Orlando (CNRS - Université de Toulouse III, France; Natural History Museum of Denmark, University of Copenhagen, Denmark)

18:00. Discussion

PROGRAM

Thursday, 14th March

10:00. Archaeological chemistry: Detecting Molecules to identify ancient materials.

Maria Perla Colombini (Università di Pisa, Italy)

11:30. Coffee break

12:00. Characterisation of archaeological waterlogged wood by pyrolysis and mass spectrometric techniques: Part 1.

Jeannette Lucejko (Università di Pisa, Italy)

13:00. Discussion

Lunch

15:30 Characterisation of archaeological waterlogged wood by pyrolysis and mass spectrometric techniques: Part 2.

Jeannette Lucejko (Università di Pisa, Italy)

16:30. Discussion

Friday, 15th March

9:30. Characterisation of Asian lacquers: a focus on analytical pyrolysis.

Diego Tamburini (Dep. Scientific Research, The British Museum, United Kingdom)

10:30. Coffee break

11:00. The analysis of natural dyes in a museum context.

Diego Tamburini (Dep. Scientific Research, The British Museum, United Kingdom)

12:00. Discussion and concluding remarks