



Course “The interpretation of World Heritage in Andalusia in the 21st century. Advanced technological solutions in the world today”

Living Lab in the frame of the European project iHERITAGE: Mediterranean Platform for Cultural Heritage of UNESCO with the co-financing of the European Union through the ENI CBC MED Programme.



The course **The interpretation of World Heritage in Andalusia in the 21st century. Advanced technological solutions in the world today** is organised by the Andalusian Public Foundation El legado andalusí (Andalusian Regional Ministry of the Presidency, Public Administration and Interior of the Andalusian Regional Government) with the co-funding of the European Union through the ENI CBC MED Programme (iHERITAGE project: UNESCO's Mediterranean Platform for Cultural Heritage). The course, designed by the Descubre Foundation, is coordinated by the Andalusian Public Foundation El legado andalusí, the Descubre Foundation with the collaboration of the Scientific Culture Unit of the University of Granada.

The iHERITAGE project, of which the Public Foundation El legado andalusí, aims to introduce advanced technological solutions in the monuments declared World Heritage Sites by UNESCO in the Mediterranean area, for their reinterpretation in the world today and their dissemination in the 21st century. In addition, it aims to improve transnational cooperation in accessing UNESCO's Mediterranean cultural heritage and to disseminate it more widely through emerging tools and technologies.

It is aimed at a varied audience, which can include the educational community (undergraduate and postgraduate students, teachers, secondary school students, etc.), art history professionals, tour guides, personnel from the fields of economics and business and, in short, any person interested in new technologies, tourism, art or mathematics.

With these objectives in mind, the course is structured in four blocks.



with the collaboration of



UNIVERSIDAD DE GRANADA

Vicerrectorado de Extensión Universitaria y Patrimonio
Unidad de Cultura Científica

methodology

This **Living Lab** invites interaction. Participants will take an active role in a dialogue with the experts, who will introduce them to the most advanced technologies and methodologies in the interpretation of heritage.

The development of the **Living Lab** will apply virtual methodology, either in real time or recorded on the Google Classroom platform and also with the conduction of questionnaires.

The backbone of the sessions is the practical learning of the different subjects, hence the importance of the student's active participation in the sessions in which dynamics and practical exercises will be introduced in order to get into the contents. Complementary and optional training is offered in the form of face-to-face workshops on practical subjects corresponding to the module 2.3 **“Touching to understand”**, **“3D-printing and laser cutting for digital manufacturing”**, as well as **Mathematical Walk-through Granada 1** and **Mathematical Walk through al-Andalus 1 and 2** within the Module IV.

The course will be held between 1 March and 10 May 2022

The full number of hours covered by the course is **75 hours**, 15 hours of which are face-to-face and non-mandatory. In order to obtain the Living Lab certificate of achievement, it is necessary to participate in 75% of the programmed virtual sessions, either in real time or deferred.

The registration period will be open **between 14th February and 15th April 2022**, until the 45 available places are filled, which will be allocated in order of registration.

REGISTER HERE

module I

presentation

Overall length of module: 3 hours

1.1 Opening.

1.2 Presentation of El legado andalusí Andalusian Public Foundation (depending on the Andalusian Ministry of the Presidency, Public Administration and Interior of the Andalusian Regional Government).

1.3 Presentation of the **iHERITAGE project**: iHERITAGE: Mediterranean Platform for Cultural Heritage of UNESCO, with co-financing from the European Union through the ENI CBC MED Programme..

Creation of the First Register of Intangible World Heritage of the Mediterranean (REIM) within the frame of the Project.

Duration: 3 hours
Date: 1 MAR 2022
Time: 11 a.m. - 2 p.m.



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module II

Overall length of module: 23 hours

technologies and tools for the communication of heritage

2.1 Technological tools for the dissemination of heritage. From the Mathematical Walk to MonuMAI

Conducted by:

Álvaro Martínez Sevilla. Member of the Andalusian Institute of *Data Science and Computational Intelligence* of the University of Granada. Scientific director of the *Mathematical Walks* project.

Duration: 2 hours
Date: 3 MAR 2022
Time: 9 a.m. – 11 a.m.



VIRTUAL MODALITY

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2.2 What is Citizen Science

Conducted by:

Teresa Cruz. Managing Director of Foundation Descubre

Duration: 3 hours
Date: 3 MAR 2022
Time: 11.30 a.m. - 2:30 p.m.



VIRTUAL MODALITY

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2.3 Touch to understand. 3D-printing and laser cutting for digital manufacturing

Conducted by:

Sergio Alonso. Design and digital fabrication. 3D-Models and Digital Fabrication. Department of Languages and Information Systems of the University of Granada. Member of the Andalusian Institute of *Data Science and Computational Intelligence* of the University of Granada.

Duration: 3 hours
Date: 3 MAR 2022
Time: 5.00 p.m. – 8.00 p.m.



ON-SITE MODALITY

Escuela Técnica Superior de Ingenierías Informática y de Telecomunicación (ETSIT). University de Granada.

Aula A1

Calle Periodista Daniel Saucedo Aranda, s/n
18014 Granada (Spain)

2.4 Do-it-yourself. Immersive Reality with Exploria Ciencia. Desktop edition of exhibitions and virtual routes.

/ Exhibition narrative /

Conducted by:

Carolina Moya Castillo. Responsible for Scientific Communication at Descubre Foundation.

Duration: 3 hours
date: 8 MAR 2022
Time: 10 a.m. – 1.00 p.m.



VIRTUAL MODALITY

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/ Photography in 360° /

Conducted by:

Sara Parrilla Cubiella. Responsible for travelling Projects at Descubre Foundation.

Duration: 2 hours
Date: 10 MAR 2022
Time: 9 a. m. – 11 a. m.



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/ Platform Exploria Ciencia. Applying spherical photography and videos in 360° /

Conducted by:

Juan García, Journalist, Department of Image and Communication of UNIA (International University of Andalusia).

Duration: 2 hours
Date: 10 MAR 2022
Time: 11.30 a. m. - 1:30 p. m.



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2.5 MonuMAI. Training the algorithm. Interactive tool to be applied to the monuments visited.

/ What is MonuMAI /

Conducted by:

Álvaro Martínez Sevilla, Mathematician. Member of the research Group *Soft Computing* and Intelligent Information Systems. Scientific director of the project "Mathematical walks through Granada."

Duration: 2 hours
Date: 15 MAR 2022
Time: 9 a.m. – 11 a.m.



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/ The App /

Conducted by:

Rosana Montes. Researcher in the Andalusian Inter-university Institute in *Data Science and Computational Intelligence*. Technological applications DaSCI.

Duration: 2 hours
Date: 15 MAR 2022
Time: 11.30 a.m. – 1.30 p.m.



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/ Citizen Science in MonuMAI /

Conducted by:

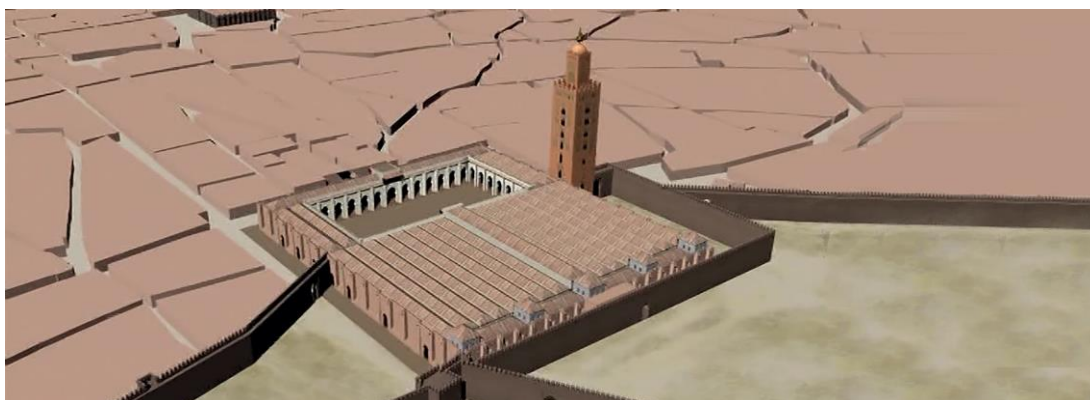
Silvia Alguacil. Responsible for Scientific Dissemination Projects and Web Development IDescubre at Descubre Foundation.

Duration: 1 hour
Date: 17 MAR 2022
Time: 9 a.m. – 10 p.m.



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2.6 Point and discover. The augmented reality for the dissemination of heritage.

Conducted by:

Carlos Ureña Almagro. Professor of Computer Graphics and Augmented Reality. Department of Languages and Information Systems. University of Granada.

Duration: 3 hours
Date: 17 MAR 2022
Time: 10 a.m. – 1 p.m.



VIRTUAL MODALITY

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module III

Overall length of module: 23 hours

innovative strategies for the communication of scientific and technological culture.

3.1 SmartCity, an allied to culture and tourism

Conducted by:

Verónica Ramírez, Andalucía Smart City, director of the I+D cluster Andalucía Smart City.

Duration: 3 hours
Date: 22 MAR 2022
Time: 9 a.m. – 12 p.m.



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3.2 Influence of consumers' personal characteristics on the marketing of services

Conducted by:

Francisco Peco. Professor at the Department of Marketing and Market Research of the University of Granada. Department of Marketing and Market Research.

Duration: 2 hours
Date: 24 MAR 2022
Time: 9 a.m. – 11 a.m.



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3.3 Marketing strategies based on interaction and the generation of experience for marketing services

Conducted by:

Ana Polo. Professor in the Department of Marketing and Market Research Department of the University of Granada.

Duration: 2 hours
Date: 24 MAR 2022
Time: 11.30 a.m. – 1.30 p.m.



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3.4 Digital marketing of scientific and technological cultural products.

Conducted by:

Santiago Molina. CEO Agencia Rockin' Pixels.

Duration: 4 hours
Date: 29 MAR 2022
Time: 9 a.m. – 1.00 p.m.



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3.5 Digital communication of science and social media

Conducted by:

Ana Pérez, Web development and Training Manager at Foundation Descubre.

Ana Rodríguez, Social Media Manager at Foundation Descubre.

Miguel Carrasco, Responsible of Corporate Communication and International Projects. Foundation Descubre.

Duration: 5 hours
Date: 31 MAR 2022
Time: 9 a.m. – 2 p.m.



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3.6 Holography and virtual reconstruction of Monuments

Conducted by:

José Manuel Moreno Domingo. Director of Services BIM en BIMnD España.

Duration: 2 hours
Date: 5 APR 2022
Time: 9 a.m.- 11 a.m.



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3.7 Start-ups are your allies. The case of Aumentur

Conducted by:

Javier Melero. Member of the Andalusian Institute of Data Science and Computational Intelligence of the University of Granada.

Duration: 2 hours
Date: 5 APR 2022
Time: 11.30 a.m. – 1.30 p.m.



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3.8 Scientific Tourism

Conducted by:

Teresa Cruz, Directora Director of Foundation Descubre.

Silvia Alguacil, Expert in scientific dissemination at Foundation Descubre.

Duration: 3 hours
Date: 7 APR 2022
Time: 9 a.m. – 12 p.m.



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module IV

Overall duration of module: 26 hours

mathematical walks

4.1 Introduction to the Walks. The scientific discourse

Conducted by:
Álvaro Martínez.

Duration: 2 hours
Date: 19 APR 2022
Time: 9 a.m. – 11 a.m.



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4.2 Introduction to the Walks. Cultural Management

Conducted by:
Teresa Cruz.

Duration: 2 hours
Date: 19 APR 2022
Time: 11,30 a.m. - 1:30 p.m.



VIRTUAL MODALITY

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4.3 Mathematical Walk through Granada I

Conducted by:
Álvaro Martínez.

Communication Support:

Ana Rodríguez, Silvia Alguacil, Miguel Carrasco and Teresa Cruz.

Duration: 4 hours
Date: 21 APR 2022
Time: to be determined



ON-SITE WALK

4.4 Mathematical Walk through Granada II

Conducted by:
Álvaro Martínez.

Duration: 4 hours
Date: 26 APR 2022
Time: to be determined



VIRTUAL MODALITY

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4.5 Mathematical Walks of al-Andalus in the Alhambra I

Ponente:
Álvaro Martínez.
Communication Support:
Ana Rodríguez, Silvia Alguacil, Miguel Carrasco and Teresa Cruz.

Duration: 4 hours
Date: 28 APR 2022
Date: to be determined



ON-SITE WALK

4.6 Mathematical Walk of al-Andalus pin the Alhambra II

Conducted by:
Álvaro Martínez.
Communication Support:
Ana Rodríguez, Silvia Alguacil, Miguel Carrasco and Teresa Cruz.

Duration: 4 hours
Date: 3 MAY 2022
Time: to be determined



ON-SITE WALK

4.7 Mathematical Walk of al-Andalus. Virtual Mosque and Synagogue of Córdoba.

Conducted by:
Álvaro Martínez.

Duration: 3 hours
Date: 5 MAY 2022
Time: to be determined



VIRTUAL MODALITY

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4.8 Mathematical Walk of al-Andalus. Seville. Virtual Giralda, Real Alcázar and Torre del Oro

Conducted by:
Álvaro Martínez.

Duration: 3 hours
Date: 10 MAY 2022
Time: to be determined



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Image credits:

3d-recreations of Cuarto Real de Santo Domingo (Granada), Mezquita Almohade de Sevilla y Madinat al-Zahra (Córdoba)

All the virtual recreations have been carried out by the School of Arab Studies (CSIC) of Granada in collaboration with the FPA El legado andalusí.

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