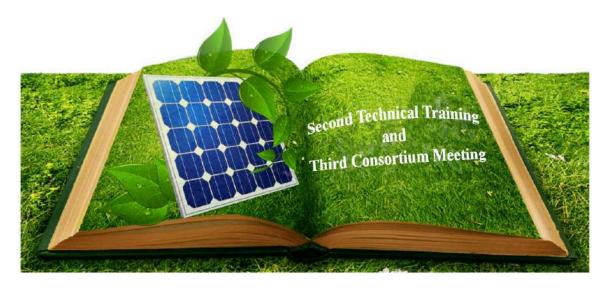




# Erasmus + KA2 Cooperation for innovation and the exchange of good practices Capacity Building in the field of Higher Education



#### Évora, Portugal

November 18-22, 2024

#### Venue:

Palácio do Vimioso, Largo Marquês de Marialva, Apart. 94 | 7002-554 Évora

#### **Contacts:**

Diogo Canavarro: diogocvr@uevora.pt | + 351 912 402 635 👂

André Santos: <u>avas@uevora.pt</u> | +351 910 622 090 S

#### **Participating Institutions:**

- Tashkent University of Information Technology (TUIT), Uzbekistan
- Politecnico Di Torino (PoliTO), Italy
- Universidade de Évora (UEVORA), Portugal
- Universidad Politécnica de Madrid (**UPM**), Spain
- Turin Polytechnic University in Tashkent (TTPU), Uzbekistan
- Jizzakh polytechnic institute (JizPi), Uzbekistan
- Fergana Polytechnic Institute (FerPi), Uzbekistan
- Andijan state university (ASU), Uzbekistan
- Tashkent Institute of Irrigation and Agricultural Mechanization Engineers Institute (TIIAME), Uzbekistan
- Karakalpak State University (KSU), Uzbekistan
- Ministry of Higher Education, Science, and Innovations of the Republic of Uzbekistan (MHSSERUZ)





### Scope and organization of the training

The DEBSEUz project aims to develop a new bachelor degree and courses in the field of solar energy. In addition, in order to enhance the collaboration with institutional and industrial stakeholders, the project aims to develop labs and co-working spaces. The DEBSEUz proposal considered an initial set of courses to be developed, listed below:

- 1. Technological measurements and instruments of the industry
- 2. Electronic technical materials and elements
- 3. Electrical technological devices
- 4. Solar Power
- 5. Optical and physical properties of semiconductor materials
- 6. Design of energy devices and stations based on alternative energy
- 7. Hybrid solar power plants
- 8. Production, transmission and distribution of electrical energy
- 9. Solar thermal devices and systems
- 10. Technology for the preparation of solar elements, photoelectric batteries and their component devices
- 11. Energy storage methods and devices
- 12. Design of new technical developments based on alternative energy

The first training section was organized by PoliTO, and it happened on May 20-24, 2024, in Turin, Italy. The training on remainder courses will be organized in Évora and Madrid according to the plan of the project.

The Évora Training Sessions will focus on important topics to provide background and knowledge to future students of the DEBSEUz bachelor. In addition, this training will provide most interesting educational approaches with practices, labs, group projects to provide capacity skills. These sessions will foresee the following courses:

- E1 Thermal Energy Storage Systems (UEVORA).
- E2 Photovoltaic and Electrical Storage Systems (UEVORA).
- E3 Solar Thermal Technologies (UEVORA).
- E4 Solar Radiation: measurement and data (UEVORA).
- E5 Water Production and Treatment (UEVORA).
- E6 Energy storage methods and devices (UPM).
- E7 Design of new technical developments based on alternative energy (UPM).
- E8 Mechanical and thermodynamic aspects of large-scale energy storage (PoliTO).

The training will also include a technical visit to research infrastructures of the Renewable Energy Chair of UEVORA: (1) Évora Molten Salts Platform (EMSP), (2) Évora Solar Concentrator Testing Platform (ESCTP), (3) Experimental Grid for Batteries and Photovoltaic Systems (SOLGRID), and the Solar Desalination and Water Treatment Platform.





The rest of this document has the following list of contents:

- Agenda
- List of Participants
- o Training Sessions Contents
- Practical Informations





## **Meeting Agenda**

The agenda of the meeting is the following:

## November 17th, 2024

Arrival and check-in of the participants in the hotels

## November 18th, 2024 – Technical Training DAY 1

09:00 – 09:30	Meeting at 09:00 at Palácio do Vimioso main entrance Palácio do Vimioso, Largo Marquês de Marialva, Apart. 94   7002-554 Évora <a href="https://maps.app.goo.gl/foyDHUveyhpt4Qk18">https://maps.app.goo.gl/foyDHUveyhpt4Qk18</a> then registration at the ROOM 205		
09:30 – 10:30	Opening welcome and presentation to the training week  - Welcome address from Project Coordinator - Halimjon Khujamatov, TUIT.  - Keynote speech from Pedro Horta, Head of the Renewable Energy Chair, UEVORA.  - Presentation of the training week, Diogo Canavarro, UEVORA.		
10:30 -11:00	Coffee Break		
11:00 – 12:30	Module E4 (ROOM 205) Solar Radiation: measurement and data  - Afonso Cavaco, University of Évora, Portugal		
12:30-14:00	Lunch break @ Nã T'acho Restaurante Atípico (see Practical Informations)		
14:00 – 15:30	Module E2 (ROOM 205)  Photovoltaic and Electrical Storage Systems - Part I  Ana Foles and José Silva, University of Évora, Portugal		
15:30 – 16:00	:30 – 16:00 Coffee Break		
16:00 – 17:30	Module E2 (ROOM 205)  Photovoltaic and Electrical Storage Systems - Part II  Ana Foles and José Silva, University of Évora, Portugal		
20:00	Free Dinner		

## **November 19th, 2024 – Technical Training DAY 2**

00.00 10.30	Module E3 (ROOM 205)
09:00 – 10:30	Solar Thermal Technologies - Part I
	<ul> <li>Diogo Canavarro, University of Évora, Portugal</li> </ul>
10:30 -11:00	Coffee Break
	Module E3 (ROOM 205)
11:00 – 12:30	Solar Thermal Technologies - Part II
	<ul> <li>Diogo Canavarro, University of Évora, Portugal</li> </ul>
12:30-14:00	Lunch break @ Nã T'acho Restaurante Atípico (see Practical Informations)
14:00 – 15:30	Module E1 (ROOM 205)





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- Radia Cadi and Tiago Eusébio, University of Évora, Portugal

15:30 -16:00 Coffee Break

16:00 – 17:30 Module E1 (ROOM 205)

Thermal Energy Storage Systems - Part II

- Radia Cadi and Tiago Eusébio, University of Évora, Portugal

20:00 Free Dinner

## **November 20th, 2024 – Technical Training DAY 3**

09:00 - 10:30	Module E6 (ROOM 205)  Energy storage methods and devices  - Liliana Medic and Slobodan Bojanic, Universidad Politécnica de Madrid, Spain		
10:30 -11:00	Coffee Break		
11:00 – 12:30	Module E7 (ROOM 205)  Design of new technical developments based on alternative energy  - Liliana Medic and Slobodan Bojanic, Universidad Politécnica de Madrid, Spain		
12:30-14:00	Lunch break @ Nã T'acho Restaurante Atípico (see Practical Informations)		
14:00 – 15:30	Module E5 (ROOM 205)  Water Production and Treatment - Part I  Helena Novais and Frederico Felizardo, University of Évora, Portugal		
15:30 -16:00	Coffee Break		
16:00 – 17:30	Module E5 (ROOM 205)  Water Production and Treatment - Part II  Helena Novais and Frederico Felizardo, University of Évora, Portugal		
20:00	Free Dinner		

## November 21th, 2024 – Technical Training DAY 4

09:00 – 10:30	Module E8 (ROOM 205)  Mechanical and thermodynamic aspects of large-scale energy storage  - Marco Cavana and Pierluigi Leone, Politecnico Di Torino, Italy
10:30 -11:00	Coffee Break
11:00 – 12:30	Module E8 (ROOM 205)  Mechanical and thermodynamic aspects of large-scale energy storage  – Marco Cavana and Pierluigi Leone, Politecnico Di Torino, Italy
12:30-14:00	Lunch break @ Nã T'acho Restaurante Atípico (see Practical Informations)
14:00 – 15:30	Consortium Meeting – Part I





-	WP1: Project manageme	nt and coordination (TUIT)
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- o The Narrative and Financial report 1 (TUIT)
- WP2: Data collection and staff skills enhancement (UEVORA)
- WP3: Bachelor Degrees organization (UPM)
  - Development of 12 new courses with lectures and laboratory works (All partners)
  - Organize two bachelor's degree programs at three Uzbek universities and modernize curricula at four universities (UPM, FerPi, MHSSERUZ)

#### 15:30 -16:00 Coffee Break

16:00 - 17:30

#### **Consortium Meeting - Part II**

- WP4: Establishment of laboratories and centers (PoliTO)
  - o Purchase of laboratory equipment for partner universities (POLITO and ASU)
- WP5: Quality Control and Monitoring (TTPU)
  - o External Quality Report 1 (TTPU)
  - WP6: Dissemination and Sustainability (FerPI)
    - o Report of National Conference 1 (FerPI, KSU)
    - o Implementation of Dissemination Plan (FerPI, KSU)

November 22th, 2024 – Technical Training DAY 5			
09:00-09:30	Travel Évora → Mitra Bus stop: <a href="https://maps.app.goo.gl/nX5bcFe1dFF4dUN87">https://maps.app.goo.gl/nX5bcFe1dFF4dUN87</a>		
Technical Visit: Renewable Energy Chair research infrastructures:  - Évora Molten Salts Platform - Évora Solar Concentrator Testing Platform - Experimental Grid for Batteries and Photovoltaic Systems - Solar Desalination and Water Treatment Platform			
12:00-12:30	Travel Mitra → Évora		
12:30-14:00	Lunch break @ Nã T'acho Restaurante Atípico (see Practical Informations)		
14:00 – 15:30	Wrap up & discussion of the training (Amphitheater 111 – Palácio do Vimioso)  - Lessons learned - Next trainings in Madrid		
20:00	Free Dinner		





## **List of participants**

The full list of participants was the following:

	Tashkent University of Information Technology (TUIT), Uzbekistan		
1	Makhkamov Bakhtiyor Shukhratovich	Rector	
2	Tashev Komil Akhmatovich	Vice-rector for Scientific Affairs and Innovations	
3	Sultanov Djamshid Bakhodirovich	Vice-rector for Academic Affairs	
4	Khujamatov Halimjon	Associate Professor	
5	Imamov Erkin Zununovich	-	
6	Khasanov Doston	-	
7	Toshtemirov Temirbek Kodirjon Ugli	-	
8	Mamanazarov Shukrullo	-	
9	Pisetskiy Yuriy Valerevich		
Politecnico di Torino (PoliTo), Italy			
1	Pierluigi Leone	Full Professor	
2	Marco Cavana	Assistant Professor	
	Universidad Politécnic	a de Madrid (UPM), Spain	
1	Slobodan Bojanic	Professor	
2	Liliana Medic	Professor	
	Turin Polytechnic University	in Tashkent (TTPU), Uzbekistan	
1	Usmonov Maksudjon	-	
2	Mavlyanova Shakhlo	-	
3	Fazliddinov Shokhrukh	-	
	Jizzakh polytechnic institute (JizPi), Uzbekistan		
1	Temur Berdiyorov	Associate Professor	
2	Khasan Abdiev	-	
3	Otabek Arzikulov	-	





Fergana Polytechnic Institute (FerPi), Uzbekistan		
1	Jakhongirov Ilimdorjon	Vice Rector
2	Akmaljon Kuchkarov	-
3	Ismailov Nodirbek	-
4	Nazarov Utkirjon	-
5	Makhmudov Osimkhon	-
	Andijan State Unive	ersity (ASU), Uzbekistan
1	Aliev Rayimjon	Professor
2	Kurbanov Azizjon	-
3	Eraliyev Abduhalil	PhD Student
Tashkent Institute of Irrigation and Agricultural Mechanization Engineers institute (TIIAME),  Uzbekistan		
1	Siddikov Ilkhomjon Khakimovich	Professor
2	Kodirov Dilshod Botirovich	Head of Department
3	Izzatillaev Jurabek Olimjonovich	Associate professor
	Karakalpak State Uni	versity (KSU), Uzbekistan
1	Reymov Kamal Mambetkarimovich	Associate Professor, Head of Department
2	Kamalov Khayratdin Usnatdinovich	Associate Professor
3	Ismaylov Kanatbay Abdreymovich	-
Ministry of higher education, science, and innovations of the Republic of Uzbekistan (MHSSERUZ)		
1	Muydinov Dilshod Najmiddinovich	Head of Department
	Universidade (	de Évora, Portugal
1	Diogo Canavarro	Auxiliary Researcher
2	André Santos	PhD Student
3	Afonso Cavaco	Auxiliary Researcher
4	Helena Novais	Auxiliary Researcher





5	Frederico Felizardo	Assistant Researcher
6	Radia Cadi	Auxiliary Researcher
7	Tiago Eusébio	Assistant Researcher
5	Ana Foles	Auxiliary Researcher
6	José Silva	Auxiliary Researcher





### **Training Sessions Content**

The modules to be developed in the Évora Training Session are:

- E1 Thermal Energy Storage Systems (UEVORA).
- E2 Photovoltaic and Electrical Storage Systems (UEVORA).
- E3 Solar Thermal Technologies (UEVORA).
- E4 Solar Radiation: measurement and data (UEVORA).
- E5 Water Production and Treatment (UEVORA).
- E6 Energy storage methods and devices (UPM).
- E7 Design of new technical developments based on alternative energy (UPM).
- E8 Mechanical and thermodynamic aspects of large-scale energy storage (PoliTO).

The detailed list of contents for each module are described as follows.

#### • E1 - Thermal Energy Storage Systems

Speakers: Radia Cadi and Tiago Eusébio

#### 1) Introduction to Thermal Energy Storage

- a) Overview of Thermal Energy Storage Systems
- b) Importance and Benefits of TES

#### 2) Types of Thermal Energy Storage

- a) Sensible Heat Storage
- b) Latent Heat Storage
- c) Thermochemical Energy Storage
- d) Principles, materials, and Heat Transfer Mechanisms

#### 3) Key components and materials in TES systems:

- a) Tanks and Storage Mediums: impact of storage mediums (e.g., water, salt, PCM) on TES system efficiency and applicability
- b) Heat Exchangers: role in transferring energy efficiently within TES systems
- c) Insulation Materials: importance of minimizing energy losses through effective insulation.

#### 4) TES Integration with Renewable Energy Systems

a) Synergy between TES and other renewable energy sources (such as solar, wind, and biomass. By effectively storing excess energy produced during peak periods, TES enables a more stable and consistent energy supply, addressing the intermittent nature of renewables. This integration not only enhances system efficiency but also promotes greater adoption of renewable technologies by improving their reliability and flexibility.





#### 5) Advanced TES Technologies and Innovations:

The field of TES is continually growing, with new materials and innovative system designs advancing to push the boundaries of performance and efficiency. This section focuses on the latest advancements in TES technology, including cutting-edge materials, hybrid systems, and novel design approaches aimed at creating scalable and more reliable solutions.

- a) Emerging Materials and Technologies: New materials and technologies for improving TES performance.
- b) Hybrid TES Systems: Combining different technologies for enhanced performance (Carnot Battery example)
- c) Innovations in TES System Design: Innovative approaches to design more efficient, reliable, and scalable TES solutions.

#### 6) Conclusion and Q&A

- a) Summary: Recap the key points covered in the presentation.
- b) Q&A Session: Open the floor for questions and discussions to clarify any doubts and engage with the audience.

#### • E2 - Photovoltaic and Electrical Storage Systems

Speakers: Ana Foles and José Silva

#### 1) Introduction:

 a) Context on global electrification rate and the contribution of renewable energies for energy demand, global warming and the need to decarbonize energy.

#### 2) Standard Test Conditions (STC)

a) Definition of the standard test conditions used to assess and compare the efficiency of photovoltaic modules

#### 3) Photovoltaic (PV) cell operation and parameters

- a) solar cell diode model and main solar cell parameters
- b) n-p junction and diode structure
- c) I-V characteristic
- d) series and shunt resistances;
- e) P-V curve and Maximum Power Point
- f) impact of radiation and temperature on the I-V curve

#### 4) Solar cell structure:

a) description of the different solar cell regions and respective roles





#### 5) From the solar cell to a PV module

a) different components of a PV module

#### 6) PV technologies:

- a) main photovoltaic technologies in the market and emerging technologies;
- b) Solar cell efficiency chart

#### 7) PV systems project:

- a) identification of system requirements
- b) site assessment; design and sizing; Balance of system (BOS)
- c) Equipment selection

#### 8) Economic analysis of PV Systems

- a) CAPEX and OPEX;
- b) LCOE and Payback time

#### 9) Energy storage – electric, electrochemical I

- a) relation of the characteristics of the energy storage technologies that are coupled with solar PV and their suitability response (power vs. discharge time) to different applications
- b) general composition of a battery cell
- c) anode, cathode, electrolyte
- d) battery storage types and main materials composition
- e) explanation of battery storage metrics: energy density (specific energy)

#### 10) Energy Storage – Electric, Electrochemical II

- a) Overview of the characteristics of energy storage technologies coupled with solar PV and their suitability response (power vs. discharge time) to different applications
- b) General composition of a battery cell: anode, cathode, electrolyte
- c) Types of battery storage and their main material compositions
- d) Explanation of battery storage metrics: energy density (specific energy)

#### 11) Batteries – Major Properties:

- a) Explanation of the major properties of battery storage
- b) Representation of battery market technologies
- c) Critical and non-critical material requirements for the current composition of lithium-ion batteries
- d) Use-case application example: Off-grid solar PV and battery system to supply energy to an island
- e) Composition, advantages, and disadvantages of flow batteries.





#### 12) Non-Battery Energy Storage

- a) Explanation of existing non-battery energy storage technologies such as flywheels, compressed air, hydro, and pumped hydro: general operation, advantages, and disadvantages.
- b) Demonstration of three other examples of new energy storage concepts

#### 13) Conclusion

- a) Obstacles to solar photovoltaic and electric energy storage
- b) Advantages of solar photovoltaic and electric energy storage

#### 14) Annex: Software

 Sharing of website links/tools that could assist in the design of related solar PV analysis, solar PV and battery analysis, and other related projects

#### • E3 - Solar Thermal Technologies

Speakers: Diogo Canavarro

- 1) Nature of light
- 2) Solar Resource
- 3) Solar Energy Conversion
- 4) Heat Losses
- 5) Solar Thermal collectors
  - a) Flat plate collectors
  - b) Solar dryers
  - c) Line focus collectors (PTC, Fresnel)
  - d) Point focus collectors (Dish, Tower)
- 6) Heat Balance Equation
- 7) Performance of Solar Collectors
- 8) Dimensioning Principles
- 9) Exercise

#### • E4 - Solar radiation: measurement and data

Speaker: Afonso Cavaco

#### 1) Importance of solar radiation data:

- a) Why does solar radiation matter?
- b) Variability, uncertainty, usage of solar radiation for plant design

#### 2) Solar Radiation Resource Concepts

a) Solar radiation spectrum,





- b) Solar cycles
- c) Solar radiation interaction with atmosphere,
- d) Solar radiation variability (spatial and temporal)

#### 3) Measuring Solar Radiation

- a) Solar radiation measuring instruments (pyranometers and pyrheliometers)
- b) Installation, working principles and O&M
- c) Data quality

#### 4) Forecasting Solar Radiation

a) Forecasting methods

#### 5) Data sources

a) Solar radiation available databases and some references

#### • E5 - Water Production and Treatment:

Speakers: Maria Helena Novais and Frederico Felizardo

#### 1) Water scarcity and water quality decrease

- a) Challenges of water scarcity and declining water quality, namely the trends in water consumption
- b) Pressures on water resources, contaminants in aquatic environments (including emerging contaminants)
- c) Sustainable water management practices

#### 2) EU Legislation on Water:

- a) European regulatory frameworks, policies and initiatives to ensure water availability in terms of quantity and quality,
- b) Aquatic ecosystems' ecological integrity
- c) Water Framework Directive (WFD, 2000/60/EC)
- d) Drinking Water Directive (Directive 2020/2184)

#### 3) Urban Water Cycle

- a) Comprehensive understanding of the urban water cycle
- b) conventional water production and wastewater treatment technologies.
- c) Water-Energy Nexus in the Urban water cycle
- d) Relationship between water and energy resources

#### 4) Solar desalination and brine valorization

- a) Overview of both conventional and advanced desalination processes supported by solar energy
- b) The concept of brine valorization





c) Zero Liquid Discharge (ZLD) principle

#### 5) Solar water treatment

- a) Overview of solar-powered water treatment technologies
- b) Sustainable approaches and innovative solutions
- c) Solar reactors and photochemical processes
- d) Solar-driven photocatalysis

#### • E6 - Energy storage methods and devices (UPM):

Speakers: Liliana Medic and Slobodan Bojanic

• E7 - Design of new technical developments based on alternative energy (UPM):

Speakers: Liliana Medic and Slobodan Bojanic

• E8 - Mechanical and thermodynamic aspects of large-scale energy storage (PoliTO):

Speakers: Marco Cavana and Pierluigi Leone





#### **Practical informations**

#### Arrival in Évora

From the Lisbon Airport: https://maps.app.goo.gl/7DxsXEBgg111aj5BA

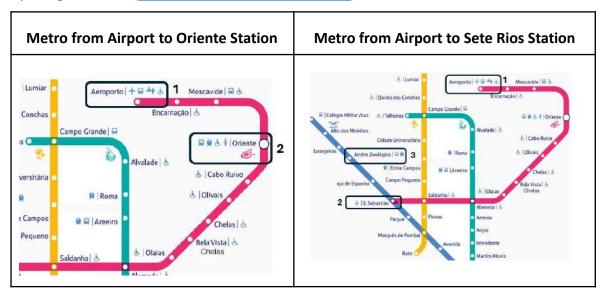
You can take a FlixBus directly from the airport to Évora by selecting the Lisbon (Airport) -> Évora route. However, the schedule is limited, with only a few buses running each day. For more details, please visit: <a href="https://global.flixbus.com">https://global.flixbus.com</a>.

Very close to the Airport main entrance/exit, there is a Metro (Subway) Station (<a href="https://maps.app.goo.gl/poMTDg3HMBwpZsfPA">https://maps.app.goo.gl/poMTDg3HMBwpZsfPA</a>) where you can start the journey to Évora by public transportation. The two main options for the travel to Évora are by **Oriente** and **Sete Rios** stations. Please, see the figure below. Of course, Taxis are always available at the Airport main entrance/exit.



Inside the Airport Metro Station you can buy the tickets at the vending machines: <a href="https://www.metrolisboa.pt/en/wp-content/uploads/sites/3/2018/03/TicketVendingM">https://www.metrolisboa.pt/en/wp-content/uploads/sites/3/2018/03/TicketVendingM</a> achines HowToBuy Carris-MetroTicket.pdf.

By using the Metro(<a href="https://www.metrolisboa.pt/en/">https://www.metrolisboa.pt/en/</a>):







For the case in the right picture, you will need to walk (2-3 minutes) from the *Jardim Zoológico* Metro Station to the **Sete Rios** Station to then take a Train or Bus to Évora.

Whether in Oriente or Sete Rios station, you can take the Train or Bus to Évora.

By Train, Comboios de Portugal (CP) tickets can be purchased online by the website: (https://www.cp.pt/passageiros/en) or by the free App for iOS and Android (https://www.cp.pt/passageiros/en/cp-app). By Bus, RedeExpresso tickets can be purchased online – or or by the free App for iOS and Android. For more details, please visit: https://rede-expressos.pt/en. In addition to these online options, train and bus tickets can be purchased at the local sale points of each company (CP and RedeExpresso) at each station. Furthermore, only in Oriente Station you can take a FlixBus to Évora. For more details, please visit: https://global.flixbus.com.

Please, pay attention to selecting the correct route. For example, for the Oriente Station, the tickets have the origin and destination as Lisboa (Oriente) and Évora, respectively.

Note: The trains to Évora are very sparse. Please check the schedule tablelist carefully if you decide to come by train.

Once in Évora (Train Station or Bus Station) you can take a Taxi, Uber, or Bolt to your Hotel. An app to call for a Taxi is available at <a href="https://www.izzymove.pt">https://www.izzymove.pt</a> (but the app is in Portuguese).

If you are not entering Portugal by the Lisbon Airport, please let us know so that we can provide you with specific directions.

#### **Accommodation:**

Moov Hotel Évora (\*\*): <a href="https://hotelmoov.com/hoteis/evora/hotel-moov-evora/">https://hotelmoov.com/hoteis/evora/hotel-moov-evora/</a>

Hotel Riviera (\*\*\*): <a href="http://www.riviera-evora.pt/">http://www.riviera-evora.pt/</a>

The Noble House (\*\*\*\*): <a href="https://thenoblehouse.pt/pt/hotel">https://thenoblehouse.pt/pt/hotel</a>

Hotel Ibis (\*\*\*): https://www.accorhotels.com/pt/hotel-1708-ibis-evora/index.shtml

Hotel Dom Fernando (\*\*\*): <a href="http://www.hoteldomfernando.com/">http://www.hoteldomfernando.com/</a>

Hotel Vila Galé Évora (\*\*\*\*): www.vilagale.com/pt/hoteis/alentejo/vila-gale-evora

Évora Olive Hotel (\*\*\*\*): https://evora.luxhotels.pt

#### Venue:

#### Évora

Évora is surrounded by the Alentejo, a region of sun-baked olive groves, fortified towns and traditional villages, all of which are a joy to explore from Évora. Évora and the Alentejo offer a truly unique Portuguese experience, with a distinctive heritage,





delicious regional cuisines and an infectious unhurried pace of life, a consequence of the sweltering hot summer months.

Évora may not be as famous or instantly recognisable as other larger Portuguese cities, but it is a destination that should be high on the list of locations to visit while on holiday in Portugal. This article will provide an introduction to Évora and is divided into three sections; the first section is tourist information, the second section contains practicalities including travel and weather information, and the third section provides details of the main tourist attractions.

Information: <a href="https://www.evora-portugal.com/index.html">www.evora-portugal.com/index.html</a>

#### University of Évora

The University of Évora is a public institution of higher education whose origins date back to 1559. After being closed in the 18th century, the university reopens in 1979. At the present time, it is organized in departments which are grouped in schools related to specific scientific domains, such as:

- Arts
- Social Sciences
- Technology Sciences
- Health

The São João de Deus School of Nursing, a public polytechnic institute of higher education, became part of the University of Évora in 2004.

Website: www.uevora.pt www.catedraer.uevora.pt

#### Palácio do Vimioso



Address: Largo Marquês de Marialva, Apart. 94 | 7002-554 Évora https://maps.app.goo.gl/fovDHUveyhpt4Qk18





#### Lunch at Nã T'acho Restaurante Atípico

https://natachorestauranteatipico.eatbu.com/?lang=en

Address: https://maps.app.goo.gl/wqPsveW11EmkoY4G8.



On monday, we all will have an oven-roasted pork loin with roasted potatoes. The à la carte is not available on this day , as the restaurant is usually closed on mondays at lunch and will open only to us. The daily menu for the week between Nov 19-22:



#### Daily Menu 19/11 a 22/11

TERÇA BACALHAU ESPIRITUAL

QUARTA ENTRECOSTO NO FORNO

QUINTA PESCADA COZIDA COM LEGUMES

SEXTA CARNE DE PORCO À PORTUGUESA

SOPA+PRATO+BEBIDA+CAFÉ-12,50€

SUGESTÃO DO CHEF

ABANICOS DE PORCO PRETO COM MIGAS DE ESPARGOS MOUSSE DE CHOCOLATE COM FLOR ÉDE SAL E AZEITE PLANSEL TOURIGA FRANCA

nã t'acho

Tuesday: Creamy Baked Codfish

Wednesday: Oven-Baked Pork Ribs

Thursday: Boiled Hake with Vegetables

Friday: Portuguese-Style Pork

Soup + main course + drink + coffee - 12.50 €

#### Chef's Recommendation

- Iberian Pork Abanicos with Asparagus Migas
- Chocolate Mousse with Sea Salt and Olive Oil (Desert)
- · Plansel Touriga Franca (Wine)

The à la carte menu:

 $\frac{https://drive.google.com/file/d/1cAxhglZNhl5B5uSz4KzwBxmuvkzxAw-e/view?usp=sharing.}{}$ 





# Technical visit to INIESC Infrastructures (Mitra Pole of the University of Évora) November 22, 2024

The Mitra Campus of the University of Évora is located in Valverde, approximately 12 km from the city of Évora. At this campus, the Renewable Energy Chair facilities on solar energy research are located: INIESC Infrastructures.

The INIESC infrastructure aims to develop solar-driven technological solutions for the decarbonization of different sectors of the economy, in order to enhance the contribution from solar energy to the current energy transition scenario. Allowing the development of technologies and applied research activities promoting the use of solar energy in the decarbonization of different economic sectors, INIESC mission is to provide technical-scientific support for the demonstration of technologies that fully fit into this field. See more in: <a href="https://www.iniesc.uevora.pt">https://www.iniesc.uevora.pt</a>.



The University of Évora will offer round-trip bus transportation to Mitra. The pickup location in Évora can be found here: <a href="https://maps.app.goo.gl/nX5bcFe1dFF4dUN87">https://maps.app.goo.gl/nX5bcFe1dFF4dUN87</a>. The bus will depart for Mitra at 09:00 on November 22, 2024, as outlined in the Week's Agenda.

#### **Free Dinner**

Évora's historic center has many restaurants, and the options for dinner during the week are quite varied.

One important point should be mentioned. Typically, these restaurants are small and can hardly accommodate 30 people arriving at once. Therefore, it is recommended to divide into groups to enhance your experience throughout the week. Additionally, it is suggested to make reservations in advance to secure your spots.