



# Erasmus+ Project: "Development of practically-oriented studentcentred education in the field of modelling of Cyber-Physical Systems"(CybPhys)

Project 609557-EPP-1-2019-1-LV-EPPKA2-CBHE-JP

**Student Mobility and Training Event** 

University of Cyprus, Nicosia, Cyprus January 30 – February 10, 2023









#### Visa Requirements:

Please consult with the indicated embassy and follow all procedures and timelines to apply for a visa, in case needed.

#### **Location**

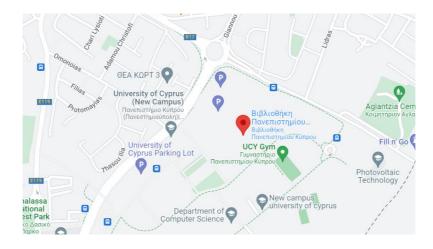
The venue/laboratory where each lecture will take place is indicated in the schedule below. LRC 014 and LCR 019 are located in the Learning Resource Center UCY Library "Stelios loannou," while SFC03 is located in the Social Facilities Center 03, where the KIOS Research and Innovation Center of Excellence (CoE) is also located. B101 is located in the Common Teaching Facilities building ( $X\Omega\Delta02$ ).

#### Prerequisites:

Participating students should be in their third year of their undergraduate studies in an Engineering field. The student mobility and training event, which is organized by the University of Cyprus, includes a wide range of lectures, hands-on activities and projects. All participants are highly encouraged to bring their own laptops.

#### **First Day Meeting Location:**

On Monday, January 30, 2023, at 9:30 am, a member of the local organizing committee will meet students at the main entrance of the <u>Learning Resource Center, UCY Library "Stelios</u> <u>Loannou"</u> (LRC). For the LRC location, please use the following link:











## **Connection link for the online students:**

### https://meet.google.com/noc-ksdq-kud?hs=224

#### **Schedule of Events:**

Day & Location	Activity	Instructor
Sunday, January 29,	Arrival in Nicosia, Cyprus	Stella
2023		Hadjistassou
Monday, January 30, 20	023	
(LRC 014)		
9:30-10:30am	Coffee Break and Registration	
10:30-11:00am	Introduction to UCY/KIOS CoE	Irina Ciornei
11:00-11:45am	Introduction to the Main Goals of the Student	Stella
	Training Event at UCY	Hadjistassou,
	Prerequisites and Software to Install:	Irina Ciornei,
	Matlab/Simulink/Simscape/Electrical/Specialized	& Hanna Hnatova
	Power Systems/EPANET Matlab Toolkit	
12:30pm	Lunch Break (TBD)	
14:00-16:00	Advanced Technical Communication	Dr. Stella
		Hadjistassou
Tuesday, January 31, 20 (LRC 014)	)23	
9:00-12:30am	1. History of Electric and Hybrid Vehicles	Prof. Andrii
	2. Classification of Electric Vehicles	Hnatov (KhNAHU)
12:30pm	Lunch Break	
14:00-16:00	Advanced Technical Communication	Dr. Stella
		Hadjistassou
Wednesday, February 1	., 2023	
(LRC 019)	I	Γ
9:00-12:30am	3. Economic and Environmental Impact of EV	Prof. Andrii
	4. The Electric Motor/Generator	Hnatov (KhNAHU)
12:30pm	Lunch Break	
14:00-15:00	Learning Resource Center, UCY Library "Stelios	UCY Student
	Ioannou" Tour & Campus Tour	Ambassador









15:00-16:00	5. The High-Voltage Battery	Prof. Andrii
		Hnatov (KhNAHU)
Thursday, February 2,	2023	
(LRC 019)		1
9:00am-12:30pm	Power Quality Assessment in Active Distribution	Dr. Irina Ciornei
	Grids Using Data Science Models	
	Project: Matrix Profile for Abnormality Detection	
12.20	in Power Quality Assessment	
12:30pm	Lunch Break Advanced Technical Communication	Dr. Stella
14:00-16:00	Advanced Technical Communication	
7:00pm	Dinner (Courtesy of UCY - Venue TBA)	Hadjistassou
· · · ·		
Friday, February 3, 202	23	
9:00am-12:00pm	Walking Tour in the Center of Old Nicosia	UCY Staff (Stella)
February 4-5, 2023	Weekend	
	Free Time	
Monday, February 6, 2	2023	
(Β101-ΧΩΔ02)		-
9:00 - 12:30pm	Integration of Renewable Energy Resources	Research Lecturer
	Part 1	Lenos
		Hadjidemetriou
12:30pm	Lunch Break	
14:00-16:00	Advanced Technical Communication	Dr. Stella
		Hadjistassou
Tuesday, February 7, 2	2023	
(105-SFCO3)		
9:00- 12:30pm	Hands-on Training on Matlab	Dr. Stelios
		Vrachimis
	Visit and Live Demo at the KIOS CoE's Water	
	Systems Testbed Facility	
12:30pm	Lunch Break	
14:00-16:00	Advanced Technical Communication	Dr. Stella
		Hadjistassou
Wednesday, February (LRC 014)	8, 2023	
9:00am-12:30pm	Integration of Renewable Energy Resources (Part	Research Lecturer
•	2)	Lenos
		Hadjidemetriou









12:30pm	Lunch Break	
14:00-15:30	KIOS Power Lab Visit and Live Demos	Research
		Lecturers
		Lenos
		Hadjidemetriou &
		Markos Asprou
Thursday, February 9	, 2023	
(LRC 019)		
9:00-10:00am	Q&A Session on the Projects (Clarification	Dr. Irina Ciornei &
	Questions)	Ms. Hanna
		Hnatova
10:00-12:30pm	Independent Project Teamwork	
12:30pm	Lunch Break	
14:00-16:00	Independent Project Teamwork	
Friday, February 10, 2	023	<u>.</u>
(LRC 019)		
9:00am-12:00pm	Presentations of Projects' Results (Team	Dr. Irina Ciornei
	Debates/Lessons Learned)	
	Student Feedback on the UCY Student Training	
	Event	
12:00pm – 1:00pm	Farewell lunch (courtesy of UCY)	









#### Local Organizer:

The training will be hosted by the <u>KIOS Research and Innovation Center of Excellence (KIOS</u> <u>CoE</u>) at the University of Cyprus. The KIOS CoE conducts cutting-edge multidisciplinary research and innovation in the area of Information and Communication Technologies (ICT), with emphasis on the Monitoring, Control, Security and Management of Critical Infrastructure Systems.

The KIOS CoE brings together a multidisciplinary team that allows the Centre to develop solutions that address all aforementioned aspects related to CIS, as well as decision support in emergency situations, starting from modelling, design, analysis, real-time implementation, as well as in-depth investigation of the social, economic and environmental impacts of the proposed solutions. KIOS CoE also investigates the interdependencies arising between multiple critical infrastructures and thus addresses issues that arise from the common integration.

Its close collaboration with operators and end-users of CIS enables the Centre to address problems of practical importance, to implement the solutions on real systems, and to get feedback from experienced end-users.

#### The University of Cyprus:

Address: 1 Panepistimiou Avenue, Aglantzia, CY-2109 Nicosia, Cyprus. Tel: +357 22894000

KIOS Research Center and Innovation Center of Excellence:

Social Activities Building, Aglantzia, Cyprus Tel: +357 22 893450/893451 Fax: +357 22 893455 Email: kiosucy.ac.cy

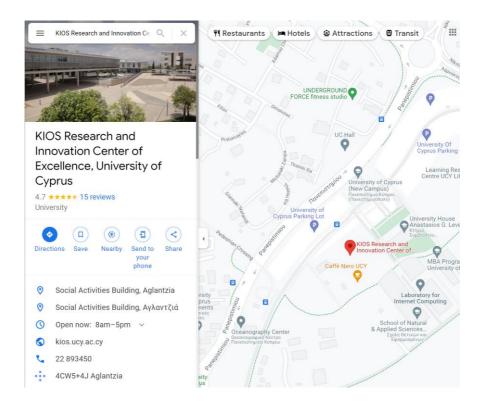








#### Please use the following link to find the KIOS CoE location.



**Local Organizing Committee:** 







Co-funded by the Erasmus+ Programme of the European Union



- Irina Ciornei
   <u>Ciornei.irina@ucy.ac.cy</u> (+35799894993)
- Stella K. Hadjistassou shadjis@ucy.ac.cy (+35797710268)
- Hanna Hnatova <u>Hnatova.hanna@ucy.ac.cy</u> Whatsapp/telegram/viber: (+380990679809)



#### Access to the Learning Resource Center "Stelios Ioannou":

In case you would like to study in the LRC building, you would need to enroll as external visitor using this <u>link</u>. To enter the classrooms where the training will be hosted (LRC014 & LRC019), no enrolment is required.

#### **Meal Options:**

The various dishes in Cyprus reflects the rich and turbulent history of the island and its indelible Greek culture. You will find tastes influenced by the Middle East, Asia Minor and the Venetians, all using fresh local ingredients, herbs and spices and olive oil. The Mediterranean diet, with its grains and pulses, sun-ripened fresh fruit and vegetables, high-protein fish, lean meat and poultry and wine is a healthy option.

At the University of Cyprus, there is a restaurant, A. Zorbas Catering Ltd & Coffee Berry, which is located at the Social Facilities Center, right below the KIOS Research and Innovation Center of Excellence. Another option is the Caffe Nero, which is located at the KOΔ02 building.











#### **About Nicosia:**

Nicosia has been the capital of Cyprus since the 10th century. It is estimated that over 200,000 people reside in Nicosia. It is a multicultural city that features a modern and cosmopolitan lifestyle; however, it remains rich in history, culture and tradition.

Apart from its legislative and administrative functions, Nicosia has established itself as the island's financial capital and a main international business center. In 2021, Nicosia ranked as the 32<sup>nd</sup> most affluent city in the world.

#### **Transportation:**

#### (1) From the Airport to Your Hotel/Motel/Rental Place:

One of the best and cost-effective options to get from Larnaca International Airport to your hotel/motel/rental place in Nicosia:

• "Kapnos airport shuttle" which is located outside the arrival's hall at Larnaca International Airport will drop you off at the <u>Kapnos station in Nicosia</u>. The best way to take the shuttle is to book tickets online in advance (at least 20 min before departure). The price for a single ticket from Larnaca airport to Nicosia is 9 euros. Please use the following link for the shuttle's schedule and reservations:

https://kapnosairportshuttle.com/

• From the Kapnos station in Nicosia, you can either get a taxi to your hotel/motel/rental place or use public transportation.









#### (2) From the Kapnos Airport Shuttle in Nicosia to the University of Cyprus:

- For a cost-effective option to the University of Cyprus, you may use the Cyprus Public Transportation Services. To reach the University of Cyprus (the new campus), you need to walk to the bus stop Ave. Akadimias – Rik Avenue - 985, and from there take either the 46 or 33 bus. To navigate yourself, you may use the <u>Pame application</u> (an alternative to Google maps public transport navigation). Please note that some buses routes do not operate on Sundays. To get up-to-date information, you may use the <u>Pame application</u>.
- Please note that if you need to get off the bus, then you need to press the stop button which is located next to each seat, otherwise the bus may not stop.

#### (3) From "Dionysiou Solomou Square" in Nicosia to the University of Cyprus:

- If your hotel/motel/rental place is located close to the old city center in Nicosia, then
  you need to walk to "<u>Dionysiou Solomou Square</u>". Then you need to take either the 33
  or 41 bus, which will drop you off at the University of Cyprus. For up-to-date bus routes
  and schedules, you may use again the <u>Pame application</u>. Alternatively, you can also
  check the routes online using the <u>Cyprus Bus website</u>.
- Please note that if your hotel/motel/ rental place is not located close to the city center, you might need to change several buses to reach your destination. You may again use the <u>Pame application</u>.

#### Taxi Services:

In case you need a taxi, you may contact any of the following services:

- Bolt
- VIPS: +357-22318318
- Ekaton Taxi: +357-22666000

**Bus Services to Other Cities:** 









If you need transportation assistance or bus route guidance, please inform us at least two days in advance. The destinations and cities you could reach from Nicosia using intercity buses are Larnaca, Limassol, Paphos, Agia Nappa and Paralimni.

You can find the bus routes, schedules and ticket information for these intercity buses on their <u>website</u>.

#### Museums in Nicosia:

Cyprus Museum https://www.nicosia.org.cy/en-GB/discover/museums/cyprus-museum/

### The Leventis Municipal Museum of Nicosia

https://www.nicosia.org.cy/en-GB/discover/museums/leventis-municipal-museum/

### A.G. Leventis Gallery

https://www.leventisgallery.org/home

#### House of Hadjigeorgakis Kornesios

https://www.nicosia.org.cy/en-GB/discover/museums/hadjigeorgakis-kornesios/

#### **CVAR - Severis FoundationOpening hours**

https://cvar.severis.org/en/

#### > Cyprus Classic Motorcycle Museum

https://www.visitcyprus.com/index.php/en/discovercyprus/culture/museums-galleries/129-cyprus-classic-motorcycle-museum?catid=0&cur\_lang=fr-FR

#### Shacolas Tower Museum & Observatory

https://www.nicosia.org.cy/en-GB/discover/museums/shacolas-tower-museumobservatory/

Prerequisites (additional information):

Personal Laptops.



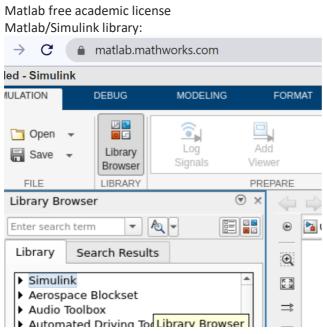






In case you cannot bring your personal laptop, the KIOS CoE will have available a few devices for that date that you could borrow in class to complete your classroom work. In some cases, you might need to work in groups and share the same device.

#### Programs to be installed on your personal laptops:



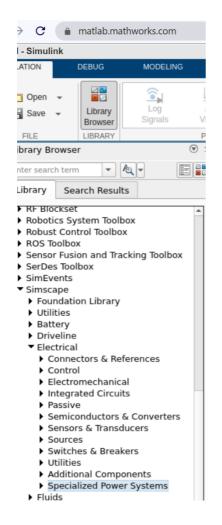
Simscape/electrical/specialized power systems











For the training course, you will also need to install the <u>EPANET 2.2 software</u> and the <u>EPANET Matlab-toolkit</u>. Please click on the following links for further instructions.







Co-funded by the Erasmus+ Programme of the European Union



https://www.epa.gov/water-research/epanet

#### Software, Compatibility, and Manuals

EPANET is public domain software that can be freely copied and distributed. It is a Windows®-based program that will work with all versions of Windows. Continued development and bug fixes are occurring under an open source project site in GitHub. Software bugs and feature requests can be reported on the site as issues, and information is available for those interested in contributing to the code and/or viewing the quality assurance plan, contributor guidelines, software development roadmap, automated testing suite, and other information.

EPA's GitHub site for EPANET 2.2 open source project

#### Software

Date	Description
07/23/2020	Self-Extracting Installation Program for EPANET 2.2 (EXE) [2](3.5 MB)
07/23/2020	Non-Installing Software for EPANET 2.2 (ZIP) 🖸 (2.84 MB)
10/01/2018	Self-Extracting Installation Program for EPANET 2.00.12 (EXE) (exe)



