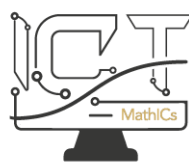


# NEWSLETTER

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CONTACT INFORMATION:  
Dissemination Committee



## e-MathICs NEWSLETTER #2

### CONTENT:

News about MathICs project.....	2
Follow up: 1st dissemination events of MathICs and first face to face MathICs meetings in Morocco (Rabat and Kenitra).....	2
Follow up: 1st MathICs Training, Almeria .....	4
Preparation of the 2nd MathICs Training, Lisbon 16-18 February 2022.....	5
Current activities and implementation .....	7
Upcoming events and dates.....	8

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## News from MathICs project

MathICs is a project co-financed by the Erasmus+ program of the European Union (Key Action 2: Capacity Building in Higher Education), and runs for three years, until January 14, 2024.

Among other activities of MathICs, professors and PhD students of Mathematics from Moroccan partner institutions will follow four trainings.

The selected professors and PhD students will follow four training programs:

Training 1. Training on the use of some software and some teaching material.

Training 2. Training on the creation of moocs, visual content and, in general, e-learning mathematics content.

Training 3. Training on some pedagogical teaching methods using ICT in the classroom.

Training 4. "Pedagogical adaptation to mathematics lessons." The last step of the training period will take the form of a workshop presenting practical activities on the knowledge acquired. Then, the trained staff will develop their works (Mooc, video, etc. ) which will then be shared on certain platforms.

The same four trainings will be held once in Europe and once again in Morocco.

The first training in Europe has been already organized in Almeria from November 2 to 5, 2021.

The second training will be held in Lisbon from February 16 to 18, 2022 (if travel situation permitting).

The third one will be held in Nantes from March 21 to 23, 2022 (if travel situation permitting).

The final step of the first period trainings will be developed online in April 2022.

## Follow up: 1st dissemination events of MathICs and first face to face MathICs meetings in Morocco (Rabat and Kenitra)

The first dissemination events of the project Strengthening Mathematics Education – MathICs was held from 05 to 07 October 2021 in the Faculty of Science of Rabat, Ibn Tofail University in Kenitra and the Engineering School of Mines in Rabat.

The 1st day of this event on October 05, 2021 at the Faculty of Sciences of Rabat, were honored by the participation of Mr. Mohammed Rhachi (President of Mohammed V University of Rabat), Mr. Mohamed Tahiri (Director of Higher Education and Pedagogical Development at the Ministry of National Education, Higher Education, Staff Training, and Scientific Research), Mr. Mohammed Regragui (Dean of Faculty of Sciences of Rabat), and Mr. Ismaïl kassou (vice president in Mohammed V University of Rabat). The coordinators of MathICs, the coordinator of the ERASMUS+ office in Morocco as well as the permanent members of the project made their presentations, and Ana Pipio, Coordinator of International Relations Office, made a presentation of IST. Professor Luis Oyonarte, the coordinator of MathICs, has given a short presentation of MathICs, its main aims and their activities. Mathematics has been identified as a "key lever for transforming STEM teaching and learning" (European Schoolnet, 2018). This is one of the messages from Professor Driss Bennis, the Moroccan coordinator of MathICs, who, during the three days of MathICs dissemination events held from 05 to 07 October 2021, demonstrated the importance of MathICs in the mathematics education system as well as the importance of using ICT to promote mathematics in Moroccan institutions.

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Dr. Latifa Daadaoui, the coordinator of the NEO Office in Morocco, gave a presentation that highlighted the great importance of the CBHE projects and in particular the MathICs project in the development of the education system in Morocco.

The 2nd day was organized on October 06, 2021 at the University Ibn Tofail of Kenitra, Professor Brahim Fahid shed light on the role and importance of MathICs dissemination strategy. He mainly showed how MathICs dissemination plan envisions dissemination not only to present the MathICs project and its results, but also to increase awareness of the use of ICTs in mathematics education in Morocco which is the main purpose of MathICs. The event concluded with a wonderful tour of the facilities of the University of Kenitra campus.

The 3rd day was held in École des Mines de Rabat. The event started by a welcomed words on the behalf of the institutions colleagues. Mr Najib Khalid gave a presentation of the Ecole des Mines de Rabat and ended by a message of thanks and gratitude to colleagues and professors of Mathematics who have showed their great interest to MathICs and attended the events coming from different regions (Casablanca, Meknes, Marrakech,...), specially colleagues from our associate, Société Marocaine de Mathématiques Appliquées (SM2A). The event included also a presentation by Mrs Hanaa Hachimi from the University Sultan Moulay Slimane of Beni Mellal. She also showed a nice video showing the beautiful landscape of Beni Mellal.

The program of the event includes also the presentation of Professor Fouad Bennis who shared his 20 years of experience as a Director of the International Relations at Centrale Nantes. At the end, Mrs Natacha Moniz from IST presented several details on the MathICs dissemination progress and achievements, as well as information on MathICs social media.

During the three days, we organized workshops on the administrative and financial details of the project, quality plan guidelines and dissemination strategy. There were also the first face to face steering committee meeting, quality committee meeting and Project Management Board meeting.



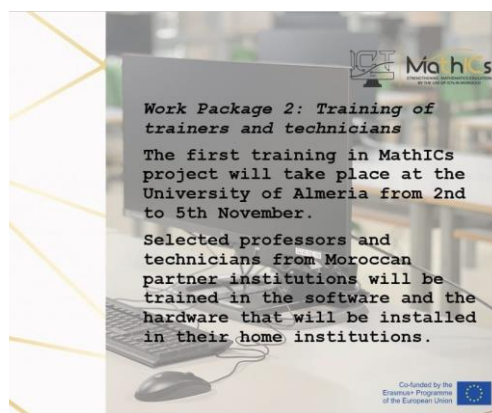
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## Follow up: 1st MathICs Training, Almeria

Universidad de Almería received 8 Organizers and Speakers and 36 Trainees from MathICs project, between 2- 5 November. In this training were held 32h of training for professors and 28h for technicians.

In this first training of MathICs Project all participants were devoted to the use of the hardware that will be installed in our partner universities. Professors and technicians both attended the sessions, and were separated in different groups to cover specific topics.



The first day's program started with a welcome word from Mr. Julian Cuevas, the Vice-Rector for Internationalization of the University of Almeria and Mr Luis Oyonarte, the MathICs coordinator. The first day of training activities was focused on the use of hardware (including Adobe Connect and Openboard). Moroccan teachers and technicians started the training together in ICTs building of UAL. All the participants have shown their satisfaction from the quality of the training and so felt familiar with the environment of MathICs Hybrid and Media Classrooms.

The program of the first day included also a visit to UAL facilities. The next day onwards, the training of the technicians ran separately (Hybrid Classroom, OPS, Media Room, OpeShot, pill recording-Chroma, Blockchain). This training was given by Francisco José Muñoz Berenguel.

Software trainings for teachers took place on 3, 4 and 5 November. Moroccan participants were divided into three groups, each of which was given a specific training in a type of software related to mathematics teaching:

- SageMath as a tool for mathematics education given by Juan Ramón García Rozas and Luis Oyonarte (list, programming, arithmetic, function and calculus, Graphics, Matrices and vectors, equation solving,...).
- GeoGebra as a tool for mathematics education given by José Carmona Tapia (Dynamic text messages, Conditionals, Sliders, animations, Activity menus, Randomized questions, new tools,...), and
- "R" as a tool for mathematics education given by Fernando Reche Lorite (Data structures, Importing data, Basic operations, Building procedures, Graphics: Formats and basic concepts, Graphical parameters, ggplot2 package, Rcommander: Installation, basics concepts and functionalities,...).

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During the training several visits were made to the UAL facilities (Media and Hybrid Room, Library, Auditorium, Sports facilities and Analysis Laboratory) and several coffee breaks sponsored by the Faculty of Experimental Sciences and the Department of Mathematics of the University of Almería were also offered.

On 5 November, at the end of the training, a lunch was held in the surroundings of Cabo de Gata (the Department of Mathematics was involved in the guided tour).

The participants were generally satisfied with the facilities, documentation and overall organisation of the training.



### Preparation of the 2nd MathICs Training, Lisbon 16-18 February 2022

Instituto Superior Técnico (Portugal) will receive during the period between 16th and 18th February 2022 the 2nd training course of MathICs project, if the health situation in both countries so permits, due to COVID19.

This training takes place in the framework of the Erasmus+ Capacity Building Project in Higher Education MathICs: “Strengthening Mathematics Education by the use of ICTs in Morocco”, and will be held in Lisbon Campus.

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The invitation letters and all the practical information, about the accommodations and the location of Campus were send to all participants in December, so that the participants could deal with all the necessary procedures for this next stage of the project.

The first version of the 2<sup>nd</sup> training programme was also designed and sent to the participants, and also included information on some documentation for reading work before the training took place.

## 2<sup>nd</sup> Training session

### CREATION OF MOOCs and e-LEARNING CONTENT

**Course resume :**

- **4 Modules**
- **Total 15 Hours (3 Days, 5 Hours) in person**
- **Learning outcomes for each module**
- **On-line learning: previous to the training and following-up activities**

**Course Schedule :**

Sub-modules	Date / Hours (Tentative)
1. MOOC design thinking	February 16 10:00-12:00
1. MOOC videos	February 16 13:00-16:00 February 17 10:00-12:00
2. Assessment and interactive activities	February 17 13:00-16:00
3. Structuring the MOOC	February 18 10:00-12:00
4. Beta-testing and presenting results	February 18 13:00-16:00

16<sup>th</sup>-18<sup>th</sup> February 2022

If the pandemic does not allow the training in Lisbon, the Steering Committee will deliberate a new proposal for the relocation of this training, as soon as possible.

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## Current activities and implementation

(November, 2021)

- Erasmus Day in Morocco: Driss Bennis, as the Moroccan coordinator of MathICs, was invited to the Erasmus National Info Day event that took place on 9 November at the National Center for Scientific and Technical Research (CNRST). The event saw the participation of several education leaders in Morocco including the Minister of Higher Education of Morocco.



(December, 2021)

- MATHICS Erasmus+ CBHE Moroccan Monitoring Meeting: The Erasmus+ Morocco National Office team conducted a monitoring at the Sultan Moulay Slimane University on 21 December 2021. This monitoring concerns the Capacity Building in the Field of Higher Education (CBHE) project "MaThICs" (Strengthening Mathematics Education by the use of ICTs in Morocco), with the contribute of Mrs Hanaa Hachimi and Mrs Youmna El Hissi.



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- International symposium on the topic “Educational systems for higher education, conditions for success and its components through some contemporary models”: The Project Coordinator for Morocco, Driss Bennis talked about the MathICs project! Presentations in Arabic and English, in this virtual meeting organized by the International Center for Educational and Scientific Research and Studies in Morocco.



### Upcoming events and dates

- ❖ 16-18<sup>th</sup> February 2022, Lisbon (Portugal): MathICs 2<sup>nd</sup> Training
- ❖ 21-23<sup>th</sup> March 2022, Nantes (France): MathICs 3<sup>rd</sup> Training
- ❖ March 2022, Beni Mellal (Morocco): MathICs 4<sup>th</sup> Training and 2<sup>nd</sup> Board Meeting
- ❖ June 2022, Beni Mellal (Morocco): MathICs 4<sup>th</sup> Training
- ❖ June 2022, Rabat (Morocco): MathICs 4<sup>h</sup> Training

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