Universidad Europea

NEWSLETTER
UE STEAM SCHOOL

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ESCUELA DE ARQUITECTURA, INGENIERÍA Y DISEÑO

UE STEAM SCHOOL

NEWSLETTER

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SENER AEROESPACE SIGNS A STRATEGIC ALLIANCE WITH UNIVERSIDAD EUROPEA'S STEAM SCHOOL

Universidad Europea signed a strategic alliance with Sener Aerospace and Defence on April 13th as part of its strategy to bring the professional sectors and the university closer together.
Sener Aeroespace and Defence, a company belonging to Sener Group, one of the major groups of engineering and technology in Spain, has joined the strategic alliances promoted by the School of Architecture, Engineering and Design (STEAM) at Universidad Europea of Madrid.

The company joins this select group because of its strong commitment to excellence in innovation and engineering, respect for the environment, its ethical principles and its contribution to the creation of wealth and employment, which make them a business of reference.

The signing took place on the campus of Villaviciosa de Odón (Madrid), in a ceremony attended by Elena Gazapo, rector of Universidad Europea de Madrid; Alberto Sols, dean of the STEAM School; Jose Julián Echevarría, managing director of Sener Aerospace and Defense; Diego Rodriguez, Director of Space and Science at Sener Aerospace and Defence; David de la Fuente, People Manager; Demetrio Zorita, Deputy Director of Business Development, both from Sener Aerospace and Defence; Verónica Egido, vice dean of the STEAM School and Daniel de la Peña, student of the Master's Degree in Aeronautical Engineering.

"It is a privilege to have Sener, a company of extraordinary international prestige, as the best guarantee of the alignment of our endeavours with the needs of industry and society"

link » https://universidadeuropea.com/prensa/sener-aeroespacial-alianza-estrategica-escuela-steam-universidad-europea/

TELEFÓNICA AND THE UNIVERSIDAD EUROPEA'S STEAM SCHOOL SIGNS A STRATEGIC ALLIANCE.

Telefónica, the leading company in the telecommunications market, and the School of Architecture, Engineering and Design (UE Steam School) at Universidad Europea of Madrid, have signed a strategic alliance to bring students closer to the realities of the professional workplace by participating in joint research projects, designing curricula, optimizing learning methodologies and providing students with training opportunities and experiences that will equip them with new skills and improve their professional development.

Alberto Sols, dean of the STEAM School, has stressed the opportunity that this Alliance represents to work together and reinforce the training received by the students: "That a strategic company like Telefónica is actively involved in all our processes helps to verify and validate our efforts to ensure optimal training of our students and to be aligned with what is required by the professional sector, to build on the foundation of experiential learning that characterizes UniversidadEuropea".

Beatriz Herranz, managing director of Telefónica in the Central Region, emphasized the need to strengthen the relationship between universities and businesses as the only way to achieve excellence in education and respond to the demands of a digital and ever-changing labour market: "We must end the gap that causes thousands of jobs to go unfilled annually in Spain because companies do not find the profiles we are looking for and for this reason we must promote digital skills in our young people".

"WE MUST END THE GAP THAT CAUSES THOUSANDS OF JOBS TO GO UNFILLED ANNUALLY IN SPAIN..."

Telefónica, Alianza Estratégica // 31/05/2023, Villaviciosa de Odón and Link »
https://universidadeuropea.com/noticias/telefonica-y-la-escuela-steam-de-la-universidad-europea-firman-una-alianza-estrategica/

APPLIED SYSTEMS ENGINEERING WORKSHOP (ASEW) 2023

The second edition of the Applied Systems Engineering Workshop (ASEW) was held on June 8th. The keynote address was given by Dr. Aurilla Arntzen, from the University of South-Eastern Norway, on the European project USEPE and the design of the algorithm to control the flight of swarms of drones in urban environments.
ASEW 2023 also featured six outstanding systems engineering application cases on topics such as integrated multimodal airport operations management; monolithic solar telescope mirrors; perpetual flight airplanes; and safety in unmanned vertical take-off and landing aircraft. It was excellent opportunity for the many attendees to learn from the best practices shared in the presentations.

With its unique approach of focusing on practical cases of systems engineering applications, ASEW 2023 is already a reference in the Spanish systems engineering scene. In the afternoon, there was a magnificent workshop on the diffusion and sharing of knowledge in companies: What is it that prevents it from flowing as it should? What discourages some people from sharing their knowledge and experiences? What can be done to improve this situation?
ASEW is an event co-organized by the School, the Spanish Association of Systems Engineering, ISDEFE and SENER. »

WORKSHOP WITH THE ARTIST MIGUEL LÓPEZ-REMIRO AND ENGINEERING STUDENTS OF THE STEAM SCHOOL

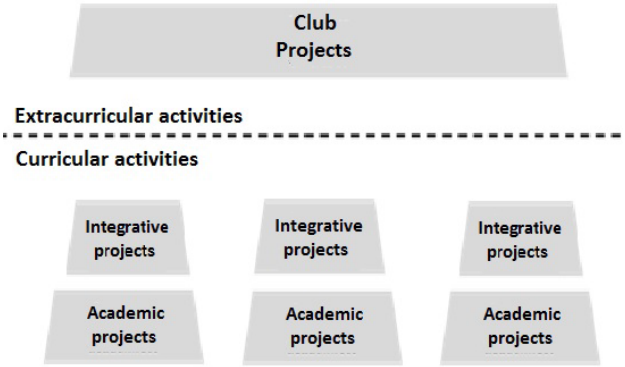
In the second semester of the course, the artist Miguel López-Remiro Forcada conducted two art workshops with undergraduate students in Industrial Systems Engineering.
The results were spectacular for the students from a teaching and human point of view, reinforcing the transversality of knowledge and experience of the PBL teaching methodology of our School.

The artist introduced the students to creative art processes, which they will undoubtedly apply to their engineering projects.
Studying at a STEAM School allows students to become aware of these multifaceted approaches to different disciplines that result in an education that does not overlook the necessary humanism of engineering. Miguel López-Remiro has more than 20 years of experience in executive positions in foundations and museums. Since 2015 he has developed his activity as an independent art curator and consultant, providing curatorial program and governance services for art foundations, museums and corporate and individual collections.
He is firmly convinced of the transformative power of art.

AGENDA PBL2.0: A COLLECTIBLE FOR GROWTH

In the same way that capillaries are channels that transport blood to the innermost parts of the body, we want this agenda to be the channel to transfer the knowledge and learning that we accumulate in the STEAM School to our classrooms.
No training on educational methodology or technology makes sense if it is not in our heads as teachers and in our classrooms so that it ends up providing the best training for our students.
This agenda is a living document that will consist of a set of collectible cards that we can have at hand and that will help us understand why we use the Project-Based Learning (PBL) methodology as a fundamental pillar of our teaching and how we implement PBL in the STEAM School.
We will have worksheets that provide us with tools that are easily transferable to the classroom, of pedagogical techniques that help us to design, implement and evaluate the projects we do in class, and to carry them out with more confidence and better each time.
We will complete our collection with factsheets containing lessons learned from our advisory forums composed of top professionals from STEAM companies (Business Advisory Board), our professors (Academic Think Tank) and prominent alumni (Alumni Advisory Board).

The knowledge that we accumulate in all of them is what we want to disseminate so that it reaches our students as reflected in our Knowledge Map. All of this to implement our commitment as an institution to be the best STEAM School in Europe for its application of the Project-Based Learning methodology, a fundamental objective of the School's Strategic Plan.



Experiential learning is developed in all subjects of all degrees. In many of them, theory is illustrated with practical examples; in some, formal projects are carried out, and in all degree programs there is at least one integrated project, which is carried out concurrently or in a coordinated manner in several subjects. Experiential and project-based learning helps to facilitate the acquisition of learning objectives, and the integrative projects help to avoid learning in knowledge silos. In addition, extracurricular life allows students who wish to do so to continue working on other projects together with students from other degrees, which helps them to learn to work with professionals from other areas of knowledge. »

"THIS AGENDA IS A LIVING DOCUMENT THAT WILL HELP US TO UNDERSTAND THE WHY AND HOW OF IMPLEMENTING OUR PBL"

VISIT OF ARCHITECT FABRIZIO BAROZZI AS PART OF THE HISPALYT - UEM CERAMIC FORUM LECTURE SERIES

On May 3rd, Fabrizio Barozzi, founding member of the award-winning architecture studio ESTUDIO BAROZZI VEIGA, visited us as part of the series of lectures organized by the HISPALYT Ceramic Forum with different Universities. ESTUDIO BAROZZI VEIGA was created and founded by architects Fabrizio Barozzi (Italian) and Alberto Veiga (Spanish) in Barcelona in 2004. They have received awards for projects, built and published work at an international level. https://barozziveiga.com/. It was an excellent opportunity for our students, as part of the series "Lessons learned: the architect teaches his work", to contrast ideas and design intentions. Fabrizio Barozzi's wonderful lecture was profound, narrating the approach to the place, understanding the context and history as the necessary contextualization and engine of the architectural project. The organization by the teachers of the School, Nestor Montenegro and Javier Mosquera was impeccable. We thank Enrique Sanz and HISPALYT Ceramic Forum for continuing to sponsor these meetings between the most prominent professionals and students for yet another year.

PROFESSIONAL PRACTICE OF ARCHITECTURE

The TFG (Final Degree Project) undergraduate workshop of the Foundations of Architecture was held on May 16th, the traditional session to talk about the professional practice of the architect. We were joined by Jesús Muñoz Gil (http://www.maya06arquitectos.es/), a brilliant alumni (20 years ago) and very successful professionally; Carlos Arroyo, professor of the School, as an architect with an international profile and representative of COAM (Official Association of Madrid Architects); Fernando de Landecho, member of COAM's Governing Board; and Paula Manzano (brilliant alumni of the UEM School of Architecture, with ten years experience as a successful professional). The first two gave a brief presentation of their professional practice (areas of specialization, studio management, overcoming economic crises, etc.) while the guests from COAM focused on explaining the role and services provided by the association to its members, especially young architects.

FIRST EDITION OF THE CIVIL ENGINEERING WEEK. VILLAVICIOSA DE ODÓN CAMPUS.

This first edition of the Civil Engineering Week was held at the School from April 24 to 28, 2023.

This initiative arises from the faculty of the Civil Engineering undergraduate and Master's degrees that proposed activities in order to bring students closer to real experiences in accordance with our academic model of experiential learning. The activities are open to all students of the STEAM careers. The proposed activities were several workshops, lectures and a visit to a construction site.

The workshops consisted of making constructions using unique and limited materials, some of them provided by Sika, within a limited time and subjected to different loads to evaluate their resistance. A competition of arch bridges, spaghetti bridges and skyscrapers evaluated in the wind tunnel was developed. In addition, a visit was made to a Madrid public sports facility under construction.

We also had a lecture on the "Application of Big Data to the Planning of a city like Madrid" given by Ms Lola Ortíz Sánchez, Managing Director of Infrastructures from the City Council of Madrid.

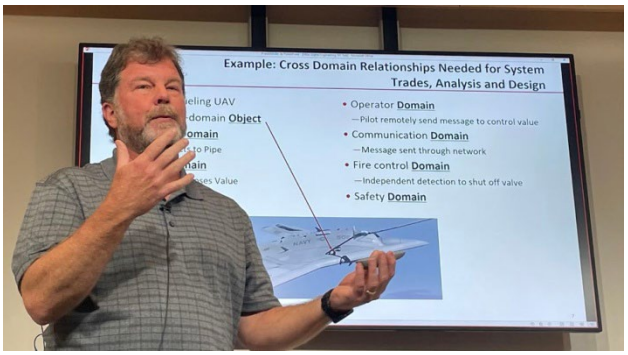
We are grateful for the participation of Mr Andrés Lorenzo, Director of Professional Services for Members of the Madrid area and Mr. Oscar Carballo, Head of Association of Technical Engineers for Public Works, as members of the tribunal that assessed the work of the students.

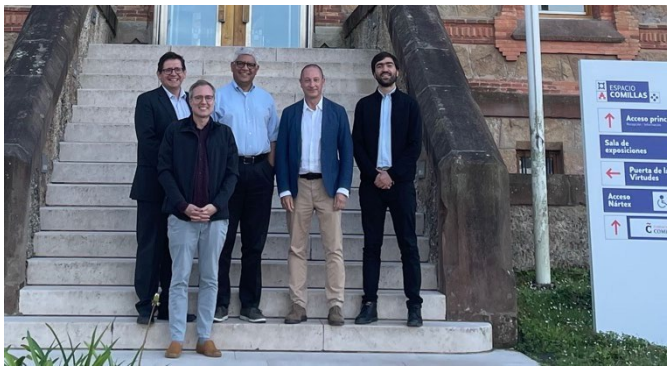
"LEARNING BY DOING IS THE DIFFERENTIATING FACTOR OF OUR ACADEMIC MODEL OF EXPERIENTIAL LEARNING"

DR DINESH VERMA PRESENTS SERC & AIRC

Dr. Dinesh Verma, former Dean of the School of Systems and Enterprises at Stevens Institute of Technology, is currently the Managing Director of the Systems Engineering Research Center (SERC) and the Acquisition Innovation Research Center (AIRC). SERC and AIRC are centers of more than 25 affiliated universities that conduct systems engineering research for the U.S. Department of Defence. Dinesh visited our School along with Tom McDermott, SERC's Director of Strategy. They presented the impressive activities of SERC & AIRC to the School Board and leaders of major research groups.

Subsequently, both gave an extraordinary presentation to a large group of professors and students on the state of the art of digital engineering. The increasing complexity of current programs undertaken in many industrial sectors requires the development and adoption of true digital engineering methods and tools as the only means to effectively and efficiently deal with such complexity. The challenge also implies changes in mentality, culture and work paradigms.
The School was proud to have hosted Dinesh and Tom, and to have had the privilege of enjoying stimulating presentations and discussions with these two great experts in systems engineering. »





INSTITUTE FOR THE FUTURE OF EDUCATION

The Dean of the School, Alberto Sols, visited the Institute for the Future of Education created by the prestigious Tec de Monterrey, at Comillas along with Dr Dinesh Verma. Dr Miguel Montoya, Director of the Institute, explained that their objective is to research the future of higher education and the development of new and innovative teaching methodologies. The School's commitment to continuous improvement and the ongoing advancement of project-based learning methodology make potential collaborations with the Institute for the Future of Education very attractive. »

VENI, VIDI, COGNOVI: HPE (León) and NTTData

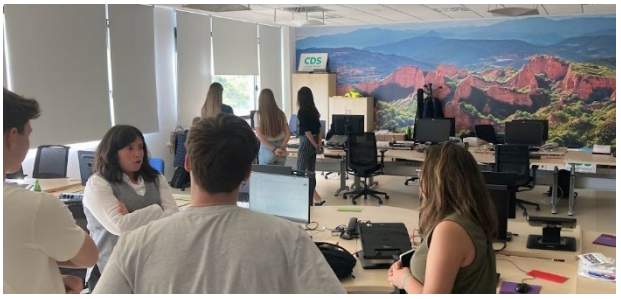
Most of the time, it is not enough to listen to those who know. We are aware that practicing with knowledge experientially in the classroom greatly improves learning and the assimilation of concepts, but going to see the places where this knowledge is actually applied and hearing from the protagonists what their day-to-day lives are like generates curiosity, the desire to know more, motivation and, in short, vocations.

Third-year undergraduate students in Computer Engineering and in Data Science visited Barcelona and León, respectively, in a round of initiation trips to help them better understand what they will do in the future.

In Barcelona they had the opportunity to visit the offices of NTT DATA Europe & Latam where they received valuable advice on how to face a job interview and how to prepare a CV.

In addition, they were able to see firsthand how innovative and cutting-edge solutions are developed for customers around the world. The visit culminated with a tour of the Barcelona Supercomputing Center (Mare Nostrum), where they saw firsthand one of the most important technology centers in Europe, and could see the enormous potential in technology and research.

While in León, our future data scientists had the opportunity to get to know the different areas in the offices of HPE CDS through an interesting "Speed Dating" activity in which they went through different job positions investigating the work of each of the employees they met.



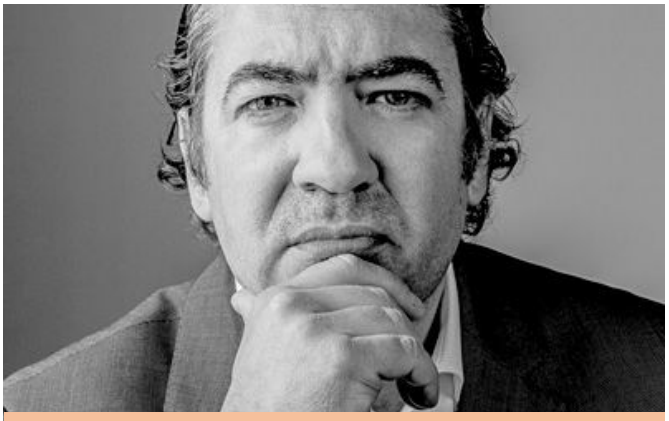
They also visited the Supercomputing Center of Castilla y León (SKYLE) where Jesús Lorenzana, coordinator of the High Performance Computing area, explained the evolution of SKYLE, its potential and everything that is still to come.

The two visits undoubtedly left many seeds planted for what their professional lives will be in the near future. »

EDUARDO ARROYO WAS A GUEST PROFESSOR FOR THE ENTIRE SECOND SEMESTER OF THE 2022-23 ACADEMIC YEAR.

After Giancarlo Mazzanti's stay during the previous academic year, it is a privilege for the School to receive the prestigious architect Eduardo Arroyo as guest lecturer. Eduardo will actively participate in multiple activities with professors and students, contributing to the development of a theoretical corpus and a common framework for the Architectural Design subjects, interacting with the Research groups and collaborating with our European Journal of Architectural Research (REIA).
Eduardo Arroyo, Architect (ETSAM 1988), PhD, founded the NO.MAD office in Amsterdam in 1989, moving its headquarters to Madrid in 1996. His award-winning work includes such renowned works as the Lasesarre Stadium and the Plaza Desierto in Barakaldo (both as a result of the Europan award), the Sondika kindergarten, the Levene House and the Zafra-Uceda House in Madrid, the Arquia headquarters in Bilbao and the EXAC University in Vienna. He has taught in many parts of the world, including ETSAM, Paris, Lausanne, Eindhoven, Graz, Ferrara, Oporto, Oslo, Brussels, Buenos Aires, Barcelona, Alicante and Seville, etc.

https://universidadeuropea.com/noticias/eduardo-arroyo-daniel-montero-mariola-penades-universidad-europea/



"I WANT STUDENTS TO RETHINK THE BROAD IMAGINATIVE LEVEL ON WHICH A SOCIETY IS STRUCTURED. OUR LABOUR IS A LABOUR OF IDEAS."

GRADUATION CEREMONIES – CLASS OF 2022-2023

As in previous years, Universidad Europea of Madrid held its solemn graduation ceremonies for the class of 2022-223 on June 16, 17 and 18.

Undergraduate, Postgraduate and Vocational Training students enjoyed with their families the emotive ceremonies that took place at the Villaviciosa de Odón Campus.

After the ceremonies, the celebration moved to the garden area located between Buildings B and C of the Campus, where attendees were able to socialize and enjoy photocalls, appetizers and live music.

In the case of the STEAM School, the events took place on the following days and at the following times:

- Friday, June 16, at 16:00h: Postgraduates of all on-site degrees.
- Saturday, June 17, at 20:00h: Vocational Training and undergraduate degrees of all on-site degrees.
- Sunday, June 18, at 12:00h: Online undergraduate and graduate degrees.

UNIVERSIDAD EUROPEA HOLDS THE FIRST EDITION OF THE PG STEAM WEEK

From June 13 to 15, Universidad Europea organized at its Alcobendas campus the PG STEAM Week, the first edition of an event that brought together experts in the field of Architecture and Engineering, and that included important professionals from the sectors of sustainability, technology and engineering.

The conference addressed different topics such as the challenges facing the industry, the professions of the future, sustainability and how digital transformation will influence all of this. Also the role that artificial intelligence is playing and the opportunities it provides, along with the challenges it faces.

The conference, which was streamed on youtube and attended in person at the Alcobendas campus of Universidad Europea, placed special focus on the role of women in engineering with the title: "Women engineers paving the way".

PG STEAM week featured leading women in the data, cybersecurity, engineering and business sectors, such as Ángeles Santa María, former director of Iberdrola and former director of Iberia; Patricia Ortega García, deputy managing director of Ground Systems at the National Institute for Aerospace Technology; Cristina Abad Salinas, director of Navantia Sistemas; María Luisa Domínguez González, president of ADIF and Miriam Rodríguez Ruiz, president of Electra Energy Cooperative. Also present were leading experts such as Carlos Martí, director of the magazine "Ciudad Sostenible"; Juan Zufiría, former vice-president of IBM; David Lugo, director of engineering at General Dynamics European Land Systems.

"SPECIAL FOCUS WAS PLACED ON THE ROLE OF WOMEN IN ENGINEERING WITH THE TITLE: 'WOMEN ENGINEERS PAVING THE WAY'..."

PG STEAM Wekk 13/06/2023- 15/6/2023, Alcobendas y streaming
https://universidadeuropea.com/noticias/la-universidad-europea-celebra-la-primera-edicion-de-la-steam-week/

HPE-CDS CHALLENGE

Last April, after 25 hours without sleep in an attempt to solve Phase II of the HP CDS Tech Challenge, our group of computer engineering undergraduates, selected as one of the teams to go to the final, made their superb presentation and received congratulations from all present. Only 5 of the 25 teams that started the challenge made it to the end and our boys and girls finished in third place, which tasted like a triumph because only having lived the experience was a victory. Congratulations to Carlos Moreno Silvestre, Jolie Mabel Alain, Lían Salmeron, María Teresa Rodríguez Gómez and Oscar Gonzalez Guerra for their work and the effort they put into it. And many thanks to the organization and volunteers of HPE for their hospitality and for moving forward with these initiatives. Thanks also to Luis Gracia Expósito, Carlos Moreno and Carlos Iglesias for helping and accompanying the students.

2ND EDITION OF THE EGG DROP COMPETITION

The Egg-Drop event is a competition aimed at students and teachers of all STEAM School degrees where the technical skills and creativity of multidisciplinary teams are put to the test in order to get a raw egg, safe and sound, to a horizontal target. It is an engineering challenge difficult to achieve, inviting numerous and curious proposals from the participants.

The competition, which took place on April 21, 2023 at the Villaviciosa de Odón Campus, had many participating teams who competed in a festive and friendly atmosphere.

The ingenious designs surprised the spectators but met with mixed success. The launches took place from the second floor of the STEAM School, with the target being placed in a controlled environment in the garden area in front of the building.

The winning team (called the EGG Smashers) included:

- Christian Pagani
- Alejandro Lara
- Javier Chouza

STRANSITIONAL CRITIQUING SESSION: FROM DREAM TO MATTER. MASTER'S IN ARCHITECTURE WITH EDUARDO ARROYO, JOSÉ MARÍA SÁNCHEZ Y FERNANDO RODRÍGUEZ AT DI_MAD

On May 10TH, we held our open critiquing session at DiMad. We have been holding this session for several years now, always in May. On this occasion we had our guest lecturer for this semester, Eduardo Arroyo, (NO.MAD), Fernando Rodriguez from FRPO and Jose Maria Sanchez, who each gave a talk, followed by a critiquing session of the three speakers with students of our qualifying Master's in Architecture. Student projects were presented and discussed. Universidad Europea's Master's Degree in Architecture is designed according to the PBL (Project-Based Learning) methodology for a transversal and personalized learning, structured around a problem statement and an individual Final Master's Project. Our architecture degree is the first School in Spain and the third in the world to simultaneously obtain the NAAB International Certification (Icert, USA) and RIBA certification (Royal Institute of British Architects), which facilitates the practice of the profession in the USA, Great Britain and the Commonwealth respectively. The organization by our professors Juan Jose Mateos and Jose Jurado was impeccable. We will return in May next year!

Eduardo Arroyo founded the NO.MAD office in Amsterdam in 1989, moving its headquarters to Madrid in 1996. His award-winning work includes such renowned works as Lasesarre Stadium and Plaza Desierto in Barakaldo (both as a result of the Europan award), the Sondika kindergarten, Casa Levene and Casa Zafra-Uceda in Madrid, the Arquia headquarters in Bilbao and the EXAC University in Vienna.
FRPO is a Madrid-based architecture firm led by Fernando Rodriguez and Pablo Oriol, acknowledged internationally with awards from Architectural Record's Design Vanguard (New York, 2012), Europe 40 under 40 (2009) and Bauwelt Preis (Berlin, 2007), among others.
José María Sánchez has been awarded national and international prizes, such as the First BSI Swiss Architectural Award, Switzerland; First AR+D Architecture Review Awards, London; Architectural Record's Design Vanguard Award, New York; First Iberoamerican Architecture and Urbanism Biennial Award; First Spanish Architecture and Urbanism Biennial Award and the Top Enor Architecture Award.

DR LAIA BRIONES, GUEST LECTURER

Dr. Laia Briones (University of Vic - Central University of Catalonia) has carried out research at the STEAM School during her stay in month of May 2023. The main objective of her visit was to work on the SENS-Health project of which she is head researcher together with Dr María Luz Morales from Universidad Europea of Madrid. The project studies environmental sensitivity and its association with health symptoms and disorders, focusing on the identification of psychosocial and lifestyle factors. The project also involves other researchers from the University of Vic and Michael Pluess from Queen Mary University, a major reference in this field. »

ICOACHKIDS+ PROJECT FINALIZES

The iCoachKids+ project has concluded with an outstanding rating from the European Commission, obtaining 91 points out of 100. It is the second of two interlinked Erasmus+ projects on which both teachers from the School and professors from the Faculty of Sports Sciences at the Universidad Europea of Madrid have worked for the past six years in collaboration with a consortium of several European institutions, creating a movement that is already unstoppable. The School has mainly worked on the technological part of the project and on the definition and implementation of the online learning model used in the 14 online courses that have been developed, including more than 200 videos. For its part, the Faculty of Physical Activity and Sports Sciences has participated in all the technical tasks from the point of view of training and the analysis of early sport dropout. Their contribution was relevant to the consortium having achieved such a positive evaluation. »

"ICOACHKIDS IS A GLOBAL MOVEMENT WITH THE MISSION TO HELP CHILDREN GET THE MOST OUT OF SPORT..."

Here is some information about the news // https://icoachkids.org/

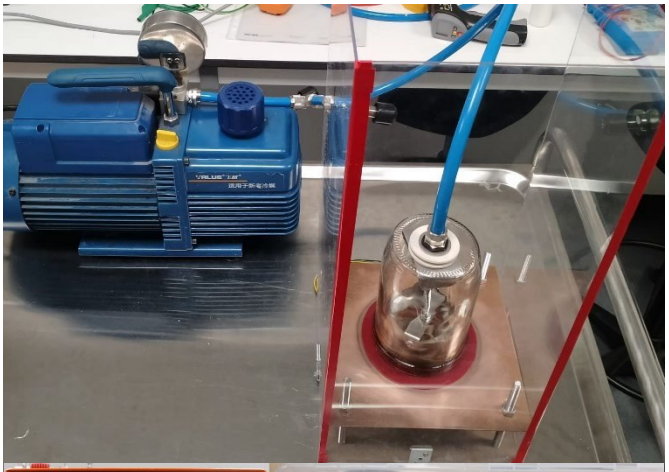
CRITIQUING SESSION OF THE FINAL ARCHITECTURE PROJECTS FOR 2022-2023: DEFINITIONS. PRODUCTOPIA AND DEEP INTERFACES

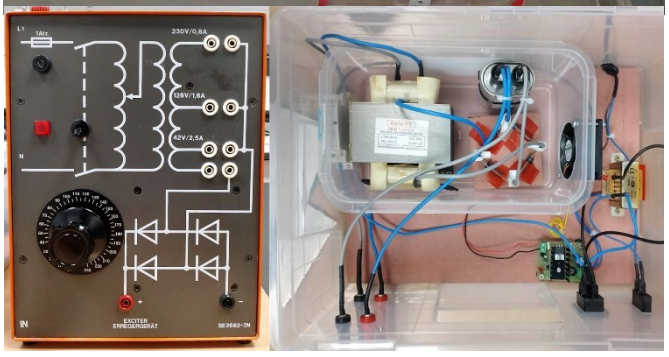
On June 1st, we held the final critiquing session of Universidad Europea's STEAM School Architecture Projects for the academic year 2022-23, DEFINITIONS. PRODUCTOPIA AND DEEP INTERFACES: A CONCEPTUAL PROGRAMME FOR THE DEVELOPMENT OF ADVANCED ARCHITECTURAL PROJECT STRATEGIES, with the participation of all undergraduates (of all levels) and master's degree students. A real feast of projects for students and teachers!

Eduardo Arroyo, this year's guest lecturer, was joined by other renowned professors and architects from outside the School, such as Daniel Bonillla, Camila Aybar, Paula Montoya, Jorge Nieto Pujol, José Juan Barba, Isabel Collado Baíllo, María Martínez Morón, María González Aranguren, Carol Ruiz-Valdepeñas, Daren Gavira and Antonio Cantero. All were accompanied, of course, by the teachers of the School.

It was an itinerary through the different project rooms and levels, where the students had the opportunity to present, debate and defend their projects and the work carried out during this intense semester. All the external guests highlighted the quality of the students' work, the talent and the strength of public communication. The best ending to a spectacular course. Thanks goes to José Luis Esteban Penelas and all the teachers of the School for organising it. We are already working on the course of 2023-2024!!!

LOWCOST DC MAGNETRON SPUTTERING





Adrián Herrero, a third-year Physics student at UEM, is building a sputtering system using recycled and easily accessible materials as a final project for his third-year laboratory course.

Sputtering is a thin film process that allows layers of only a few hundred atoms thick to be deposited on any type of surface with a high level of control and precision.

Applications of sputtering span a variety of fields, such as the aerospace and defence industry, where coatings are used for cockpit displays and aircraft turbine engines. It is also used in the manufacture of electronic and optical devices, such as touch screens and solar panels. In recent years, thin films have even been studied for their potential to control the drug release process with a high level of control and precision, which could help millions of people taking medication for chronic conditions.

In our system, we create a vacuum inside the chamber in order to generate the right conditions for plasma production. Once the optimum pressure is reached, we apply about 700 volts with a high-voltage power supply so that the small amount of gas inside the chamber is ionised, i.e. the atoms lose their outermost electrons and become electrically charged. As this ionised gas, or plasma, is positively charged, we can accelerate it to speeds sufficient to strip the surface atoms from our target object. Thus, we are able to form a vapour of the metal that will coat atom by atom any object in the chamber.

By making access to this technology cheaper, it brings the path of research closer to those with fewer resources, thus accelerating the advancement of society. Most importantly, our physics students demonstrate what they learn and motivate those who come after them.

IT SEMINAR 2023 IN SIERRE, SWITZERLAND

This year the IT Seminar 2023 held its 15th edition in Valais-Wallis, Switzerland (HES-SO University of Applied Sciences) from the 11th to 14th of April 2023.

The IT-Seminar is an international and independent academic event with the participation of professors and students from different European universities. The 4-day event consists of lectures and workshops by guest lecturers, in collaboration with students, on information technologies and related topics such as virtual reality, robotics, artificial intelligence, etc.

The IT Seminar was started in 2006 and is organized annually on a rotating basis at different universities throughout Europe.

This year students and professors from three universities participated: Universidad Europea de Madrid (Spain), HAAGA-HELIA University of Applied Sciences (Finland), HES-SO Valais-Wallis, (Switzerland).

The participants from Universidad Europea of Madrid were professors Nourdine Aliane, Gonzalo Mariscal and nine students from the STEAM School: Celia García-Tola González (Biomedical Engineering), Iñigo Alberola López (Videogame Design), Presiyan Dimitrov Panayotov (Animation), Emilie Mallat (Animation), Carlos Sánchez Renedo (Aerospace Engineering), Laura Albentosa Millor (Animation), Marcela Celin Correa (Animation), Alejandro de Miguel Martín (Biomedical Engineering), Mauricio Ruben Villarreal Barrera (Mathematics Engineering for Data Analysis), and Juan Alberto García Díaz (Aerospace Engineering).

The main goal of this event is to give our students the opportunity to be trained and/or updated in certain technological aspects, as well as to develop transversal competences, and to be immersed in an international and multicultural environment.

In addition to the teaching objectives, this visit was also aimed at creating strategic alliances for the university:

- Research agreements in virtual and augmented reality (strategic line for the UEM) with HES-SO (pioneers in augmented reality applied to education)
- Promote the exchange of students and teachers

Apart from the academic activities, they visited the Sierre Hydroelectric Plant. Visits to companies always enrich the programme.

"IN ADDITION TO TECHNICAL TRAINING, STUDENTS DEVELOP TRANSVERSAL COMPETENCES IN AN INTERNATIONAL AND MULTICULTURAL ENVIRONMENT"

NEW INSTALLATIONS FOR 2023/2024

During the next academic year we will provide our students with two devices for materials characterisation: an X-ray diffraction device (XRD) and an atomic force microscope (AFM).

X-ray diffraction allows, through a direct application of Bragg's Law, the characterisation of crystalline substances. Analysis of the diffractograms allows the reflections to be assigned to the corresponding lattice planes given by their respective Miller indices, the lattice constant and the interplanar distance to be determined, as well as the mass of a crystalline cell and the number of atoms per cell. The degree of crystallinity of a sample can also be determined as well as a semi-quantitative analysis of its crystalline components.

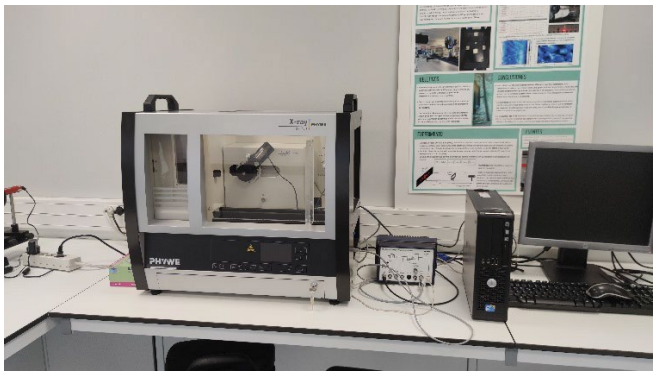
Atomic force microscopy (AFM) is a mechano-optical technique capable of detecting nanonewton forces by scanning with a probe or pyramidal cantilever associated with a laser that detects how the probe interacts with the sample surface. In static mode, the resulting curvature is used to perform a topographical analysis of the sample. In dynamic mode, the cantilever oscillates at a fixed frequency that produces a damped amplitude near the surface.

In addition to these two experimental techniques, the TechFactory of the STEAM School will equip part of the XR Lab.

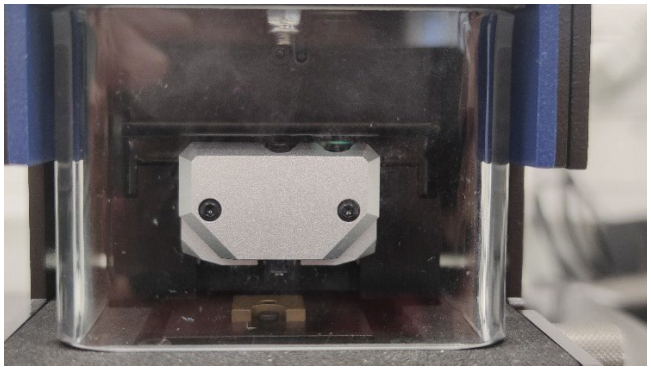
The XR Lab aims to develop innovative learning resources together with teachers, based on virtual and augmented reality, to improve student learning, satisfaction and motivation.

Extended reality applications allow students to develop transversal and specific skills and competences through simulations of real cases from the professional world in immersive environments, which is one of the seven pillars of the university's academic model. Simulation allows students to perform in a safe environment where they can make decisions without risk.

"COMBINING XRD AND AFM CHARACTERISATION TECHNIQUES, STUDENTS AND TEACHING AND RESEARCH STAFF WILL ADVANCE THE STUDY OF NANOMATERIALS "



Más información sobre el XRLAB en:
https://xr-lab.universidadeuropea.es/sobre-el-xrlab/



INDUSTRIAL PARTNERS

After the huge success of signing strategic alliances with the companies HPE CDS, SENER and TELEFONICA, the School takes another step forward in its close connection with the professional world by linking companies to workshops and laboratories. These companies will be the 'Industrial Partners' of these spaces. Their collaboration will consist of one or more of the following activities: (1) loan of equipment; (2) organisation of challenges for students; (3) intellectual sponsorship of TFGs (undergraduate theses) or TFMs (master's theses) that are developed, to a large extent, in this space; (4) external/professional collaboration in the tutoring of TFGs or TFMs: open critiquing sessions; (5) participation in TFG or TFM thesis tribunals that take place, to a large extent, in this space; and (6) any other activity of a similar nature to the above. The Swiss multinational BOSSARD is already an industrial partner of the Industry 4.0 laboratory. »

INNOVATION 2023-2024 IN THE SCHOOL OF ENGINEERING, ARCHITECTURE AND DESIGN

Among the most relevant innovations, next year we will offer the Bachelor's Degree in Computer Engineering in English. We are also starting up the new CREATIVE CAMPUS, which will house all the degrees related to the areas of design, arts and creative technologies: animation, video game design, graphic and multimedia design, product design, interior design, fashion design, fashion management and communication, and digital art and creative technologies, among others.

And there are 14 important innovations to the postgraduate programme as follows: Increase to 60 ECTS in the programmes of AI, Sustainable Architecture, MFP Data Science, MFP Blockchain, MFP Project management. We will offer the programmes Project Management, International Construction Management, MFP and AI in English. The new master's degree programmes in Urban Design and Sustainable Mobility will be offered in classroom and online modes, as well as MFP Architectural Projects. We will also have new teaching formats for on-site master's in video games, on-site master's in Digital Graphic Design, and the syllabus for the UX/IX Master's degree has been updated. »

https://universidadeuropea.com/noticias/la-creatividad-toma-el-centro-de-madrid-de-la-mano-de-la-universidad-europea/

INNOVATION IN THE EDUCATIONAL SYSTEM IS ESSENTIAL TO ACHIEVE A DEFINITIVE ACCESS TO BETTER AND MORE IN-DEPTH KNOWLEDGE

PABLO DE LA CRUZ, CEO OF ANZEN ENGINEERING

Pablo de la Cruz did his undergraduate degree in aerospace engineering at the UEM. He holds a diploma in advanced national defence studies from CESEDEN and has two master's degrees focused on innovation and business creation and management. Prior to engineering, he studied dual vocational training in aeromechanics sponsored by Iberia. Pablo is the CEO and co-founder of the engineering company ANZEN, a European leader in aircraft, drone and aerospace platform safety (System Safety & Reliability). The activity is encompassed within systems engineering and is focused on preventing aircraft failure, achieving a safer aerospace industry.

ANZEN currently employs a team of 30 highly qualified engineers and has leading customers around the world, achieving an annual turnover of around €3M. ANZEN is headquartered in Madrid and has subsidiaries in Switzerland, the United States and the United Arab Emirates. In 2022, he was included in the Forbes 30 Under 30 Europe list as one of Europe's most influential young people under 30 in the industry. He has worked for Airbus as a safety engineer on different platforms such as the Airbus A400M and A330MRTT among others. UEM has provided Pablo with knowledge and an active network of contacts that have helped him to progress professionally. Pablo maintains close contact with the university (Photo: José Ramón Ladra - ABC). »

JUNE ARROYO, QUALITY ASSURANCE AT OUTRIGHT GAMES, A VIDEOGAME COMPANY

June Arroyo, alumni of Universidad Europea's STEAM School, currently works as QA at the videogame developer Outright Games. June studied a double degree in Animation and Video Game Design. A year ago she finished her undergraduate degree in Animation, and is currently working on her final project in Video Game Design, which she combines with her current job at the videogame production studio.

Previously, June collaborated with the STEAM School where she worked for six months as a lab technician in the Tech Factory, a laboratory that provides a very special coexistence space where students and teachers of the School carry out tutorials, training workshops, or develop their academic or even professional projects. All this thanks to the tutoring provided by the teachers of the School, computers with high-performance processors and graphics cards, which include professional licenses so that students can publish their commercial products. »

MANUEL R. SCHERE, ALUMNI AT POLYGONAL MIND

My name is Manuel Rodríguez Schere, a graduate in Computer Engineering from the University of Alcalá (UAH) and alumni of the Master's in Blockchain at Universidad Europea of Madrid (UEM). Currently, I work at Polygonal Mind, a startup from Zaragoza specialised in the development of tokenised events and avatars for different metaverses. As a blockchain developer, my main responsibilities consist of integrating the different blockchain networks with backend and frontend systems, as well as the development and deployment of smart contracts.

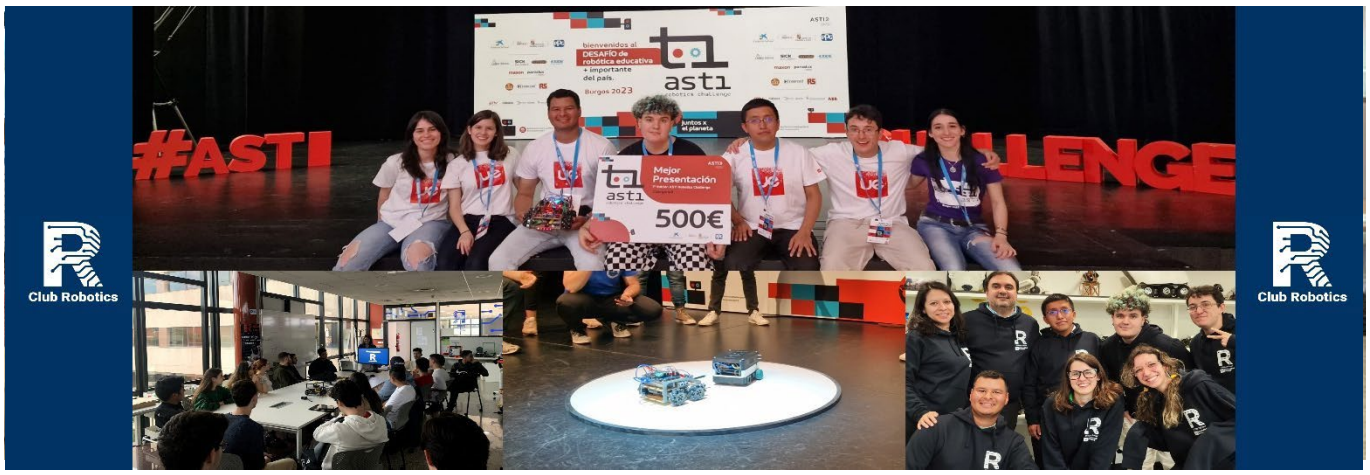
The Master's in Blockchain at UEM, taught in collaboration with Telefónica Tech, provided me with the necessary technical knowledge to tackle this type of project and allowed me to join one of the most innovative and fastest-growing industries in the world. What I enjoy most about my job is that it encourages creativity and fosters the use of disruptive technologies to face the different challenges that arise during the development of a project.

CRISTINA BENEITEZ ALUMNI IN AEROESPACE ENGINEERING IN AIRCRAFTS

Passionate about space and aeronautics, Cristina Beneitez Ortega studied Aerospace Engineering in Aircraft at the Universidad Europea of Madrid, where she had the opportunity to study her final year at the University of Hertfordshire (London, UK), obtaining a double degree from both universities. After a qualifying master's degree, she started her professional career at the German Aerospace Center (DLR) - Institute for Technical Physics (Stuttgart, Germany). There she worked on a research project where she helped develop a technique based on lasers and optics to estimate the flight altitude of an aircraft throughout its mission. Her passion for research led her to DLR Munich, where for three years she worked in the field of thermodynamics and thermal management of various innovative aircraft configurations. Focusing on the electrification of aeronautics, she worked as team leader in the thermal field on a project called HAP (High Altitude Platform), a UAV with a propulsion system based on batteries and solar panels with a cruising altitude of 20 km and a flight duration of one month. Her work focused on the thermal analysis of all the systems on board the HAP, performing numerical and experimental analyses with vacuum chambers to estimate the temperature that each system would reach, as well as the possible temperature control techniques that can be used to keep them in the operational temperature range. She presented her work at the American Institute of Aeronautics and Astronautics in Chicago in 2022. In February 2023, she ended her stint at DLR to continue her career at Væridion.

Væridion is a new company whose goal is to develop, certify and build an electric microliner for short-haul flights by 2030. There, she is chief aeronautical systems engineer, where she designs the aircraft's on-board systems and coordinates the various disciplines to optimise the aircraft's configuration.

"Universidad Europea has been the key that made it possible for me to be where I am today."



ROBOTICS CLUB

The Robotics Club, chaired by María Sol Torres (fourth-year computer engineering student) as team leader, has competed in the VII edition of the ASTI Robotics Challenge held in the city of Burgos, winning the "Best Project" award in this competition. For this challenge, the team designed, built and programmed from scratch a mobile robot that had to overcome a series of tests autonomously, achieving excellent results in the competition.

In addition, other club activities included a variety of workshops on different topics that have been developed throughout the year.

For example, 3D design and Arduino programming workshops were given by members of the club and university teaching staff, which was open to both members and other students of UEM.

At the same time, internal projects have been developed. Among them we should mention a domotic house with a multidisciplinary team of architecture and computer engineering students, and an alarm device deactivated by a *Simon says* style code as collaboration for the Escape Room organised as a joint project among the clubs of the Steam School.

COMPUTER SCIENCE AND NEW TECHNOLOGIES CLUB

The Computer Science and New Technologies Club, chaired by David Partal Gómez (third-year computer engineering student) as Team leader, is divided into three main branches: GeniusX, Competitive Programming and Hacknet.

GeniusX is a division of our company focused on the creation of innovative projects. This year, we have developed two outstanding projects: smart streetlights and a password management system based on NFC cards.

In competitive programming, we teach basic and advanced programming workshops open to any student of the school and we also prepare for competitions such as the Ada Byron or the HPE CDS Tech Challenge, as well as organising the first edition of the UEM programming competition.

Hacknet is our cybersecurity branch, where Diego Rodríguez Sanz (second-year computer engineering student) teaches workshops on various techniques which he has taught himself over the last two years.