

ITC-Industry Open House 2022

On 11 February 2022, the Institute of Technology of Cambodia (ITC) in collaboration with JICA organized the OpenHouse program for private companies/institutions in order to introduce the Institute of Technology of Cambodia's laboratory services and facilities to enterprises and to strengthen All kinds of cooperation between the Institute of Technology of Cambodia and private companies/institutions in order to boost the economy in Cambodia.

We have made a poster to present about the center of excellence for automation under the project ASEAN Factori 4.0 private companies/institutions. There was also a lab visit from industries/companies to the center of excellence.






Center of Excellence for Automation




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

Center of Excellence and Project Information

Factori 4.0 is a collaborative project between the European Union and ASEAN countries under the Erasmus+ project framework. The goal is to update the curricular in the partner universities and to implement industrial PLC Supervisory Control And Data Acquisition (SCADA) with a Cyber security system for university students' lab practice, a training center (TC), a center of excellence (CE). The other goal is to transfer new technology from the research field to the industrial sector to update their competency to reach the level of industrial 4.0 without compromising their security. The center of excellence will be used for training programs for the Asian staff during the project and in sustainable development for vocational learning. The designed PLC labs that consist of industrial PLC with interfaced software will be dedicated to allowing the cloud-based emulation of specific industrial processing like manufacturing or energy management with the protection of cyber security systems. This practice will follow the latest development of the well-known Industry 4.0 in Europe.



Platform: Cybersecurity

The panel is made up of an MS80 ePAC controller integrating security functions, a manageable switch and an SN60 Stormshield industrial firewall.

The objectives of this educational panel

- Understand the concepts of industrial networks
- Choose and implement a secure network architecture
- Understand areas of trust
- Analyze and manage communication flows
- Implement an industrial firewall
- Study and implementation of Industrial Bus, Ethernet
- Classification and risk analysis
- Identification of vulnerabilities
- Protection and configuration at PLC and HMI level
- Protocols: CANOpen, Modbus TCP, CIP, http(s)
- User and access management
- VPN

Activities




- Under the ASEAN Factori 4.0, project staffs have been trained at Grenoble, France by EU partners (UGA and UCLB Lyon) to build their capacities in industry 4.0 for the field of **cybersecurity in industrial automation**.
- **Vocational Training** on industrial automation will be provided for free to local companies under the project. If you are interested, please contact us.

Other LAB Facilities

PLC panels, which have been donated by Schneider Electric, ATS (local company) and Mitsubishi Electric, have been designed for various applications.

Motion Control



Energy Monitoring



Smart Home



Motor Starter, Motor Drive and PLC





LAB Services

- Short courses training on industrial control and automation
- Consultation services

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PLC Brands





ITC's Career Fair Draws Enthusiastic Crowd

December 17, 2022 - ITC (Institute of Technology of Cambodia) played host to an exciting and highly anticipated Career Fair, attracting an array of companies, students, and members of the public. The event created a dynamic platform for individuals to explore career opportunities, network with industry professionals, and gain valuable insights into various fields of interest.

With an impressive turnout, the ITC Career Fair provided a bustling environment for attendees to interact with numerous companies actively seeking skilled individuals to join their ranks. The fair served as a crucial bridge between employers and job seekers, fostering connections that could potentially shape the future of the attendees' careers.

One particular area of interest that captured the curiosity of many visitors was the Cyber Security panel with a focus on PLCs. Hosted at the booth of the Department of Electrical and Energy Engineering, the panel served as an invaluable resource for those eager to explore the burgeoning field of cyber security within industrial settings. Attendees seized the opportunity to engage in lively discussions and pose insightful questions, gaining a deeper understanding of the subject matter.

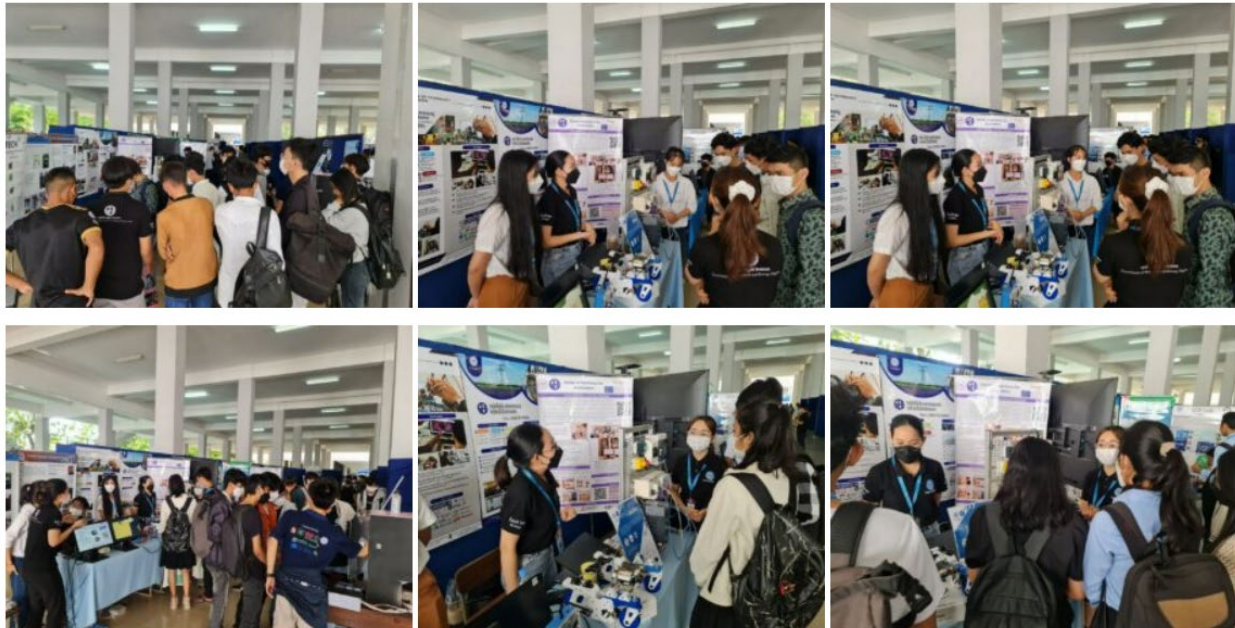
The booth itself became a hub of activity, as individuals flocked to learn more about the applications of PLCs in the context of cyber security. The Department of Electrical and Energy Engineering showcased their expertise and offered valuable insights into the importance of protecting industrial systems from cyber threats. Through informative discussions and engaging demonstrations, visitors gained a firsthand appreciation of the critical role that cyber security plays in safeguarding industrial operations.

The overwhelming interest in the Cyber Security panel underscored the growing awareness of the significance of protecting industrial systems from cyber attacks. It also highlighted the increasing demand for professionals with expertise in this field, making it an attractive career path for aspiring engineers and technology enthusiasts.

The Career Fair at ITC served as a catalyst for fostering meaningful connections and opening doors to exciting career opportunities. By providing a platform for interactive discussions and showcasing the relevance of emerging technologies like PLCs in cyber security, the event empowered attendees to make informed decisions about their career paths.

ITC's commitment to equipping students and the public with cutting-edge knowledge and industry-relevant skills was evident throughout the fair. The success of the Cyber Security panel and the high level of engagement demonstrated the institute's dedication to nurturing talent and addressing the evolving needs of the industry.

As the Career Fair at ITC came to a close, attendees departed with newfound inspiration and a clearer vision for their professional futures. The event's impact will undoubtedly resonate as individuals continue their journeys, armed with knowledge and connections forged at this remarkable gathering.



Member Universities of ERASMUS FACTORI 4.0 Convene in Bangkok for Management Meeting and Conference

January 14-29, 2023 - Chulalongkorn University in Bangkok, Thailand, played host to an esteemed gathering of member universities under the prestigious ERASMUS FACTORI 4.0 project. This momentous occasion brought together a total of 10 member universities, comprising three European universities and seven ASEAN universities. Among the prominent participants was the Institute of Technology of Cambodia (ITC), a partner from the ASEAN region. The event served as a platform for fruitful discussions, management meetings, and progress reporting on the project's implementation.

The meeting, held from January xx to xx, facilitated comprehensive discussions on the current status of the ERASMUS FACTORI 4.0 project. Representatives from each member university participated in intensive deliberations, exchanging insights and sharing progress reports. This collaborative endeavor aimed to enhance cooperation and coordination among the universities involved, fostering a strong foundation for the successful implementation of the project.

In addition to the management meetings, the member universities have an opportunity to showcase their achievements and advancements at the 3rd International Symposium on Instrumentation, Control, Artificial Intelligence, and Robotics. Each university partner presented their findings and progress in implementing the ERASMUS FACTORI 4.0 project, highlighting the positive impact it has had on their respective institutions and the wider academic community.

The ERASMUS FACTORI 4.0 project stands as a testament to the power of international collaboration in driving technological advancements and fostering cross-cultural exchange. By leveraging the expertise and resources of universities from Europe and ASEAN, the project aims to enhance industrial automation and promote sustainable development in the participating regions. The management meeting conference in Bangkok served as a crucial milestone in the project's journey, enabling participants to align their efforts, address challenges, and chart a path toward success.

As the conference drew to a close, the member universities left with a renewed sense of purpose and determination to further their collaborative endeavors. The progress made during the meeting and the insights gained from the symposium will undoubtedly contribute to the ongoing success of the ERASMUS FACTORI 4.0 project. The conference not only fostered meaningful connections and knowledge exchange but also strengthened the bonds between European and ASEAN universities, paving the way for future collaborations and advancements in the field of industrial automation.



Orientation Day for New Students

February 16, 2023 - In a bid to ignite the passion and guide the academic journey of budding engineers, ITC (Institute of Technology of Cambodia) is all set to host an Orientation Day event for its foundation year students. The highly anticipated event aims to introduce approximately 1500 students to the various faculties and departments within the institute, allowing them to explore their areas of interest and chart a path toward their desired majors.

The primary objective of the Orientation Day is to acquaint the students with the diverse array of fields and specializations available at ITC. By providing comprehensive insights into each faculty and department, the event aims to empower students to make informed decisions about their preferred majors, which they will ultimately choose at the conclusion of their first year.

Among the departments eager to showcase their offerings is the esteemed Department of Electrical and Energy Engineering. With an eye on the future, the department has arranged a series of captivating laboratory demonstrations to captivate young minds. One notable laboratory that will be unveiled is the Center of Excellence for Control and Automation, which will leave students awe-inspired with its cutting-edge applications.

This exceptional laboratory experience will give students a firsthand glimpse into the fascinating realm of Industrial Automation. Through the demonstration, they will witness the practical implementation of Programmable Logic Controllers (PLCs) fortified with robust Cyber Security systems, specifically designed for the industrial sector. Such exposure to real-world applications is set to ignite the passion for innovation and technological advancement among young engineers.

The Orientation Day event at ITC promises to be a dynamic and enriching experience for the students, offering them a valuable opportunity to interact with faculty members, industry professionals, and fellow peers. Through engaging presentations, interactive sessions, and informative workshops, the students will gain crucial insights into their chosen fields of study, fostering a strong foundation for their engineering journey.

By providing an engaging platform for exploration and discovery, ITC's Orientation Day seeks to inspire and empower the next generation of engineers to build a better future through innovation and technical excellence.



ERASMUS FACTORI 4.0 Member Universities Gather in Phuket for Project Management Meeting and Conference

March 17 to 22, 2023 - The idyllic coastal city of Phuket, Thailand, played host to a momentous gathering of member universities under the esteemed ERASMUS FACTORI 4.0 project. A total of 10 member universities, united by their shared commitment to technological advancements, came together for discussions, management meetings, report finalization, project closure planning, budget considerations, and sustainability discussions. The meeting coincided with The 8th International Conference on Digital Arts, Media, and Technology (DAMT) and the 6th ECTI Northern Section Conference on Electrical, Electronics, Computer, and Telecommunications Engineering (NCON). Notably, the Institute of Technology of Cambodia (ITC) team presented their findings on the Center of Excellence for Control and Automation within the ASEAN Factori 4.0 Project.

Set against the backdrop of Phuket's stunning landscapes, the meeting provided a serene yet productive environment for member universities to evaluate the progress made within the ERASMUS FACTORI 4.0 project. Representatives from each university engaged in fruitful discussions, sharing valuable insights, and deliberating on the best practices and strategies employed during the project's implementation. The meeting served as a pivotal platform for collaboration, enabling participants to synchronize their efforts and align their objectives.

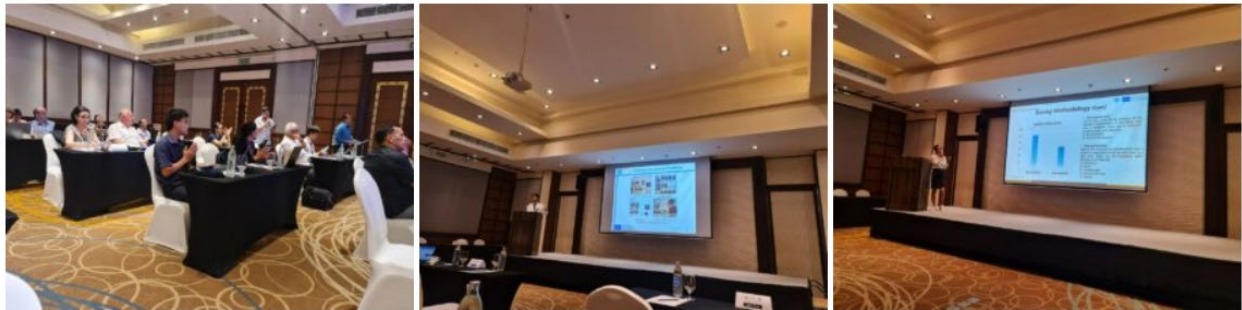
Amidst the comprehensive management meetings, member universities had the opportunity to partake in the 8th International Conference on Digital Arts, Media, and Technology (DAMT) and the 6th ECTI Northern Section Conference on Electrical, Electronics, Computer, and Telecommunications Engineering (NCON). These conferences brought together experts, researchers, and practitioners from various disciplines, fostering a rich environment for knowledge sharing and interdisciplinary collaboration. The ITC team stood out by delivering a captivating presentation on their Center of Excellence for Control and Automation, offering valuable insights within the context of the ASEAN Factori 4.0 Project.

The ERASMUS FACTORI 4.0 project represents a remarkable collaborative effort among the member universities, pooling together their expertise and resources to advance industrial automation and drive sustainable development. The management meeting and conference in Phuket served as a significant milestone, allowing participants to reflect on their achievements, address challenges, and strategize for the future.

As the conference came to a close, the member universities departed with a renewed sense of purpose and determination to continue their collective endeavors. The insights gained during the meetings and

presentations will undoubtedly contribute to the project's ongoing success and pave the way for sustainable development in the field of industrial automation.

The convergence of academia, technology, and creativity in Phuket set the stage for an event of remarkable significance. The ERASMUS FACTORI 4.0 project continues to exemplify the potential of international collaborations in shaping the future of technological advancements. With Phuket as the backdrop, the participants departed with cherished memories, strengthened connections, and a shared vision to drive innovation and excellence within the field of industrial automation.



ITC's Annual Scientific Day Showcases Cutting-Edge Research and Innovative Partnerships

June 8, 2023 - ITC (Institute of Technology of Cambodia) hosted its highly anticipated annual Scientific Day, a remarkable event that unveiled groundbreaking research and fostered collaboration within the realms of science and technology. The prestigious occasion saw an array of captivating presentations, mesmerizing prototypes, and thought-provoking discussions, captivating the minds of attendees.

Scientific Day at ITC proved to be a veritable treasure trove of knowledge, with numerous engaging presentations that shed light on the latest research conducted at the institute. The event provided a platform for researchers, professors, and students to showcase their exceptional work, highlighting the innovative strides made within the scientific community.

Moreover, the event featured booths exhibiting prototypes and products from partner companies, truly capturing the essence of collaboration between academia and industry. These displays served as a testament to the fruitful partnerships ITC has forged, showcasing the practical applications of cutting-edge technologies developed through collaborative efforts.

The significance of the event was further elevated by the presence of esteemed government officials from the Ministry of Education, Youth, and Sport, along with representatives from national and international partner institutions. Their attendance underscored the importance of fostering strong ties between academia and the public sector to drive advancements in the field of science and technology.

Notably, the Department of Electrical and Energy Engineering took center stage with an impressive booth display. The department seized the opportunity to exhibit student prototypes, demonstrating their prowess in creating innovative solutions. Additionally, the booth also shows a benchmark for cyber security in the industrial sector, focusing on the utilization of Programmable Logic Controllers (PLCs). These PLCs were generously donated by a partner university in France, as part of the Erasmus project, solidifying the international cooperation and knowledge exchange.

The presence of these cutting-edge prototypes and the focus on cyber security in industrial settings highlighted the commitment of ITC and its partners to stay at the forefront of technological advancements. This collaboration between academia and industry not only equips students with hands-on experience but also contributes to the development of solutions that address real-world challenges.

The annual Scientific Day at ITC was a resounding success, fostering an environment of innovation, collaboration, and knowledge sharing. The event showcased the remarkable research endeavors of the institute while emphasizing the importance of partnerships in driving technological advancements. With each passing year, ITC continues to solidify its position as a premier institution, dedicated to shaping the future through scientific exploration and transformative education.

