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WHAT IS THE Cyber4CA PROJECT?

One of the key elements of Cyber Security (CS) is its relevance in the field of Higher Education. Growing cybersecurity threats require specialists with in-depth knowledge in areas such as quantum cryptography, blockchain technologies, SOC, information security incident investigation, practical pentesting, Internet of Things (IoT) security, AI and many others. The integration of CS necessitates graduates who possess knowledge related to the field. This is where the Cyber4CA project steps in, aiming to advance students' skills further.



The primary objective of the Cyber4CA initiative is to create MA study program across various disciplines at Higher Education Institutions (HEIs) that include CS-focused courses, as well as to establish Centres under laboratories (CyberLabs) dedicated to the Application of CS within HEIs of Central Asia.

Educators at these institutions will gain the essential knowledge and skills required to implement CS principles in different areas. The initiative emphasizes the sharing of experiences, knowledge transfer, and the exchange of best practices between EU HEIs and those in Uzbekistan (UZ), Kazakhstan (KZ) and Kyrgyzstan (KG) which are located in Central Asia.

This overarching aim aligns seamlessly with the goals of the Capacity Building projects within the Erasmus+ program, particularly in terms of “Digital transformation” and “Sustainable growth and jobs.”

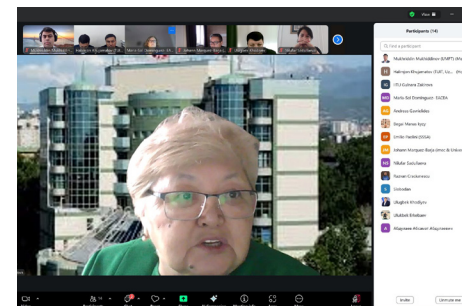
The limited number of universities with a license to train masters in the field of information security creates unsatisfied demand for educational programs. Most Higher Education Institutions (HEIs) in Central Asia do not provide enough courses focused on CS, particularly its

application across various fields. By incorporating CS into their curriculum, the project aids in the development and adaptation of educational programs to align with the changing demands of students, industries, and society as a whole.

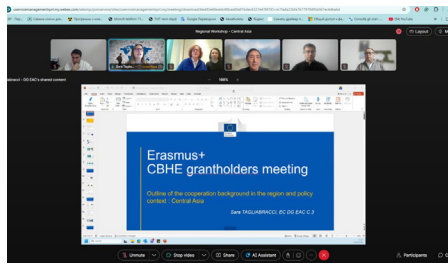
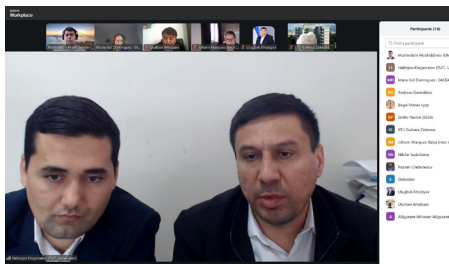
Furthermore, the CS centres will facilitate a connection between the education system and the job market in different countries of Central Asia, ensuring that students acquire the specific knowledge and skills needed in the CS sector. The creation of these CS centres involves collaboration among educators, CS specialists, the broader community, and potentially international partners.

The overall goal of the Cyber4CA project is to create graduate study programs in different disciplines at the Higher Education Institutions (HEIs) with CS-related courses and establish Centres for the Application of CS in Central Asia. The main focus is on sharing experiences, transferring knowledge, and exchanging best practices between HEIs from the European Union (EU) and the Central Asia (CA) regions. This broader goal aligns perfectly with the priorities of the Capacity Building projects under the Erasmus+ program (“Digital transformation” and “Sustainable growth and jobs”).

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



OBJECTIVES OF THE Cyber4CA PROJECT



The first specific objective is aligned with national programs and regional needs, the project focuses on achieving the following:

-Curriculum Development of three innovative educational program for the first time, encompassing 12 courses (of which 8 new and 6 upgraded courses). These practical courses, designed to add practical laboratory work approaches, will seamlessly integrate it into existing information security programs at three universities of Central Asia. The curriculum will address current security vulnerabilities and enhance teaching methods within Central Asia partner institutions (CAPI).

- A program will have specialization and two paths, and it caters to specific skill sets required by future cybersecurity professionals. The first path-program includes four new, highly specialized courses on information security systems analysis and research, alongside three improved courses based on existing curricula at partner universities. This program will be offered and tested by the graduate students of CAPIs.

Second path is designed to train cybersecurity professionals in utilizing security elements. It also comprises four new, specialized courses on information security management, along with three enhancements to existing partner university courses.

CAPIs will introduce and test this program for new graduate students.

The first specific objective is aligned with national programs and regional needs, the project focuses on achieving the following: These newly developed programs, curricula, and innovative teaching methods will create a foundation for a unified interdisciplinary educational space in Central Asia dedicated to cybersecurity. This initiative will leverage advanced technologies and explore

their potential applications in information security education. The project incorporates best practices and methodologies from European institutions, ensuring the content and delivery methods meet the highest standards.

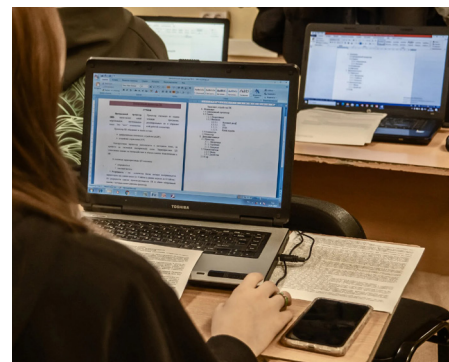
The second specific objective is to expand educational reach to a broader community including those from low-income families and students with disabilities through a specialized platform. This online platform will provide a wealth of educational materials, catering to students and interested professionals. This platform will allow individuals from various backgrounds to participate in the educational process. Interactive features will allow engagement with industry experts and diverse community groups, ensuring the curriculum reflects real-world needs and remains cutting-edge.

The third specific objective is to strengthen the practical skills of students. Understanding the importance of practical learning, the project will establish a novel system of practical education at each partner university. During the project, 7 innovative CyberLabs dedicated to CS engineering will be established in each CAPIs. This will bridge the gap between theoretical knowledge and practical application, significantly boosting the effectiveness of learning.

The fourth specific objective aims to promote research and development opportunities for graduate students. The project fosters a collaborative environment for researchers, student interns, and information security professionals. This team tackles critical challenges in the field by developing innovative solutions, practical projects, and a robust implementation framework. Their focus includes enhancing existing cybersecurity, exploring new vulnerability technologies, and improving security practices within educational institutions.



09-11 December 2025



INTERNATIONAL PARTNERS AND COLLABORATION

The success of the Cyber4CA initiative is made possible through collaboration between leading universities, governmental institutions, and research organizations. Partners from Spain, Romania, Belgium, Italy, Uzbekistan, Kazakhstan, and Kyrgyzstan contribute their academic expertise and practical experience.

Through joint curriculum development, research activities, and knowledge exchange, the partnership strengthens cybersecurity education and supports the development of highly qualified specialists across Central Asia.



Partners: Europe

Universidad Politécnica de Madrid (Spain)

University Politehnica of Bucharest (Romania)

University of Antwerp (Belgium)

Scuola Superiore Sant'Anna (Italy)

Uzbekistan

TUIT - Grantholder (Tashkent University of Information Technologies named after Muhammad al-Khwarizmi)

NUU (National University of Uzbekistan)

UMFT (University of Management and Future Technologies)

Kazakhstan

International Information Technology University (IITU)

Korkyt Ata Kyzylorda University (KKU)



Kyrgyzstan

Kyrgyz State Technical University named after I. Razzakov (KSTU)

Osh State University (OSU)

Non-academic partners

State Unitary Enterprise “Cybersecurity Center”

“UNICON.UZ - Science-Technical and Marketing Research Center”

Limited Liability Company

MHESI (Ministry of Higher education, science and innovations of the Republic of Uzbekistan)

Ministry of Science and Higher Education of the Republic of Kazakhstan

Association of legal entities «Kazakhstan Information Security Association»

Associate partner

Ministry of Digital Technologies of the Republic of Uzbekistan

The Ministry of Education and Science of the Kyrgyz Republic



TASHKENT UNIVERSITY OF IT (TUIT), UZBEKISTAN



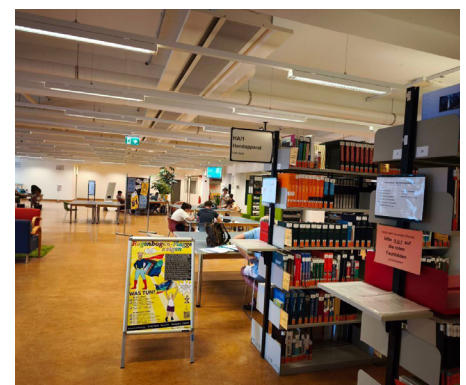
Tashkent University of Information Technologies is one of the leading higher education institutions in Uzbekistan in the field of ICT. It plays an important role in developing the country's digital economy and training highly qualified IT specialists. The university actively contributes to digital transformation and the implementation of innovative technologies across various sectors.

TUIT is one of the largest IT education centers in Central Asia. It prepares specialists in areas such as cybersecurity, software engineering, AI, telecommunications, information systems, digital economy, and big data. Academic programs are regularly updated in line with international standards and labor market demands. The university offers Bachelor's, Master's, and PhD programs that combine knowledge with practical training.

Practical training is a key focus at TUIT. The university has modern laboratories, allowing students to work on real projects and develop hands-on skills. The dual education system enables students to combine learning with internships in government and IT companies, gaining valuable professional experience.

TUIT also actively develops international cooperation with universities and research centers worldwide. It participates in international projects, including Erasmus+, aimed at modernizing education and supporting mobility.

In addition to education, the university is engaged in research and innovation in fields such as AI, cybersecurity, telecommunications, and engineering. It also supports student development through conferences, workshops, competitions, and startup initiatives, helping students build professional networks.



UNIVERSIDAD POLITÉCNICA DE MADRID (UPM), SPAIN



Universidad Politécnica de Madrid (UPM) is one of Spain's leading technical universities and a prestigious institution in Europe specializing in engineering, architecture, and technological sciences. Established in 1971 through the integration of historic technical schools, it has long contributed to Spain's scientific and industrial development.

Today, UPM is the largest technological university in Spain, with over 35,000 students and around 3,000 academic staff. It offers Bachelor's, Master's, and PhD programs aligned with European Higher Education Area standards, preparing graduates for a global technological environment.

The university includes 18 technical schools and faculties covering fields such as Computer Science, Telecommunications, AI, Cybersecurity, Industrial and Aerospace Engineering, Civil

Engineering, and Architecture. Its campuses in Madrid feature modern facilities, laboratories, and research centers, with Montegancedo known for its strong innovation ecosystem.

UPM emphasizes practical learning through research projects, internships, and laboratory work, helping students develop problem-solving skills and professional experience. It is also highly active in research, with numerous institutes working in areas like AI, robotics, cybersecurity, renewable energy, and data science.

The university maintains strong international cooperation, participating in global partnerships and Erasmus+ projects focused on digital transformation. Through its academic excellence and research, UPM plays a key role in technological advancement in Spain and contributes to global scientific progress.



UNIVERSITY POLITEHNICA OF BUCHAREST, ROMANIA



University Politehnica of Bucharest (UNSTPB) is one of the largest technical universities in Eastern Europe, known for excellence in engineering, IT, and applied sciences. Founded in 1818, it has played a major role in Romania's technological and industrial development.

Today, UNSTPB educates over 30,000 students and offers Bachelor's, Master's, and PhD programs aligned with European Higher Education Area standards. The university includes faculties in fields such as Computer Science, Electronics, Telecommunications, Cybernetics, Electrical and Industrial Engineering, Aerospace, and Applied Sciences, combining theory with practical training.

The university operates modern campuses in Bucharest with advanced laboratories, research centers, and innovation spaces. It emphasizes hands-on learning through projects, internships,

and competitions, supported by modern technological equipment.

Research is a key focus, with centers working in AI, cybersecurity, robotics, data science, and energy systems, often in collaboration with industry and international partners. UNSTPB is actively involved in global cooperation and has participated in over 100 Erasmus+ projects, supporting academic mobility and joint research.

The university also contributes to international initiatives such as Cyber4CA and has established advanced cybersecurity facilities in partnership with Bitdefender, providing practical training in cyber defense and digital security.

Through its strong academic programs, research, and international partnerships, UNSTPB continues to play a leading role in engineering education and technological innovation in Eastern Europe.



UNIVERSITY OF ANTWERP, BELGIUM



University of Antwerp is a research-focused public university in Belgium, known for its interdisciplinary approach and strong international orientation. Located in Antwerp, a major European economic hub, the university combines academic research with active involvement in societal and technological development.

Founded in 2003 through the merger of several institutions, UAntwerp now serves over 20,000 students and offers Bachelor's, Master's, and PhD programs aligned with European standards. Its faculties cover a wide range of fields, including engineering, social sciences, business, law, medicine, and computer science.

The university is particularly recognized for its work in areas such as data analytics, AI, cybersecurity governance, and sustainability. Students benefit from learning environments and are encouraged to engage in projects, internships.

UAntwerp places strong emphasis on innovation and collaboration with external partners. Researchers actively work with industry, government institutions, and international organizations to develop solutions to complex global challenges. This cooperation ensures that academic research has practical impact and contributes to real-world development.

International cooperation is a key priority at UAntwerp. The university actively participates in global partnerships and Erasmus+ programs, supporting academic mobility and joint research initiatives. It also contributes to projects like Cyber4CA, focusing on digital governance, cybersecurity education, and innovation in higher education.

Through its research, education, and international collaboration, UAntwerp prepares professionals to address global challenges in the digital era.



SCUOLA SUPERIORE SANT'ANNA, ITALY



Scuola Superiore Sant'Anna (SSSA) is a selective public research university in Pisa, Italy, renowned for applied sciences, interdisciplinary research, and advanced academic training. As a “Scuola Superiore Universitaria,” it combines university-level education with intensive research and is recognized for excellence in engineering, economics, law, life sciences, and technological innovation.

Founded in 1987, SSSA operates within Pisa’s historic academic environment, alongside institutions like the University of Pisa and Scuola Normale Superiore. The university offers Bachelor’s, Master’s, and PhD programs, many taught in English, across areas such as Economics and Management, Law and Political Sciences, Agricultural and Biotechnology Sciences, Medical Sciences, and Industrial and Information Engineering. Admission is highly competitive, selecting motivated students through rigorous exams. Accepted

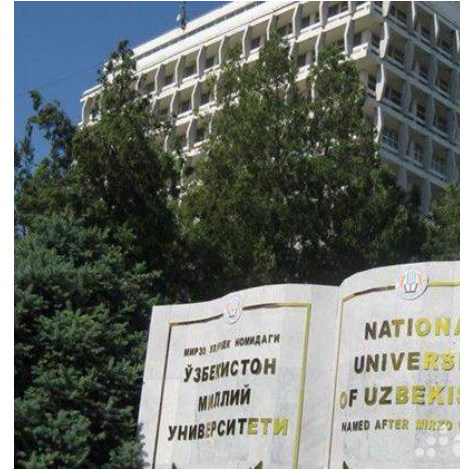
students benefit from small classes, personalized mentorship, and close collaboration with faculty, fostering a supportive and intellectually stimulating environment.

Research is central to SSSA’s mission. The BioRobotics Institute conducts pioneering work in robotics, AI, biomedical engineering, and human–robot interaction, while the Dirpolis Institute focuses on law, politics, governance, and socio-economic development. The university participates in European and international research initiatives with global partners and actively engages in Erasmus+, enabling student exchanges, joint research, and collaborative programs.

Through rigorous academics, cutting-edge research, and international collaboration, Scuola Superiore Sant’Anna educates professionals and researchers capable of tackling technological, economic, and social challenges, contributing to innovation and sustainable development globally.



NATIONAL UNIVERSITY OF UZBEKISTAN, UZBEKISTAN



National University of Uzbekistan (NUU), officially Mirzo Ulugbek National University, is one of Central Asia's oldest and most prestigious universities. Founded in 1918, it has a long tradition of academic excellence, research, and cultural influence, playing a central role in Uzbekistan's higher education and scientific development.

science, IT, and social sciences. The Department of Information Security trains specialists in cybersecurity, covering cryptography, ethical hacking, digital forensics, and network security, with practical experience in modern labs.



Located in Tashkent, NUU attracts students and scholars nationally and internationally. The university offers Bachelor's, Master's, and PhD programs across faculties such as Physics and Mathematics, Chemistry, Biology, History, Economics, Law, Journalism, and Information Technologies, providing both broad knowledge and specialized expertise.

The university actively promotes international cooperation, participating in Erasmus+ programs and global partnerships. Students and staff engage in academic exchanges, joint research, and international conferences, strengthening NUU's integration into the global academic community.



Through strong academics, research, and international collaboration, NUU supports Uzbekistan's digital transformation and prepares specialists for government, technology, and research sectors, remaining a leading center of higher education in Central Asia.

UNIVERSITY OF MANAGEMENT AND FUTURE TECHNOLOGIES, UZBEKISTAN



University of Management and Future Technologies (UMFT) is a private higher education institution in Tashkent, Uzbekistan, established in 2022 to prepare specialists for the digital economy and modern industries. Despite being new, the university combines modern educational approaches with practical professional training and state-recognized diplomas.

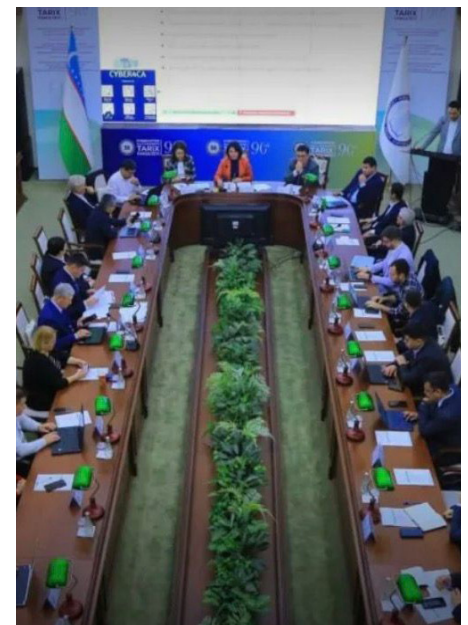
UMFT offers undergraduate programs in IT Engineering, Economics, Business Management, and Pedagogy, emphasizing interdisciplinary education that blends technological knowledge with managerial and entrepreneurial skills. The university focuses on practical training, industry collaboration, and innovation, encouraging students to participate in projects, internships, and professional programs.

The university also places strong emphasis on international

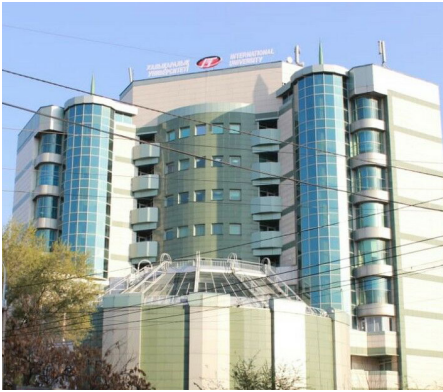
academic cooperation. UMFT partners with universities in South Korea, Germany, and Latvia, offering joint diploma programs and ACCA-accredited courses, giving students global academic experience and recognized qualifications. Student mobility and exchanges are encouraged to develop intercultural competencies and expand professional networks.

Career development is another priority at UMFT. The university collaborates with companies like KEI Advanced, UICE Group, Odoo, DERC, Uztelecom, and BTS, providing students with internships, practical experience, and opportunities to work on real business and technology projects.

Through innovation, international collaboration, and applied learning, UMFT aims to modernize higher education in Uzbekistan and train specialists ready for the challenges of a rapidly changing global economy.



INTERNATIONAL INFORMATION TECHNOLOGY UNIVERSITY (IITU), KZ



The International Information Technology University (IITU) in Almaty, Kazakhstan, is a specialized institution focused on applied IT education, digital transformation, and technological innovation. Established in 2009, the university supports Kazakhstan's growing digital economy by preparing highly qualified IT professionals for modern technological environments and global industries. IITU collaborates closely with government institutions, technology companies, and international partners to ensure its programs meet current technological trends and labor market demands.

The university offers Bachelor's, Master's, and PhD programs in fields such as Information Systems, Software Engineering, Cybersecurity, Digital Journalism, Finance in IT, and Management in the Digital Economy. Programs combine theoretical knowledge with practical skills, preparing students for modern industries. The curriculum is continuously updated to reflect technological developments and industry needs.

IITU emphasizes practice-oriented learning, project-based education, and industry collaboration. Students participate in technological projects, research initiatives, and internships, applying classroom knowledge to real-world problems. Modern laboratories and advanced computing facilities provide hands-on experience with software tools, programming environments, and digital technologies.

The Department of Cybersecurity trains specialists to protect digital infrastructure and information systems. Students study information security, network protection, cryptography, digital forensics, cyber risk management, and ethical hacking. Laboratory training, simulations, and practical exercises equip students with the skills to prevent and respond to cyber threats.

IITU promotes research and innovation in artificial intelligence, data science, blockchain, cloud computing, and digital media. Faculty and students collaborate on projects that create technological solutions and support Kazakhstan's digital transformation. Industry partnerships provide internships, applied research, and professional training, helping graduates succeed in IT companies, technology firms, financial institutions, and digital media organizations.

The university supports entrepreneurship, encouraging students to participate in technology competitions, startups, and innovation initiatives. International collaboration, including Erasmus+ programs and global partnerships, allows students and faculty to engage in exchanges, joint research, and collaborative educational programs.

Through academic training, industry cooperation, research, innovation, and international partnerships, IITU prepares the next generation of IT specialists to meet global technological challenges.

KORKYT ATA KYZYLORDA UNIVERSITY, KAZAKHSTAN



Korkyt Ata Kyzylorda University (KKU) is a public regional university in Kyzylorda, Kazakhstan, playing an important role in higher education, research, and regional development. Named after the historical figure Korkyt Ata, the university contributes to the intellectual and economic growth of the region by preparing qualified specialists and supporting research in key academic fields.

Established to meet regional needs, KKU has become one of the leading universities in southern Kazakhstan. It offers Bachelor's, Master's, and PhD programs in engineering, natural sciences, education, economics, law, humanities, and information technologies, combining theoretical knowledge with practical skills relevant to the labor market.

The university emphasizes practice-oriented and interdisciplinary education. Students participate in internships, research projects, and collaborations with local industries and public institutions, gaining valuable professional experience. Modern teaching methods and laboratory training help students apply their knowledge to real-world challenges.

KKU also places growing emphasis on innovation and entrepreneurship among students. The university supports startup initiatives, business incubation programs, and participation in regional and national competitions. Through these activities, students are encouraged to develop creative

solutions, transform ideas into practical projects, and contribute to the development of small and medium-sized enterprises in the region. This focus helps strengthen an entrepreneurial mindset and prepares graduates to adapt to rapidly changing economic conditions.

The university also focuses on digitalization and the integration of modern technologies into the educational process. E-learning platforms, digital tools, and online resources are actively used to enhance teaching quality and provide flexible learning opportunities for students.

Strong ties with local enterprises and government organizations help align education with regional needs, improve workforce skills, and promote the implementation of new technologies. The university plays a key role in strengthening the connection between academic knowledge and practical application.

International cooperation is another priority, with KKU participating in Erasmus+ programs and global partnerships that support academic mobility, joint research, and the adoption of modern teaching methods.

Through its integration of education, research, regional engagement, and international collaboration, Korkyt Ata Kyzylorda University continues to contribute to the development of higher education and the training of professionals capable of supporting technological and economic progress.



KYRGYZ STATE TECHNICAL UNIVERSITY NAMED AFTER I. RAZZAKOV (KSTU), KYRGYZSTAN



Kyrgyz State Technical University named after I. Razzakov (KSTU) is one of the leading technical universities in Kyrgyzstan, located in the capital city of Bishkek. Founded in 1954, the university has played an important role in the development of engineering education, technological innovation, and scientific research in the country. Over the decades, KSTU has contributed significantly to the preparation of qualified engineers, IT specialists, and technical professionals who support Kyrgyzstan's industrial, technological, and economic development.

Named after Iskhak Razzakov, an influential statesman who played a major role in the development of education and industry in Kyrgyzstan, the university carries a strong tradition of academic excellence and technological progress. Today, KSTU continues to serve as one of the most important technical higher education institutions in the country, attracting students from different regions of Kyrgyzstan as well as from neighboring countries.

KSTU offers a wide range of Bachelor's, Master's, and doctoral programmes designed to prepare specialists for modern technological industries. These programmes are designed to combine strong theoretical foundations with practical technical training that reflects the needs of contemporary industries.

A key priority of the university is the promotion of practice-oriented education and applied research.

International cooperation plays an increasingly important role in the development of the university. KSTU maintains partnerships with universities, research institutions, and educational organizations from different countries. These partnerships support academic exchanges, collaborative research projects, and the sharing of scientific knowledge.

The university actively participates in Erasmus+ and other international cooperation programmes, which promote mobility and collaboration in higher education. Through Erasmus+ initiatives, students and academic staff have opportunities to participate in exchange programmes, joint research activities, and international educational projects with partner universities in different regions.

Participation in international projects also strengthens the university's global academic connections and provides students with opportunities to gain international experience and broaden their professional perspectives.

By combining strong engineering traditions, modern technological education, practical training, and international cooperation, Kyrgyz State Technical University named after I. Razzakov continues to play a crucial role in the development of technical education in Kyrgyzstan.



OSH STATE UNIVERSITY (OSHSU), KYRGYZSTAN



Osh State University (OshSU) is one of the oldest and largest public universities in Kyrgyzstan, serving as a major educational and research center in the southern region. Founded in 1939 as a teacher training institute and granted university status in 1992, it has grown into a comprehensive institution contributing to the academic, cultural, and socio-economic development of the region.

Located in the historic city of Osh, the university attracts students from across Kyrgyzstan and internationally. OshSU offers Bachelor's, Master's, and PhD programs in a wide range of fields, including humanities, natural sciences, engineering, business, medicine, law, education, and international studies. Its programs combine strong academic foundations with practical training, preparing students for diverse professional careers.

The university emphasizes interdisciplinary and practice-oriented education. Students engage in laboratory work,

internships, field research. OshSU also supports research in areas such as environmental studies, education, tourism, and regional development, contributing to both academic knowledge and practical solutions. The university aims to enhance its infrastructure, expand scientific output, and develop into a competitive research institution in Central Asia.

International cooperation plays a key role in its strategy. OshSU collaborates with universities worldwide and participates in Erasmus+ and other mobility programs, enabling student exchanges, joint research, and curriculum development. These initiatives help integrate modern educational standards and promote global academic collaboration.

By combining academic tradition, research development, and international collaboration, university continues to strengthen its role as a leading institution in the region, preparing qualified professionals capable of contributing to social, economic, and scientific progress.



UNICON.UZ – SCIENCE-TECHNICAL AND MARKETING RESEARCH CENTER, UZBEKISTAN



UNICON.UZ Scientific-Technical and Marketing Research Center LLC is a key applied research and analytical organization in Uzbekistan's digital and telecommunications sector. Operating under the Ministry of Digital Technologies, it plays an important role in scientific research, regulatory development, and modernization of the national digital infrastructure. The center contributes to the development of standards, policies, and technological frameworks that support the growth of the digital economy.

Originally established as a state unitary enterprise, UNICON.UZ has evolved into a comprehensive research and testing center supporting government institutions, telecom operators, and technology companies. Its modern headquarters, opened in 2021, marked an important step in strengthening the country's digital research infrastructure.

The center focuses on research, policy analysis, and regulatory development in ICT. It develops technical standards and frameworks to ensure the reliability, security, and interoperability of telecommunications networks and digital systems. UNICON.UZ works closely with government bodies and industry partners to align national regulations with international standards.

A major area of activity is the testing, certification, and technical evaluation of ICT equipment and

software. The center ensures that digital technologies meet required standards and also provides metrology and calibration services. In addition, it develops technical documentation and analytical reports that support the development of national digital infrastructure.

UNICON.UZ plays a significant role in implementing electronic digital signature (EDS) systems in Uzbekistan. It provides services for issuing and managing digital signature keys used in e-government services and secure digital transactions, contributing to the reliability of digital communication.

The organization employs around 200 specialists, including researchers and engineers, working in various laboratories focused on telecommunications, cybersecurity, and digital technologies. The center also conducts research in cybersecurity, develops policy recommendations, and organizes professional training programs.

Additionally, UNICON.UZ actively supports the development of digital transformation strategies at the national level. The center provides expert consulting, analytical assessments, and strategic recommendations that assist in shaping long-term ICT policies and digital governance initiatives. Through its involvement in national projects, UNICON.UZ contributes to the implementation of smart



technologies, improvement of public digital services, and the overall advancement of Uzbekistan's digital ecosystem.

International cooperation is an important part of its activities. UNICON.UZ collaborates with global partners and participates in initiatives such as Erasmus+ and the Cyber4CA project, contributing to cybersecurity education and digital capacity building in Central Asia.

ASSOCIATION OF LEGAL ENTITIES “KAZAKHSTAN INFORMATION SECURITY ASSOCIATION” (KISA), KAZAKHSTAN



The Association of Legal Entities “Kazakhstan Information Security Association” (KISA) is a professional organization that brings together experts, companies, research institutions, and organizations working in the field of information security and cybersecurity in Kazakhstan. The association plays an important role in strengthening cooperation between industry, government, and academia in order to enhance the country’s cybersecurity ecosystem and promote the development of modern digital security standards.

KISA operates within Kazakhstan’s broader national cybersecurity framework, including the “Cyber Shield of Kazakhstan” strategy, which aims to protect the country’s critical information infrastructure and improve national resilience against cyber threats. The strategy focuses on strengthening cybersecurity governance, developing national digital security standards, and improving coordination between institutions responsible for protecting information systems and digital infrastructure.

The association serves as a coordinating platform for cybersecurity professionals and organizations, enabling collaboration between companies, experts, and government institutions involved in protecting digital infrastructure. By bringing together legal entities and specialists from various sectors, KISA helps facilitate the exchange of knowledge, best practices, and technical expertise in the field of

information security.

One of the key objectives of the association is to contribute to the development of cybersecurity policies, regulatory frameworks, and security standards within Kazakhstan’s digital ecosystem. The organization works in a regulatory environment shaped by national legislation such as the Law on Personal Data and Its Protection, as well as other cybersecurity regulations and digital governance policies aimed at safeguarding sensitive information and ensuring compliance with international standards.

KISA also plays an important role in supporting the development of Kazakhstan’s information security market. By connecting cybersecurity professionals, technology companies, and research institutions, the association helps strengthen the professional community working in digital security. Through conferences, workshops, and industry events, KISA provides a platform where experts can discuss emerging cyber threats, technological developments, and strategies for protecting digital systems.

Another important area of the association’s activities is cybersecurity education and awareness. KISA promotes the development of professional training programs and educational initiatives aimed at improving cybersecurity skills among specialists and raising awareness about digital security issues. These initiatives support the development of a skilled workforce capable of responding to increasingly complex cyber threats.

The association also conducts security assessments and analytical activities related to the protection of information systems and digital infrastructure. Through expert evaluations and professional consultations, KISA contributes to improving cybersecurity practices within both public institutions and private organizations. These activities help organizations identify vulnerabilities, implement

effective security solutions, and strengthen the overall resilience of digital systems.

KISA maintains active cooperation with government bodies, academic institutions, and private sector organizations. This collaborative approach enables the association to integrate scientific knowledge, industry expertise, and policy perspectives into its activities. By working with multiple stakeholders, KISA contributes to the development of balanced and effective cybersecurity strategies that support national digital transformation.

International cooperation is also an important component of the association’s work. KISA participates in international partnerships and collaborative initiatives that aim to strengthen cybersecurity expertise and support the exchange of knowledge between countries. Through cooperation with foreign organizations, universities, and research institutions, the association contributes to the development of global cybersecurity networks.

Through its participation in Erasmus+-related initiatives and international educational projects, KISA supports capacity-building activities aimed at strengthening cybersecurity education and professional training. One example of such cooperation is the Cyber4CA (Cyber for Central Asia) initiative, which focuses on improving cybersecurity education and developing digital skills across Central Asia.

By combining professional expertise, industry cooperation, policy engagement, and international collaboration, the Kazakhstan Information Security Association plays a significant role in strengthening the cybersecurity landscape of Kazakhstan. Through its activities, the association contributes to the protection of digital infrastructure, the development of cybersecurity standards, and the preparation of professionals capable of addressing the evolving challenges of the digital era.

THE MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATIONS OF THE REPUBLIC OF UZBEKISTAN



The Ministry of Higher Education, Science and Innovations of the Republic of Uzbekistan (MHSSERUZ) is the central governmental authority responsible for shaping and implementing national policy in the areas of higher education, scientific research, and innovation development. The ministry plays a crucial role in managing the country's higher education system and coordinating the activities of universities, research institutions, and innovation centers across Uzbekistan. Through its policies and initiatives, the ministry aims to strengthen the national education system and support the development of a modern knowledge-based economy.

The ministry supervises and coordinates the work of public universities, research institutes, and higher education institutions throughout the country. Its responsibilities include ensuring the quality and modernization of academic programmes, supporting scientific research, and promoting innovation-driven development. By developing national educational standards and regulatory frameworks, the ministry helps maintain high academic quality and ensures that educational programs meet both national and



international requirements.

Another important priority of the ministry is the digital transformation of higher education and scientific research. The ministry promotes the integration of digital technologies into teaching and learning processes, supports the development of online education platforms, and encourages the use of modern digital tools in academic environments. These initiatives aim to improve educational accessibility, enhance learning outcomes, and prepare students for careers in a rapidly evolving digital economy.

The ministry also focuses on strengthening research capacity and scientific innovation. Through national research programs, grants, and collaborative initiatives, it supports the development of scientific projects in fields such as information technologies, engineering, natural sciences, and social sciences. The ministry encourages universities and research institutions to engage in applied research that contributes to technological progress and economic development.

An important aspect of the ministry's strategy is the integration of science, education, and industry. By fostering cooperation between universities, research centers, and private sector organizations, the ministry promotes the commercialization of research results and the development of innovative technologies. These partnerships help bridge the gap between academic research and practical applications, contributing to the growth of Uzbekistan's innovation ecosystem.

The ministry also plays a central role in coordinating Uzbekistan's participation in international educational programs and

initiatives, including the Erasmus+ programme of the European Union. Through Erasmus+ projects, universities and academic staff in Uzbekistan gain access to international mobility opportunities, collaborative research initiatives, and educational capacity-building projects.

Participation in Erasmus+ initiatives helps strengthen academic cooperation between Uzbekistan and universities in Europe and other regions. These programs support student and staff mobility, curriculum development, institutional capacity building, and research collaboration, contributing to the modernization of higher education institutions across the country.

One example of such cooperation is the Cyber4CA (Cyber for Central Asia) initiative, which focuses on improving cybersecurity education and digital skills development in Central Asian countries. Through its involvement in projects like Cyber4CA, the Ministry of Higher Education, Science and Innovations supports the development of modern cybersecurity curricula, strengthens cooperation between universities and international partners, and promotes the integration of advanced digital technologies into higher education.



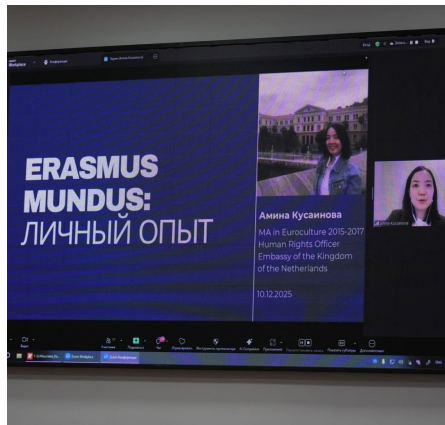
THE MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE REPUBLIC OF KAZAKHSTAN



The Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE) is the central government authority responsible for developing and implementing national policy in higher education, scientific research, and innovation. Established as a separate ministry in 2022, it plays a key role in shaping Kazakhstan's modern education and research landscape. By coordinating universities, research institutes, and academic organizations, the ministry supports the modernization of higher education and strengthens the country's scientific and technological potential.

The Ministry supervises higher education institutions and research centers across the country, ensuring the quality of academic programs, developing educational standards, and promoting reforms that enhance university competitiveness at both national and international levels. It works to improve the effectiveness of universities and align Kazakhstan's education system with global academic standards.

One of the ministry's key priorities is the modernization of higher education and the strengthening of university autonomy. Reforms aim to expand academic freedom, improve



governance, and encourage universities to develop innovative educational programs and strengthen research activities. The Ministry also promotes integration into global academic frameworks, including participation in the Bologna Process and the European Higher Education Area, supporting academic mobility and international recognition of degrees.

The Ministry actively supports scientific development, innovation, and international cooperation. It manages research funding programs, encourages young researchers, and promotes collaboration between universities, research institutions, and industry to commercialize scientific results. In addition, it advances digital transformation and STEM education, while participating in initiatives such as Erasmus+ and Cyber4CA. Through these efforts, the ministry strengthens Kazakhstan's higher education system and its position in the global academic and scientific community.



THE MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC



The Ministry of Education and Science of the Kyrgyz Republic (MES) is the central governmental authority responsible for shaping and implementing national policy in education, science, and research development. It plays a key role in guiding the strategic development of Kyrgyzstan's education system, ensuring the quality of academic programs, and promoting scientific advancement. Through its initiatives, MES aims to strengthen human capital and support sustainable socio-economic development.

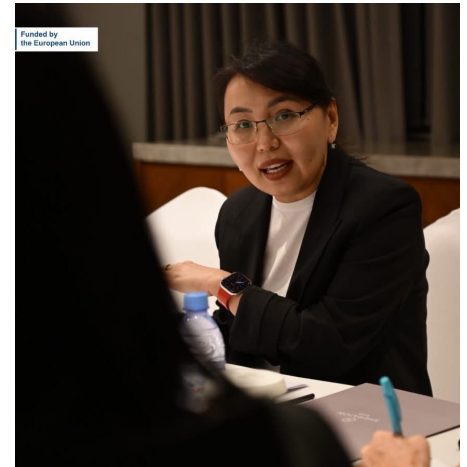
The Ministry oversees all levels of education, including preschool, primary, secondary, vocational, and higher education, as well as research institutions. It ensures that academic standards meet national and international requirements while focusing on modernization and long-term sectoral planning. MES develops national education strategies, qualification frameworks, and standards that align Kyrgyzstan's education system with global practices, supporting academic mobility and international cooperation.

A major priority of the Ministry is the implementation of education reforms focused on

competency-based and student-centered learning. It promotes modern teaching methodologies, curriculum innovation, and the development of practical skills relevant to the labor market. At the same time, MES advances digital transformation by introducing online learning platforms and information technologies, improving access to education and fostering digital competencies among students and educators.

The Ministry also emphasizes teacher professional development, inclusive education, and equal access to learning opportunities. It organizes training programs for educators and supports policies aimed at reducing educational inequality. In the field of science, MES strengthens research capacity through funding programs, support for young researchers, and the promotion of applied research contributing to national development.

International cooperation is an important aspect of the Ministry's work. MES participates in programs such as Erasmus+ and initiatives like Cyber4CA, supporting academic mobility and digital skills development.



THE MINISTRY OF DIGITAL TECHNOLOGIES OF THE REPUBLIC OF UZBEKISTAN



The Ministry of Digital Technologies of the Republic of Uzbekistan (MDTRUz) is the central authority responsible for national policy in digital transformation, ICT, and the digital economy. It plays a key role in modernizing digital infrastructure and integrating advanced technologies into public administration, economic sectors, and society. Through its strategies, the Ministry promotes innovation, efficiency, and accessibility in government and economic activities, supporting Uzbekistan's transition toward a knowledge-based economy.

The Ministry coordinates national digital transformation initiatives, including the development of ICT infrastructure and e-government systems. It supports the expansion of online public services, ensuring secure and efficient access for citizens and businesses. These efforts improve transparency, reduce administrative barriers, and enhance the overall quality of public services.

Another important focus is the development of digital infrastructure, including broadband networks, telecommunications, and data systems. By expanding connectivity across the country, the Ministry supports e-commerce, online education, and other digital services, helping to bridge the digital divide between regions.

The Ministry also promotes innovation in information technologies by supporting the adoption of advanced solutions such as artificial intelligence, cloud computing, and big data. These

technologies are increasingly applied in sectors like healthcare, education, finance, and public administration, contributing to the modernization and efficiency of the national economy.

A key priority of the Ministry is strengthening cybersecurity and ensuring the protection of digital systems, networks, and sensitive data. MDTRUz develops regulatory frameworks, technical standards, and awareness programs to enhance cybersecurity across public and private sectors.

The Ministry actively promotes digital literacy and skills development for citizens, professionals, and public sector employees. These initiatives aim to ensure the effective and safe use of digital tools while fostering a workforce capable of supporting a rapidly evolving digital economy.

MDTRUz collaborates with international partners, technology companies, and research institutions to support innovation and the growth of Uzbekistan's IT sector. It participates in initiatives such as Erasmus+ and Cyber4CA, contributing to digital skills development and cybersecurity education in Central Asia.

Through these efforts, the Ministry plays a vital role in shaping Uzbekistan's digital future. By coordinating national strategies, supporting technological innovation, and fostering international collaboration, MDTRUz strengthens digital infrastructure, improves public services, and drives the development of a secure, modern, and competitive digital economy.

THE SIGNIFICANCE OF THE CYBER4CAE PROJECT FOR IITU



Cybersecurity education is becoming an increasingly important priority for universities in the digital era. International projects such as Cyber4CAE aim to strengthen cooperation between European and Central Asian universities while developing modern educational programs that meet global standards and respond to emerging digital threats.

Another interview within the Cyber4CAE project was conducted with Gulnara Zakirova, Associate Professor and Candidate of Pedagogical Sciences at MUIT, who shared her insights on the importance of cybersecurity education, the challenges in this field, and the role of international collaboration in developing modern academic programs.

What is the significance of the Cyber4CAE project for MUIT?

The cybersecurity project Cyber4CAE is very important for our university. First of all, MUIT is a member of the international consortium that implements this project. Being part of such a consortium means that our university actively participates in achieving the goals and objectives of the project together with partner universities from other countries.

One of the main goals of the project is the development of a master's degree program in cybersecurity that corresponds to European educational standards. This is especially important today, as cybersecurity has become one of the most demanded and rapidly developing fields in the world. By developing a program that meets international standards, our university ensures that students receive modern, competitive knowledge and skills.

Another important aspect of the project is that it strengthens cooperation between universities in Central Asia and European educational institutions. Such collaboration allows us to exchange academic experience, improve educational methods, and introduce new approaches to teaching cybersecurity.

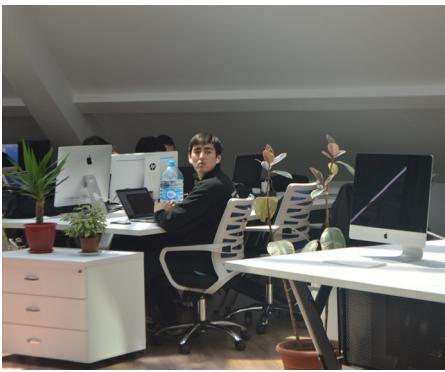
Overall, the Cyber4CAE project plays a significant role in the modernization of cybersecurity education at MUIT and helps integrate our educational system into the international academic environment.

What are the main challenges in cybersecurity education today?

Today, cybersecurity education faces several serious challenges. One of the main challenges is the rapid development of digital technologies and cyber threats. New types of cyberattacks appear constantly, and educational programs must be regularly updated in order to keep up with these changes.

Another challenge is the lack of modern laboratories and practical training opportunities. Cybersecurity is not only a theoretical field; students must develop practical skills in order to respond to real cyber threats. That is why universities must create modern learning environments where students can practice using real cybersecurity tools and technologies.

In addition, there is a growing global demand for qualified cybersecurity specialists. Many organizations, governments, and companies require professionals who can protect information systems and digital infrastructure. Therefore,



universities must prepare specialists who have strong analytical thinking, technical skills, and an understanding of international cybersecurity standards.

Projects like Cyber4CAE help address these challenges by providing universities with new educational resources, international cooperation, and improved academic programs.

What is IITU main contribution to this project?

As a member of the consortium, MUIT contributes to the project in several important ways. One of the key contributions is participation in the development and implementation of the master's program in cybersecurity. Our university works together with partner institutions to design the curriculum, define learning outcomes, and ensure that the program meets international standards.

Another important contribution is the creation of a specialized cybersecurity laboratory. This laboratory will play a crucial role in supporting the educational process. It will allow students to work with modern technologies, analyze cyber threats, and develop practical cybersecurity skills.

MUIT also contributes by sharing its academic experience and participating in joint educational and research activities with other universities in the consortium. Through this cooperation, universities can exchange knowledge, organize joint training activities, and improve the overall quality of cybersecurity education in the region.

What does this project mean for students?

For students, the Cyber4CAE project opens many new opportunities. First, the master's program will include core subjects designed according to European educational standards. This ensures that students

receive high-quality education that is recognized internationally.

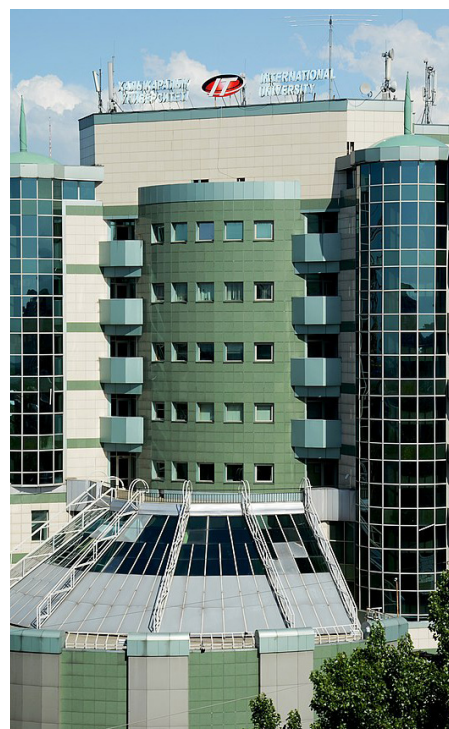
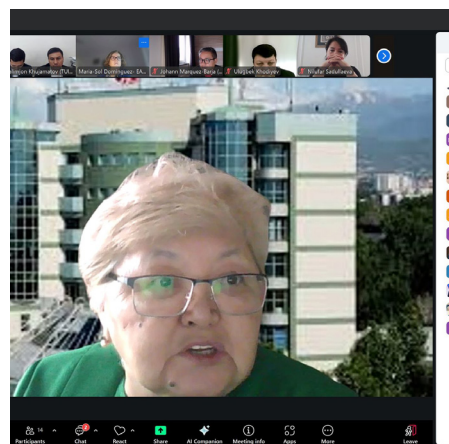
Another important advantage is the internationalization of the educational program. Since the program is developed jointly by universities from different countries, students will have the opportunity to interact with international professors and experts in the field of cybersecurity.

The project also supports academic mobility. Because the participating universities share similar learning outcomes and competencies, students can move between universities within the consortium. For example, a student from Uzbekistan or Kyrgyzstan can start their master's studies at MUIT and later continue or complete their program at another partner university.

This creates a more flexible and international learning environment for students and allows them to gain valuable global academic experience.

Would you like to add anything else to this interview or share your thoughts?

I would like to emphasize that the Cyber4CAE project is not only about creating a new educational program but also about building a strong academic network between universities and preparing highly qualified cybersecurity specialists for the future. In today's digital world, cybersecurity is becoming increasingly important, as governments, businesses, and individuals rely on secure information systems. Therefore, universities must play an active role in training professionals capable of protecting digital infrastructure and responding to modern cyber threats. Projects like Cyber4CAE help modernize educational systems, strengthen international cooperation, and provide students with better academic and professional opportunities while contributing to the overall digital security of the region.



CYBER4CA KICK-OFF MEETING IN CENTRAL ASIA



From 9 to 11 December 2025, the Cyber4CA Erasmus+ project officially started with an international Kick-Off Meeting and Workshop on Curricula Development, bringing together 17 universities, ministries, research centers, and professional organizations from Uzbekistan, Kazakhstan, Kyrgyzstan, Spain, Belgium, Italy, and Romania. The meeting marked the launch of a long-term collaboration aimed at modernizing cybersecurity education and aligning academic programs with the region's digital transformation needs.

Hosted by Tashkent University of Information Technologies, the meeting united representatives of higher education institutions, governmental bodies, research centers, and professional organizations from Central Asia and Europe. Over three intensive days, participants discussed curriculum development, academic cooperation, and practical approaches to strengthening cybersecurity competencies in response to growing digital challenges.

The rapid digitalization of public services, industry, and education has significantly increased the demand for cybersecurity specialists in Central Asia. Universities and governments across the region face the challenge of adapting educational programs to evolving cyber threats and labor market expectations. In this context, the Cyber4CA Kick-Off Meeting became a key platform for coordinating academic, institutional, and policy-driven efforts.

The Cyber4CA consortium brings together leading European technical universities with extensive experience in Erasmus+ projects and cybersecurity education. These include Universidad Politécnica de Madrid (Spain), University Politehnica of Bucharest (Romania), University of Antwerp (Belgium), and Scuola Superiore Sant'Anna (Italy). Their expertise in curriculum design, quality assurance, and research-

based education provides a strong methodological foundation for the project.

European partners shared best practices in competence-based learning, accreditation procedures, cooperation with industry. Their experience contributes to the development of modern cybersecurity curricula with international standards.

Central Asian universities play a decisive role in shaping the regional dimension of Cyber4CA. Institutions from Uzbekistan, Kazakhstan, and Kyrgyzstan presented their academic profiles, existing IT and cybersecurity programs, and priorities for curriculum modernization. The consortium includes Tashkent University of Information Technologies, National University of Uzbekistan, University of Management and Future Technologies, International Information Technology University (IITU), and Korkyt Ata Kyzylorda University.

Universities from Kyrgyzstan - Kyrgyz State Technical University named after I. Razzakov and Osh State University - highlighted regional educational needs and the importance of expanding access to cybersecurity education beyond capital cities. Discussions focused on practice-oriented learning, the integration of cybersecurity laboratories, and collaboration with industry partners.

As a student of International



Information Technology University, participation in such international academic initiatives clearly demonstrates how global cooperation directly enhances the quality, and competitiveness of IT education.

Another important outcome of the Kick-Off Meeting was the establishment of a shared understanding of regional challenges in cybersecurity education. Participants emphasized that Central Asia requires not only strong technical training, but also flexible educational models capable of responding to rapidly changing digital risks, including legal and ethical aspects of cybersecurity.

European partners highlighted the importance of interdisciplinary approaches and close cooperation with industry, while Central Asian universities stressed the need to adapt international practices to local regulatory frameworks and institutional capacities. These discussions helped shape a common vision of how Cyber4CA can serve as a bridge between global standards and regional realities.

The meeting also strengthened professional networks among academic staff, researchers, and policy makers. Informal discussions and collaborative sessions created opportunities for long-term partnerships beyond the project framework, supporting academic mobility, joint research initiatives, and future Erasmus+ cooperation.

Beyond universities, the Cyber4CA project is supported by research centers, professional associations, and governmental institutions, ensuring a comprehensive and sustainable approach. The UNICON.UZ Science-Technical and Marketing Research Center contributes analytical expertise, while the Kazakhstan Information Security Association

(KISA) provides an industry-oriented perspective on cybersecurity skills and labor market demands.

National authorities responsible for education, science, and digital development play a strategic role in the project. These include the Ministry of Higher Education, Science and Innovations of the Republic of Uzbekistan, the Ministry of Digital Technologies of the Republic of Uzbekistan, the Ministry of Science and Higher Education of the Republic of Kazakhstan, and the Ministry of Education and Science of the Kyrgyz Republic. Their involvement ensures alignment between academic initiatives and national digital strategies.

During the working sessions, partners reviewed existing study programs, identified gaps in cybersecurity education, and discussed approaches to joint curriculum development. Special attention was given to quality assurance mechanisms, academic staff capacity building, and dissemination activities aimed at ensuring long-term project impact.

The Cyber4CA Kick-Off Meeting laid a solid foundation for future cooperation. By uniting universities, ministries, research centers, and professional associations, the project creates a regional platform for advancing cybersecurity education in Central Asia. The outcomes of the meeting will directly contribute to the development of modern curricula, the establishment of innovative CyberLabs, and the preparation of a new generation of cybersecurity professionals ready to address the challenges of the digital era.

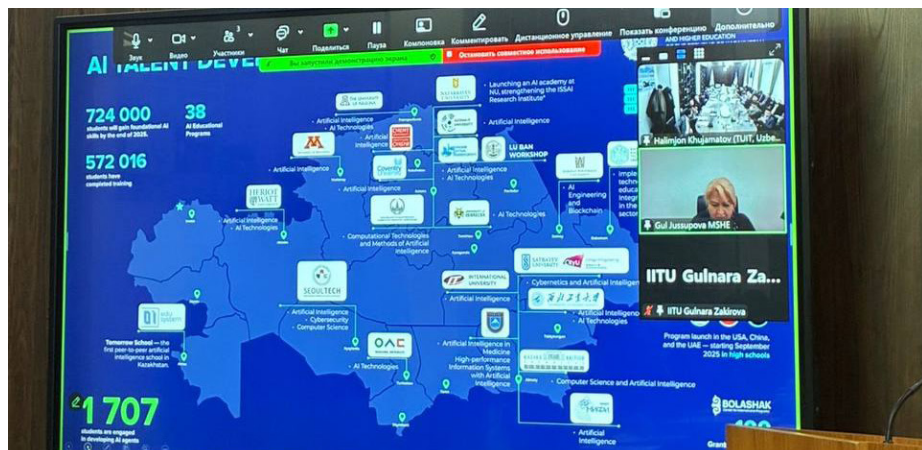
This foundation is reinforced by the diverse academic and institutional profiles of the project partners. Tashkent University of Information



Technologies, one of the leading IT universities in Uzbekistan, brings extensive Erasmus+ experience, having participated in 12 Erasmus+ projects between 2020 and 2024, including three as a grant holder. University Politehnica of Bucharest, with participation in more than 100 Erasmus+ projects, contributes long-standing expertise in engineering education and international academic cooperation.

Other European partners - Universidad Politécnica de Madrid, University of Antwerp, and Scuola Superiore Sant'Anna - add strong backgrounds in applied research, curriculum development, and quality assurance within Erasmus+ initiatives. Central Asian universities, including National University of Uzbekistan, University of Management and Future Technologies, International Information Technology University (IITU), Korkyt Ata Kyzylorda University, Kyrgyz State Technical University named after I. Razzakov, and Osh State University, contribute regional perspectives, practice-oriented education, and growing engagement in Erasmus+ mobility and cooperation programmes.

The involvement of research centers, professional associations, and national ministries further strengthens the project's impact. Analytical support from UNICON.UZ, industry expertise from the Kazakhstan Information Security Association, and strategic participation of the ministries responsible for higher education, science, and digital development in Uzbekistan, Kazakhstan, and Kyrgyzstan ensure that Cyber4CA remains aligned with national priorities and international standards.



INTERNATIONAL COOPERATION IN CYBERSECURITY: A MEETING IN TASHKENT

As part of an international project aimed at developing cybersecurity education, representatives of universities from Central Asia and Europe met in Tashkent. During the meeting, participants discussed modern trends in cybersecurity education, exchanged experiences, and outlined future steps for cooperation. Mr. Talgat Nurlybaev shared his thoughts on the importance of this meeting and the prospects of the project.

Could you tell about the meeting that took place in Tashkent? What impressions did it leave?

— The meeting within the framework of our project took place in Tashkent, a very beautiful and welcoming city. I have many positive impressions from this event. Our meeting was held the day after the Constitution Day of the Republic of Uzbekistan. The city was beautifully decorated for the celebration, and the atmosphere was truly festive. Our Uzbek colleagues welcomed us very warmly, and the organization of the event was at a very high level.

Why is this project important?

— The main goal of the project is to develop cooperation and exchange experience between Central Asian and European universities in the field of cybersecurity education. In particular, the project focuses on developing modern educational programs and training models for master's programs in cybersecurity.



During the meeting, we discussed current trends in the field, such as artificial intelligence, quantum technologies, and other rapidly developing areas. Participants shared their experience in teaching cybersecurity and spoke about both achievements and challenges in training specialists. Such an exchange of knowledge is extremely important for strengthening the cybersecurity education system in our region.

What are the next steps within the project?

— The next meeting will take place in Almaty. In March, representatives of universities from Europe and Central Asia will visit the International Information Technology University (IITU). We plan to present our achievements in cybersecurity education and research.

In addition, specialists from leading companies and banks working in the field of information security will take part in the event. This will help combine academic knowledge with practical experience.

How can the results of the meeting be evaluated?

— The most important outcome was the exchange of experience between universities from different countries. We also visited laboratories and learned more about the educational infrastructure of our partners. Interestingly, the university we visited in Tashkent has a very similar name — the Tashkent University of Information Technologies — while our university is called the International Information Technology University.

What skills should modern cybersecurity specialists have?

— Today, cybersecurity specialists must possess a wide range of skills. First of all, it is important to understand how artificial intelligence can be applied in cybersecurity and how to develop intelligent security systems.

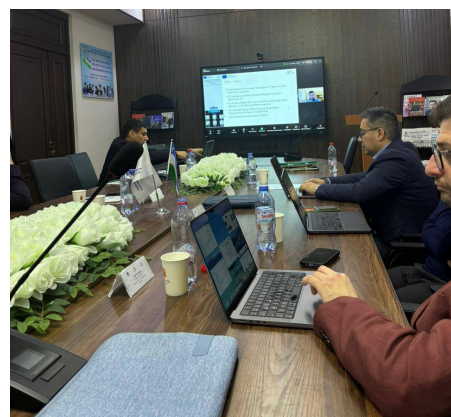
Another important area is quantum and post-quantum technologies, especially in the field of cryptography. Cybersecurity in the Internet of Things (IoT), including industrial IoT and operational technologies, is also becoming increasingly significant.



Finally, cloud infrastructure is rapidly developing, so specialists must also have strong knowledge in cloud security.

Would you like to add anything in conclusion?

— I hope that this project will help strengthen cooperation between universities in Europe and Central Asia. Joint work in cybersecurity education and specialist training will be beneficial for all participants and will contribute to improving professional standards in this field.



KICK-OFF MEETING IN TASHKENT: NEW OPPORTUNITIES IN CYBERSECURITY

A Kick-off meeting was held in Tashkent to launch a new stage of collaboration in the field of cybersecurity. Representatives of universities and partner organizations gathered to discuss key directions and future plans. We spoke with the Head of the Cybersecurity Department to learn more about the outcomes of the meeting. Interview by Damelya Maksutovna.



Could you briefly describe the Kick-off meeting held in Tashkent?

— The Kick-off meeting in Tashkent was the first official meeting within the framework of the international project. Representatives from various universities and partner organizations participated and discussed the main directions of the project. It was also a great opportunity to exchange experiences and establish future cooperation.

What was the main goal of this meeting?

— The main goal was to define the objectives and tasks of the project, as well as to establish effective communication between participants. In addition, future plans and stages of the project were discussed, and responsibilities were distributed among partners.

What key issues were discussed during the meeting?

— The participants discussed the improvement of educational programs in cybersecurity, the introduction of new technologies, and the development of students' practical skills. International cooperation and joint research opportunities were also important topics.

What opportunities does this project provide for students?

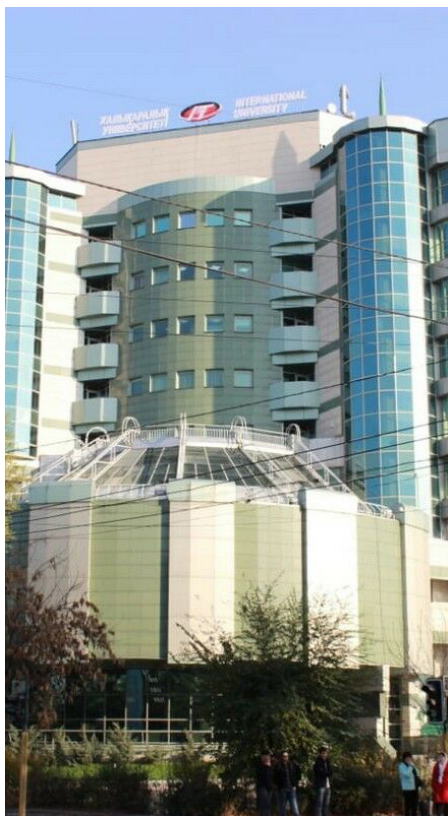
— This project opens up great opportunities for students to gain modern knowledge in cybersecurity, participate in international projects, and develop their professional skills. Students will also have access to training sessions, workshops, and practical experience.

Conclusion

The Kick-off meeting in Tashkent became an important step in strengthening international cooperation in cybersecurity education. It opens new opportunities for students and contributes to their professional growth.



INTERNATIONAL WORKSHOP ON CYBERSECURITY EDUCATION TO TAKE PLACE IN ALMATY



At the end of March 2026, International Information Technology University in Almaty, Kazakhstan will host an international workshop dedicated to the development of cybersecurity education in Central Asia. The three-day event titled “Workshop on Cyber Security Application Comparative Analysis in EU/CA HEIs Curricula Development” will take place from March 31 to April 2, 2026 and will bring together universities, research institutions, and government representatives from Europe and Central Asia.

Central Asia are still adapting their curricula to meet international standards and labor market expectations.

The upcoming workshop in Almaty will provide a platform for experts from European Union institutions and Central Asian partner universities to exchange experience and discuss ways to improve cybersecurity education. Participants will analyze current academic programs, compare teaching approaches, and identify differences between cybersecurity curricula in European and Central Asian universities. The event also marks an important stage of the Cyber4CA project and will help prepare the next phase of developing new educational programs.

The workshop is organized within the framework of the Erasmus+ Capacity Building project Cyber4CA – Development of Innovative Graduate Educational Program in Cyber Security for the Digital Labor Market of Central Asia. The project aims to strengthen cybersecurity education and help universities in the region design modern academic programs that meet the growing demands of the digital economy.

The workshop will gather representatives from many international universities and organizations. European partners include Universidad Politécnica de Madrid in Spain, University of Antwerp in Belgium, Scuola Superiore Sant’Anna in Italy, and University Politehnica of Bucharest in Romania. From Central Asia, participants will include universities from Kazakhstan, Uzbekistan, and Kyrgyzstan, including Tashkent University of Information Technologies and other



Cybersecurity has become one of the most important challenges of the digital era. As societies increasingly rely on digital infrastructure, the demand for qualified cybersecurity professionals continues to grow worldwide. Many universities in





regional institutions. Representatives of ministries responsible for higher education and digital development are also expected to attend.

The three-day program will include presentations, discussions, and collaborative working sessions. During the first day, participants will present research results on existing cybersecurity curricula, public awareness of cyber threats, and labor market demand for cybersecurity specialists. Experts from European universities will also share their experience in designing cybersecurity programs and teaching methods used in EU higher education institutions.

The second day will focus on interactive working groups where participants will develop practical recommendations for improving cybersecurity education. The groups will discuss curriculum development, practical training opportunities, and the creation of specialized cybersecurity laboratories that allow students to gain hands-on experience.

Another part of the program will include a technical visit to a cybersecurity division of a technology company in Almaty. This visit will allow participants to observe how cybersecurity solutions are implemented in real professional

environments and how cooperation between universities and industry can strengthen educational programs.

One of the main expected outcomes of the workshop is the development of recommendations for creating modern master's degree programs in cybersecurity in Central Asian universities. These recommendations will contribute to the next stage of the Cyber4CA project focused on designing new academic programs and training modules.

The workshop will conclude with a session dedicated to summarizing results and discussing further cooperation between partner institutions. By bringing together experts from different countries, the event aims to strengthen academic collaboration and support the development of a skilled cybersecurity workforce in Central Asia.



Erasmus+ KA2 Capacity Building project

Implementation of Innovative Graduate Educational Program in
Security for Digital labor market of Central Asia
(Cyber4CA)



31 March-2 April 2026

Workshop on Cyber Security Application
Comparative Analysis in EU/CA HEIs curricula
development" Almaty, Kazakhstan

Venue:
National Information Technology University, 34/1 Manas Str, Almaty

“WORKSHOP ON CYBER SECURITY APPLICATION COMPARATIVE ANALYSIS IN EU/CA HEIS CURRICULA DEVELOPMENT”. ALMATY, KAZAKHSTAN

31 March-2 April 2026

Venue: International Information Technology University, 34/1 Manas Str, Almaty

This 3-day face-to-face workshop, held at IITU (International Information Technology University) (Almaty, Kazakhstan), will bring together all project partners to compare and analyze cybersecurity curricula, courses and best practices in higher education institutions in the European Union (EU) and Partner Countries (PC). The event will be the culmination of WP2 (analysis phase) and will also serve as a solid “bridge” to WP3 (development of training courses and programs). The main objectives of the workshop are:

- presentation and discussion of previous analyses;
- sharing best practices;
- review of the draft survey on public demand and awareness;
- develop practical recommendations for adaptation through working groups;
- strengthen the consortium’s common understanding and agree on directions for WP3.

PROGRAM:



Monday 30, March 2026

Arrival and check-in of the participants at the hotels.

DAY 1 Tuesday, 31 March – Workshop
Zoom ID: 816 5996 7915
Password: 1

09:30 – 10:00	Registration
10:00 – 11:00	Opening, Welcome <ul style="list-style-type: none"> Welcome Address – Ministry of Science and Higher Education of the Republic of Kazakhstan; Welcome Address - Rector, IITU, Kazakhstan; Welcome Address - Ministry of higher education, science, and innovations of the Republic of Uzbekistan; Welcome Address - Ministry of Education and Science of the Kyrgyz Republic; Welcome Address – Halimjon Khujamatorov Project Coordinator – Cyber4CA, Uzbekistan; Welcome Address – Slobodan Bojanic Regional Coordinator from EU, UPM, Spain.
11:00 -11:30	Coffee Break Common cybersecurity challenges in curricula, gaps in PC vs EU approaches, and highlights of EU Cyber Security centers
11:30 – 13:00	Report on Survey of Public Demand and Awareness (Summary of findings from D2.1 and D2.2) Razvan Craciunescu, UNSTPB, Romania; Nilufar Sadullaeva, NUU, Uzbekistan.
13:00-14:30	Lunch Break
14:30-15:30	Session 1: EU Best Practices in Cybersecurity Education Slobodan Bojanic, UPM, Spain; Johann Marcelo Marquez Barja, UAntwerp, Belgium; Luca Valcarengi, (SSSA), Italy; Razvan Craciunescu, (UNSTPB), Romania. Presentation content: 1) an overview of EU policy in the domain of Cyber Security. 2) Tools, methods, standards, policies, and programs incorporated in EU countries pertaining to Cyber Security. 3) Specific instances of Cyber Security implementation in EU Partner universities. 4) Curricula and courses pertaining to Cyber Security and its specific applications 5) Teaching approaches related to the use of Cyber Security.
15:30-16:30	Session 2: Partner Country Curricula and Challenges

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Presentation content:

Existing educational programs in Cybersecurity, standards, tools, methods, curricula, courses, teaching approaches.

Khasanov Doston, TUIT, Uzbekistan;
 Nilufar Sadullaeva, NUU, Uzbekistan;
 Mukhiddin Mukhiddinov, UMFT, Uzbekistan;
 Damelya Yeskendirova, IITU, Kazakhstan;
 Temirbolat Kenshinbay, KKKU, Kazakhstan;

16:30-17:00

Coffee Break

17:00-17:30

Absamat Abdulaev, KSTU, Kyrgyzstan;
 Ulukbek Erkebaev, OshSU, Kyrgyzstan.

17:30 – 18:00

Discussion, Q&A

19:00

Welcome Dinner

DAY 2 Wednesday, 1 April – Workshop
Zoom ID: 816 5996 7915
Password: 1

09:30 – 09:45

Deep Dive: Interactive Working Groups & Knowledge Exchange
 (Highlights of the discussions on Day 1: identified best practices, key challenges and gaps. General summary as a “starting point” for the work of the working groups.)

09:45 – 10:15

Session 3: Specialized Topics Presentations

Cybersecurity competencies and qualification: modern market demands

Victor Pokussov, (KISA), Kazakhstan;
 Makhamadnozimov Shukurjon, (UNICON.UZ), Uzbekistan.

10:15-10:45

CyberLab and training program models
 Slobodan Bojanic, UPM, Spain;

10:45-11:00

Q&A

11:00-11:30

Coffee Break

11:30-11:45

Development of the design and content of the Master's degree program within the framework of the project

(Each CA partner university should have a draft of the future MA educational program taking into account national requirements).

Formation of working groups

(Participants will be divided into 3 groups of mixed EU and PC. Each group will be given a topic, guiding questions, and a flipchart/worksheet. Each group will appoint a rapporteur)

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Participating Institutions:

- Tashkent University of Information Technology (TUIT), Uzbekistan
- Universidad Politecnica De Madrid (UPM), Spain
- University Politehnica of Bucharest (UNSTPB), Romania
- University of Antwerp (UAntwerp), Belgium
- Scuola Superiore Sant'Anna (SSSA), Italy
- National University of Uzbekistan (NUU), Uzbekistan
- University of Management and Future Technologies (UMFT), Uzbekistan
- International Information Technology University (IITU), Kazakhstan
- Korkyt Ata Kyzylorda University (KKU), Kazakhstan
- Kyrgyz State Technical University named after I. Razzakov (KSTU), Kyrgyzstan
- Osh State University (OshSU), Kyrgyzstan
- “UNICON.UZ - Science-Technical and Marketing Research Center” LLC, Uzbekistan
- Association of legal entities “Kazakhstan Information Security Association” (KISA), Kazakhstan
- Ministry of higher education, science, and innovations of the Republic of Uzbekistan (MHSSERUZ)
- Ministry of Science and Higher Education of the Republic of Kazakhstan (MSHE RKZ)
- Ministry of Education and Science of the Kyrgyz Republic (MESKR)
- Ministry of Digital Technologies of the Republic of Uzbekistan (MDTRUZ)



11:45-13:00		Password: 1	
	Parallel Working Groups:	09:30-10:00	Consortium Meeting – WP1 WP1: Project management and coordination (TUIT) (i) Project management and coordination (TUIT) (ii) Financial flows and budget management (TUIT)
	Group 1 - Curriculum Content & Structure: (Compare EU and PC course/topic lists. Identify new courses or content areas that should be added to the PC curriculum (e.g., incident response, blockchain security, etc.). Make suggestions for restructuring existing courses, teaching methodologies (lecture vs. lab, PBL, etc.);)	10:00-10:30	Consortium Meeting – WP2 WP2 - Analyses of Cyber Security related study programs (UNSTPB and NUU) (i) Report on Cyber Security centres at EU (ii) Report on Survey of Public Demand and Awareness
	Group 2 - CyberLabs & Practical Training: (Requirements for hands-on training: equipment, labs, practical assignments, industry collaboration. Adaptation of EU CyberLab experience (D2.2 and Session 3B) to Central Asian context. CyberLab Recommendation Package for WP4);	10:30-11:00	Consortium Meeting – WP3 WP3: Development and implementation of Cyber Security related study programs and courses
	Group 3 - Policy Alignment & Institutional Support: (Institutional changes and political support required to implement new programs: accreditation processes, role of ministries, incentives, industry participation, faculty training needs (related to WP3), sustainability mechanisms);	11:00-11:30	Coffee Break
13:00-14:30	Lunch Break	11:30-12:00	Consortium Meeting – WP3 WP3: Development and implementation of Cyber Security related study programs and courses
14:30-15:30	Working Group Reports (Plenary) (Each group rapporteur presents the results) Group 1 Group 2 Group 3	12:00-12:30	Consortium Meeting – WP4 WP4 – CyberLab and training program development (Universidad Politecnica De Madrid in collaboration with IITU) (i) List of purchasing equipments (All CA HEIs)
15:30-16:00	Coffee Break	12:30-13:00	Consortium Meeting – WP5 WP5 – Quality assurance and monitoring (Scuola Superiore Sant'Anna in collaboration with KSTU) (i) Quality Assurance Plan (ii) External Quality Evaluation
16:00-16:30	Consolidation discussion The rationality of using the best practices of the EU and CA in the creation of the MA program on Cybersecurity and the role of Cyberlab: the view of WPs Leaders. Leader of WP2 – Analyses of Cyber Security related study programs UNSTPB; Co-Lead: NUU Leader of WP 3 - Development and implementation of Cyber Security related study programs and courses Lead UAntwerp; Co-Lead: OshSU Leader of WP 4: CyberLab and training program development Lead: UPM; Co-Lead: IITU Discussion, Q&A (A brief summary of the results achieved, an assignment for participants to prepare additional ideas for final recommendations, and Q&A)	13:00-14:30	Lunch Break
16:30-18:00	Tour visit to “Freedom Satellite Company”, the division of the Information Security Department, Almaty	14:30-15:00	Consortium Meeting – WP6 WP6 – Dissemination and exploitation (University of Management and Future Technologies in collaboration with KKU) (i) Project website and social networks (ii) Dissemination and exploitation plan (iii) Project promotional material
		15:00-16:00	Session 4: Formulating Final Recommendations for Regional Adaptation (Curriculum updates (which modules/courses from the EU to adapt to PC programs), Pedagogical changes (more hands-on labs, industry guest lectures, PBL, etc.), CyberLab development steps (based on the EU model, taking into account local resource constraints), Policy/partnership mechanisms (industry advisory board, ministerial support, accreditation path, etc.) and these recommendations directly feed into the design of WP3 (courses/programs) and WP4 (CyberLabs))
		16:00-16:30	Formalizing decisions and action items (Review and approve the list of decisions from the workshop)
		16:30-17:00	Coffee Break
DAY 3 Thursday, 2 April – Workshop Zoom ID: 816 5996 7915			



17:00-17:30 | Closing Session and Certificates Ceremony

Friday, 3 April – Partners' Departure



Niyazgulova Aigul Askarbekovna-
Chef Editor of the Journal



The magazine was prepared in the
framework of the subject «Digital
photography» Teacher: Shorokhov D. P.



The magazine was prepared by a
second-year student-Yelesmes Akerke