NJSC "Eurasian National University. L.N. Gumilyov"

REPORT
on the implementation of Educational Program development plans
6B06306 "Information Security systems", 7M06306 "Information Security systems",
8D06306 – "Information Security systems"
Departments of "Information Security"
name of the department
Faculty of Information Technologies
name of the faculty
behind 2022
reporting period

REVIEWED
at the department meeting
Protocol No. 5
from December 27th 2022 g.

Astana city
2022

№ pp	Name of the strategic direction, goals and objectives	Measures to implement the strategic direction	Results
	Strategic direction 1. Science and innovation, commercialization and technology transfer "**ENU - INNOVATION UNIVERSITY**"		
	Goal 1. Ensuring the competitiveness of research and innovation results at the international level		
1.1	TASK 1.1. Improve the quality and effectiveness of scientific research	*Participation of students in scientific conferences (university, national, international), competitions of scientific papers, in the presentation of the results of their own research at scientific seminars of the department*	**Publications in collections of scientific conferences:** 10 students participated in 4 international conferences (XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", ENU, March 12, 2022; International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)", MUIT, Almaty, March 31, 2022; International Student Conference " Digital Transformation:new Challenges of Science and education", November 25, 2022; International Scientific Conference "XXII Satpayev Readings", Toraigyrov University, Pavlodar, Kazakhstan; April 12, 2022): - Isainova A. N., **Mayanov M. R.** Analysis of types of SQL injection attacks and methods of countering them. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Kabiev Nazarbek**. Scientific supervisor-Ospanova A. B. Mobile spy "Pegasus". XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 - Eshmukhametov Yerlan, Kүlimkhanov Adilet. Научный руководитель – Оспанова А. Б. Компьютерлік желіде ақпараттық қауіпсіздікті қамтамасыз етуге арналған желілік барлау құралдары. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022

			• • Toksan Bekzat, Myrzakul Zhansaya, Shashubai Ulan. Научный руководитель – Оспанова А. Б. Қазақ тілінің статистикалық заңдылықтары және криптоанализдегі қолданбалы орындары. International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)", MUIT, Almaty, March 31, 2022 • Aidarbekov Aidiye, Zhusippaliev Nurbakhyt, Imasheva Kalamkas, **Amirshin Bakhtiyar**, Scientific supervisor – G. Shakhmetova. Non-fungible token technology as a part of different fields of new media, cyber security, crypto and even filmmaking. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • **Myrzakul Zhansaya**. Creation and effectiveness of using a telegram bot in the educational process. International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)", MUIT, Almaty, March 31, 2022 • **Almazbek Abbasov** Alizhanovich Scientific supervisor-senior lecturer Akhaeva Zh. B. Digital Kazakhstan. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • **Alekseyev Ilya** Scientific supervisor-senior lecturer Akhaeva Zh. B. Application of VR and AR in Kazakhstan. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • **Kurgumbayev Adlet** Muratkanovich. Scientific supervisor, senior lecturer Akhaeva Zh. B. VR / AR-technologies and their development. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • Toksan Bekzat, Myrzakul Zhansaya, Shashubai Ulan. Scientific supervisor-Ospanova A. B. Statistical patterns of the Kazakh language and their application in cryptanalysis. International Scientific Conference "XXII Satpayev Readings", Toraigyrov University, Pavlodar, Kazakhstan; April 12, 2022 • **Saldeshov Askar Mauletuly**. International Student Conference "Digital Transformation:new challenges of science and education", November 25, 2022 **Prizes in research competitions and Olympiads:**

			Among the achievements of the department's students are diplomas for the best reports at international conferences, winning personal and presidential scholarships, as well as winning the republican research and development competition.:
			• Myrzakul Zhansaya. SIB-37. **1st degree diploma**. International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)" • Mayanov Madiyar. SIB-44. **Алғыс хат**. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • Kabiev Nazarbek. SIB-25. **3rd degree diploma**. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • Күлімханов Әділет. SIB-45. **2nd degree diploma**. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • Myrzakul Zhansaya. SIB-37. **2nd degree diploma**. International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)" • Шашубай Ұлан. SIB-43. **2nd degree diploma**. International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)" • Amirshin B. SIB-44. **3rd degree diploma**. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • • Saldeshov Askar Mauletuly. SIB-29/1. **2nd degree diploma** International Student Conference "Digital Transformation:new challenges of science and education", November 25, 2022 • Ilya Alekseev. SIB-32. **Presidential Scholarship** • • Kuandyk Dias Nurgaliuly. SIB-35. **Presidential Scholarship** • Myrzakul Zhansaya. SIB-37. **Personalized scholarship** Shakhmaran Yesenov Foundation • Myrzakul Zhansaya. SIB-37. KAI, **D. K. Suleev Scholarship** • Төлегенова Аружан. SIB-37. Kazakh Academy of Infocommunications. **Personalized scholarship** named after M. M. Moldabekov • Дүйсенова Раушангүл. SIB-37. Kazakh Academy of

<table>
<tr><td></td><td></td><td></td><td>Infocommunications. **Personalized scholarship** named after M. B. Sabit</td></tr>
</table>

			• • Myrzakul Gulzhan. SIB-27. Kazakh Academy of Infocommunications. **Personalized scholarship** named after A. A. Yelibayev
			• Usen D. SIB-42. **1st place. Republican Research and Development Contest**
		Participation of undergraduates in scientific conferences (university, national, international), competitions of scientific papers, in the presentation of the results of their own research at scientific seminars of the department	**Publications in collections of international scientific conferences):** 12 undergraduates participated in 6 international conferences, including abroad (XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", ENU, March 12, 2022; International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)", MUIT, Almaty, March 31, 2022; International Scientific Conference "XXII Satpayev Readings", Toraigyrov University, Pavlodar, Kazakhstan; April 12, 2022; CCLXIII Международная научно-практическая конференция «Молодой исследователь: вызовы и перспективы», Интернаука, 2022; «БІЛІМДІ ҰРПАҚ ЕЛ ТҰРАҚТЫ ДАМУЫНЫҢ КЕПІЛІ» Халықаралық ғылыми-практикалық конференциясының материалдар жинағы, Алматы, 11.11. 2022 zh.; 7th International Conference on Recent Trends in Computer Science and Electronics, January 5-7, 2022, University of Hawaii, Manoa, Hawaii, USA): • **Eshmukhametov Yerlan, Kulimkhanov Adilet.**Научный руководитель Оспанова А. Б. Компьютерлік желіде ақпараттық қауіпсіздікті қамтамасыз етуге арналған желілік барлау құралдары. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 • **Toksan Bekzat, Myrzakul Zhansaya, Shashubai Ulan**. Научный руководитель Оспанова А. Б. Қазақ тілінің статистикалық заңдылықтары және криптоанализдегі қолданбалы орындары. International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)", MUIT, Almaty, March 31, 2022 • **Bisenbaeva Nazerke** Kobylandievna, **Nurzhaubaev Akniet** Alibievich. Using machine learning to detect distributed denial-of-service attacks. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022

			Зәйнікен Аяулым. Ғылыми жетекшісі – Қонырханова А.А. DLP жүйелерінің құрылымы. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Мұқанов Мерей** Амангелдіұлы. Scientific supervisor-PhD Tashenova Zh. M. Centralized management system for the protection of end devices in the corporate network. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Мұхамәдиев Мадияр** Ғалелұлы. Ғылыми жетекшісі – Қонырханова А.А. Динамикалық талдау негізіндегі компьютерлік вирусты зерттеу әдістері. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Нұрғалиқызы Маржан**. Ғылыми жетекшісі – Қонырханова А.А. «Ақылды көлік» бағдарламалық кешенін іске асыруда қолданылатын қазіргі заманғы WEBтехнологиялардың қауіпсіздігін зерттеу. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Тоқтыбаев Иса** Асхатұлы. Ғылыми жетекші – аға оқытушы, PhD Ж.М. Ташенова. Желілік қауіпсіздікті junos ож негізінде басқару. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Тоқсан Бекзат**, Мырзақұл Жансая, Шашубай Ұлан. Scientific supervisor Ospanova A. B. Statistical patterns of the Kazakh language and their application in cryptanalysis. International Scientific Conference "XXII Satpayev Readings", Toraigyrov University, Pavlodar, Kazakhstan; April 12, 2022 **Қали Айтханым**. Ғылыми жетекшісі – Қонырханова А.А. Виртуализация құралдарына жүргізілетін шабуылдардан бұлтты есептеулерді қорғау әдістері. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Karazhanov M. N.** Scientific supervisor-Nurusheva A.M. Comparative analysis of standards and regulatory requirements for information security of automated process control systems. Young Researcher: Challenges and Prospects: a collection of articles based on the materials of the CCLXIII International Scientific and Practical Conference "Young Researcher: Challenges and Prospects". - No. 21 (263). - Moscow, Publishing House

			"Internauka", 2022.

· Gabitova A. Ғылыми жетекші - Сагиндыков К. Компьютерлік инценденттерді зерттеу әдістері. «БІЛІМДІ ҰРПАҚ ЕЛ ТҰРАҚТЫ ДАМУЫНЫҢ КЕПІЛІ» Халықаралық ғылыми-практикалық конференциясының материалдар жинағы, Алматы, 2022ж. 17.11., 295-298 бб.

· A. Ospanova, B. Tuleuov, A. Zharkimbekova, A. Tokkuliyeva, **B. Toksan**. Linguistic Processor (Simplified) for Decision Support in the Computer Networks Testing. Proceedings of 7th International Conference on Recent Trends in Computer Science and Electronics, January 5-7, 2022, University of Hawaii, Manoa, Hawaii, USA, p. 58.

Prizes in research competitions and Olympiads:

· Сағадат Нұрмұхаммед (2 курс), Жақсыбек Диас (1 курс), Жақсығали Фараби (1 курс). **3rd degree diploma**. V case-RISC Information Security Championship. **Moscow, Russia**.

· Ешмұхаметов Ерлан. ISIB-11. 2nd degree diploma. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022

· Тоқсан Бекзат. ISIB-11. 3rd degree diploma. International Student Scientific and Practical Conference " YOUTH DIGITAL FORUM (YDF-2022)"

Presentations of research results at the scientific seminar of the Department:
All undergraduates of the department in each course make a report at the weekly scientific and methodological seminar of the department. The schedule is drawn up for each semester in consultation with speakers and academic supervisors. Information about the seminar reports is available on the department's website.

| | | *Participation of doctoral students in scientific conferences (university, national, international), competitions of* | **Publications in collections of scientific conferences:** Әбдіраман Әлия Серғалиқызы. Scientific supervisor-Nurusheva A.M. Models and techniques of information security risk assessment. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 |

		scientific papers, in the presentation of the results of their own research at scientific seminars of the department	**Prizes in research competitions and Olympiads:** Әбдіраман Әлия Серғалиқызы. Scientific supervisor-Nurusheva A.M. DSIB-2. **1st degree diploma**. XVII International Scientific Conference "YLYLYM JÁNE BILIM-2022", 2022 **Presentations of research results at the scientific seminar of the Department:** All doctoral students of the department in each course make a report at the weekly scientific and methodological seminar of the department. The schedule is drawn up for each semester in consultation with speakers and academic supervisors. Information about the seminar reports is available on the department's website.
	TASK 1.1. Improve the quality and effectiveness of scientific research	*Involvement of undergraduates in scientific research (R & D), under the guidance of leading scientists of the department in the framework of scientific projects of grant funding for the scientific cluster "Mathematics and Information Technologies"*	Contract with the project executor; participation in conferences, publications within the project; registered research reports
1.2	TASK 1.1. Improve the quality and effectiveness of scientific research	*Publications of students ' research results in national and foreign scientific publications*	***Published works in scientific journals:*** Collection of articles based on the materials of the international scientific and methodological conference "Young Researcher challenges and Prospects". Moscow, Russia, 2021
		Publications of research results of undergraduates in domestic	***Published works in scientific journals:*** • Asylkhan A.M., Kayyr A. E. Scientific supervisor-Nurusheva A.M. USE OF

| | | *and foreign scientific publications* | DLP TECHNOLOGIES IN EVENT MONITORING SYSTEMS. Internauka: electron. scientific. журн. 2022. № 15(238). URL: https://internauka.org/journal/science/internauka/238
• Asylkhan A.M., Kayyr A. E. Scientific supervisor-Nurusheva A.M. UNDERSTANDING AND CHOOSING A SOLUTION TO PREVENT DATA LOSS. Internauka: electron. scientific. журн. 2022. № 15(238). URL: https://internauka.org/journal/science/internauka/238
• Tleugaliev E. U. Scientific supervisor Sagindykov K. M. Monitoring system for ensuring information security in the corporate network. Annali d'Italia No. 31/2022-pp. 139-141
• **Aldabergenov A.** Tashatov N. Features of mobile development when creating cartographic applications. International independent scientific journal. No. 41/2022-pp. 50-52. https://doi.org/10.5281/zenodo.6981423.
• A. Ospanova, B. Tuleuov, A. Zharkimbekova, A. Tokkuliyeva, **Bekzat Toksan**. Processor (Simplified) For Decision Support In The Computer Networks Testing. International Journal of Mechanical Engineering. – Vol. 7, No. 1, 2022. P. 3541-3549 |
| | | *Publications of research results of doctoral students in domestic and foreign scientific publications* | ***Published works in scientific journals*:**
Doctoral students of the department have publications in journals included in the WoS, Scopus databases, as well as in the list of KKSON of the Ministry of Education and Science of the Republic of Kazakhstan:
• Razaque A., Alotaibi B., Alotaibi M., Amsaad F., Manasov A., Hariri S., **Yergaliyeva B.**, Alotaibi A. Blockchain-Enabled Deep Recurrent Neural Network Model for Clickbait Detection. IEEE ACCESS. – 2022.- Vol. 10.-Pages: 3144-3163. DOI:10.1109/ACCESS.2021.3137078. Accession Number: WOS:000741988600001. **Impact-factor log number: 3.367 (2020). quartile: Q2**. ISSN:2169-3536
• Razaque A., Shaldanbayeva N., Alotaibi B., Alotaibi M., **Murat A. (Murat Akhmetov)**, Alotaibi A. Big Data Handling Approach for Unauthorized Cloud Computing Access. ELECTRONICS ((Switzerland).- 2022. – Vol. 11, Issue 1, Article Number: 137 DOI: 10.3390/electronics11010137. Accession |

			Number: WOS:000748003400001. **Log Impact Factor: 2.397 (2020). quartile: Q3**. eISSN:2079-9292.
			- Boranbayev S., **Amrenov A.**, Nurusheva A., Boranbayev A., Goranin N. Methods and Techniques of Information Security Risk Management During Assessment of Information Systems. In: Arai, K. (eds) Advances in Information and Communication. FICC 2022. pp. 787-797. Lecture Notes in Networks and Systems, vol 439. Springer, Cham. doi.org/10.1007/978-3-030-98015-3_53. ISBN 978-3-030-98014-6. (link.springer.com/chapter/10.1007/978-3-030-98015-3_53). **IF 0,170** **Yergaliyeva, B.B.**, Seitkulov, Y.N., Satybaldina, D. Methods for the secure use of external servers to solve computationally-complex problems with secret parameters. Journal of Theoretical and Applied Information Technology, 2022, 100(1), pp. 235–245. **Quartile: Q3, percentile 36**. ISSN 19928645. METHODS FOR THE SECURE USE OF EXTERNAL SERVERS TO SOLVE COMPUTATIONALLY-COMPLEX PROBLEMS WITH SECRET PARAMETERS. **IF 0.153** **Banu B. Yergaliyeva**, Yerzhan N. Seitkulov, Dina Satybaldina, Ruslan M. Ospanov. On some methods of storing - data in the cloud for a given time. TELKOMNIKA (Telecommunication, Computing, Electronics and Control), Vol 20, No2, 2022, pp. 366-372. DOI: 10.12928/telkomnika.v20i2.21887. **Quartile: Q3, percentile 46**. ISSN:1693-6930. E-ISSN:2087-278X. On some methods of storing data in the cloud for a given time. **IF 0.258** - Razaque A., Alotaibi B., Alotaibi M., Amsaad F., Manasov A., Hariri S., **Yergaliyeva B.**, Alotaibi A. Blockchain-Enabled Deep Recurrent Neural Network Model for Clickbait Detection. IEEE ACCESS. – 2022.- Vol. 10.- Pages: 3144-3163. DOI:10.1109/ACCESS.2021.3137078. **Quartile: Q1, percentile 87**. ISSN:2169-3536. Blockchain-Enabled Deep Recurrent Neural Network Model for Clickbait Detection. **IF 0.587** - Razaque A., Shaldanbayeva N., Alotaibi B., Alotaibi M., **Murat A. (Murat Akhmetov)**, Alotaibi A. Big Data Handling Approach for Unauthorized Cloud Computing Access. ELECTRONICS ((Switzerland).- 2022. – Vol. 11,

			Issue 1, Article Number: 137 DOI:10.3390/electronics11010137. **Quartile: Q2, percentile 52**. eISSN:2079-9292. Big data handling approach for unauthorized cloud computing access. **IF 0.360** • Ospanov R.M. Seitkulov Ye.N., **Yergaliyeva B.B.** A cryptographic hash function based on a modified sponge scheme. Eurasian Journal of Mathematical and Computer Applications. Volume 10, Issue 2, Pages 55 – 70. ISSN 23066172. DOI 10.32523/2306-6172-2022-10-2-55-70. **IF 0.315** • **Yergalieva B. B.** Seitkulov E. N., Tashatov N. N., Satybaldina D. Zh. Methods of secure cloud processing of large-dimensional matrix equations. Proceedings of the University, section "Power Engineering, Automation, ICT", 2022, №1 (86), - pp. 333-337. DOI 10.52209/1609–1825_2022_1_333. ISSN (print): 1609-1825 • Seitkulov E. N., Ospanov R. M., Tashatov N. N., **Yergalieva B. B.**, Satybaldina D. J. A set of unconditional optimality criteria for s-blocks. Bulletin of the National Engineering Academy of the Republic of Kazakhstan. 2022. № 1 (83).-C.83-90. https://doi.org/10.47533/2020.1606-146X.144. ISSN (print): 2709-4693 • **Abdiraman A.**, Nurusheva A., Goranin N., Aldasheva L. Designing A Model of Information Security Risk of an Information and Communication Infrastructure Object and Its Prevention on the Example of Satellite Communication Systems. Proceedings of the University, section "Automation, Power Engineering, ICT", 2022, №3 (88), - pp. 374-379. DOI 10.52209/1609–1825_2022_1_333. N (print): 1609-1825 • **Abdiraman A.**, Nurusheva A., Aldasheva A. Analysis of methods of information security level assessment of information and communication infrastructure objects. Bulletin of the National Research Academy of the Republic of Kazakhstan, section "Technical Sciences and Technologies", 2022, No. 3. ISSN 2709-4693 (Print), ISSN 2709-4707 (Online)
1.3	TASK 1.3. Modernize and	Opening / modernization of specialized educational /	All teachers of the department are registered and actively use the platform's features https://www.researchgate.net.

	digitize the scientific infrastructure.	scientific laboratories and organization of work on the development and use of elements of the digital scientific platform (virtual laboratories, simulation modeling systems, digital services of university infrastructure, digitized databases of educational and scientific publications)	Teachers of the department master the 1C certification course. On October 26, 2022, a meeting was held with Economic Leaders D. Shcheglova and B. Kurmangalieva, during which the 1C Certified Education Center and Laboratory were opened. The department plans to introduce the 1C Bitrix system https://b24-jwpveo.bitrix24.kz/?secret=6gjmnrui. IT Alem laboratories have been upgraded. Teachers of the department attended a training seminar on organizing courses and checking works for plagiarism in the system moodle.enu.kz. Access to Coursera's optional courses is expected
Goal 2. Increasing the contribution of science to the real economy			
	3ADACHA 2.2. Ensure the effectiveness of the activities of commercialization structures	Involvement of undergraduates and doctoral students in the development and commercialization of startup projects of undergraduates and doctoral students, as well as in the implementation of research work of the department with business structures and enterprises of the city and country	The ENU Youth Business Incubator regularly conducts training on the course of technological entrepreneurship in Astana Hub, which is attended by teachers. master's and doctoral students of the department. The ENU Rector held a competition for awarding a grant to support scientific projects and ideas with prospects for commercialization. On October 6-7, students of the department Khamitov A. (SIB-49/5), Raikul S. (ISIB-12), Magzumov A. (Sib-45) participated in the KazHACKathon organized by TSARKA, Cambridge Global Advisors (CGA) and the International Development Agency of the USA (USAID). On November 8, the university selection round of the ENACTUS Kazakhstan Business Forum competition for innovative projects of students, undergraduates and doctoral students was held (November 24-25, Almaty).

	Strategic direction 2. Academic Excellence " ENU-ACADEMIC EXCELLENCE UNIVERSITY		
	Goal 1: International orientation of educational programs and quality assurance of personnel training		
2.2	TASK 1.1. Ensure the quality of personnel training	Teaching teaching staff in new areas of science and technology, with the possibility of obtaining international certificates, including professional certificates from IT vendors	1. Nurusheva A.M.-Audit of the information security management system based on the requirements of ISO / IEC 27001: 2013. Internal Auditor of the ISMS, certified by TUV Rheinland International Service Solutions, 11.03.2022 2. Nurusheva A.M. ISACA, 01.08.2022-16.09.2022 "Certified Information Security Manager", 2022 3. Tyulemisova Dana. -SO/IEC 27001:2013 Requirements. Information Security Management System Internal Auditor.Certificate № IA 33-2213-17 June's 2022 g. 4. Rabaev Daulet. -NSE 4 Network Security Professional. FORTINET 16.07.2022 5. Rabaev Daulet. -NSE 6 FortiADC.FORTINET 23.07.2022 6. Rabaev Daulet. -NSE 6 FortiWeb. FORTINET 29.05.2022 7. Rabaev Daulet -NSE 6 Securing AWS with Fortinet Cloud Security. FORTINET 06.09.2022 8. Rabaev Daulet -NSE 7 Network Security Architect FORTINET 16.07.2022-16.07.2024 9. B. K. Abduraimova - "Development of a research university - the experience of European higher educational institutions", 2022. 10. Seitkulov E. N. - " Digital forensics: detection, investigation and response to incidents of cyber attacks", 07.02.2022-24.02.2022, 72h, T&T Security, no. C - ½ - 2022

| | | Training of competitive personnel in the international labor market: increasing academic mobility of teaching staff and students, training of multilingual groups,etc. | **Information about attracted foreign professors in the academic year 2021-2022:**
1. Andrey S. Bereznitsky, PhD in Economics, Associate Professor, North Caucasus Federal University (Stavropol, Russia)
2. Evgeny Ivanovich Nikolaev, Candidate of Technical Sciences, Associate Professor North Caucasus Federal University (Stavropol, Russia)
3. Boltaev Sherzod Tuilibayevich, PhD, Associate Professor.Professor Mirzo Ulugbek National University of Uzbekistan (Tashkent, Uzbekistan)

foreign scientific supervisors of doctoral students
3. Nikolay Goranin, Knyaz Gediminas Vilnius Technical University
4. Peter Popov, City, University of London
5. Willian Dimitrov, University of Library Studies and Information Technologies · Computer Science
6. Alexander N. Kurbatsky, Belarusian State University
7. Tebuova Fariza Bilyalovna, North Caucasus Federal University
8. Sukhomlin Vladimir Aleksandrovich, Moscow State University.Lomonosov Street
9. Vadim Goikhman, St. Petersburg State University of Telecommunications
10. Kopytov Vladimir Vyacheslavovich, North Caucasus Federal University
11. Vyacheslav Ivanovich Petrenko, North Caucasus Federal University
12. Abdul Razak, PhD Doctor of New York University (USA)

Information about outgoing academic mobility of teaching staff of the department:
ex.no academic mobility in 2022

Incoming academic mobility of students
1. Gruntovoy Anton Vitalievich, North Caucasus Federal University (Russia)
2. Andrey A. Shauev, North Caucasus Federal University (Russia)
3. Anastasia V. Garanzha, North Caucasus Federal University (Russia)
4. Zavolokina Ulyana Vladimirovna, North Caucasus Federal University |

			(Russia)
			5. **Kovtun A. S. -**North Caucasus Federal University (Russia)
			6. **Mamutov E. V.-**North Caucasus Federal University (Russia)
			7. **Khapantsev A.M.-**North Caucasus Federal University (Russia)

Outgoing Bachelor's degree academic mobility

1. Nurmanova A. S., 3rd year, Saint Petersburg University of Information Technologies, Mechanics and International Research, Russia, 01.02.2022-30.06.2022
2. Shakhidani A. E., 3rd year, Poland, University of Warsaw 14.02.2022-08.07.2022
3. Serik Balnur, 6B06306 - "Information Security Systems", Silesian University of Technology, Poland, 01.09.2022-05.01.2022

4. Kakimishov Yerbol Adilkhanuly, 6B06306 - "Information Security Systems", University of Lodz (Poland) 01.09.2022-05.01.2022

5. Igumenshev Daniil Vladimirovich, 6B06306 - "Information Security Systems", University of Alba Iulia, Romania, 01.09.2022-05.01.2022

6. Kabiev Nazarbek Balabayevich, 6B06306 - "Information Security Systems", Silesian University of Technology, Poland, 01.09.2022-05.01.2022

Outgoing academic mobility in the Master's program

7. Әбдіхалық Ш.С. магистрант, Литва, Университет Вильнюс, 01.02.2022-30.06.2022
8. A. N. Karimzhanov:, Master's student, Vilnius University, Lithuania 01.02.2022-30.06.2022
9. Seidualy A. K., Master's student, Vilnius University, Lithuania, 01.02.2022-30.06.2022
10. Sydykov D. M., Master's student, Vilnius University, Lithuania, 01.02.2022-30.06.2022
11. A. K. Manatbek, Master's student, Pamukkale University, Turkey,

			21.06.2022-17.06.2022

21.06.2022-17.06.2022
12. Сағадат Нұрмұхаммед Берікұлы, Национальный исследовательский ядерный университет «МИФИ»
13. Dosmurat Beisekeyev, National Research Nuclear University "MEPhI"
14. Zhursinbek Erden Shakhmaranuly, National Research Nuclear University "MEPhI"
15. Kuzembay Sholpanay Bakytbekkyzy, National Research Nuclear University "MEPhI"
16. Mukanova Aykun Sabitkyzy, National Research Nuclear University "MEPhI"
17. Orynaly Yerasyl Bekezhanovich, National Research Nuclear University "MEPhI"
18. Yerasyl Slyamov, National Research Nuclear University "MEPhI"
19. Isa Askhatuly Toktybayev, National Research Nuclear University "MEPhI"
20. Nurzhaubaev Akniet Alibekovich, NCFU
21. Tyulemisova Dana Bolatovna, North Caucasus Federal University
22. Boranbai Zhandos, North Caucasus Federal University
23. Ainur Rakhymzhanova, North Caucasus Federal University

doct ex:
Abdiraman Alii Sergalikyzy, 8D06306 - "Information Security Systems", Knyaz Gediminas Vilnius Technical University (Vilnius, Lithuania), doctoral internship

Multilingual groups: (, bachelor's degree -40, master's degree -12, doctoral students-11)
Bachelor course
1-course
1. Kaiyrbekov Bekzhan
2. Sagyndykov Elshat
3. Onimbay Saltanat Zhandosbekkyzy
4. Mergembay Iskendir Kanatuly
5. Alibekova Zhanel Akylbekkyzy
6. Ubinamin Argyn

			7. Dauletkanova Inkar Akylbekovna
			8. Zhalbi Nұraylym Ruslankyzy
			9. Tursymat Eldana Sabyrzhankyzy
			10. Khaldybek Orazeli Bakhytzhanuly
			11. Kali Arkat Aituaruly
			2-course
			12. Argyn Baktiyar
			13. Baқyt Dauren Yerzhanuly
			14. Gainollinova Ayym Amantayevna
			15. Igumenshev Daniil Vladimirovich
			16. Kanatova Yerkenaz Kanatovna
			17. Kurmangali Temirlan Kudaibergenuly
			18. Tlegenov Dias Erboluly
			19. Gazezov Dauren Erbolatuly
			20. Sitkaliev Nursultan Kuanovich
			21. Mirash Tair Yerlanovich
			3rd-year course
			22. Adebiet Meruert
			23. Beybitov Yernur Mukhamedyaruly
			24. Bulkairov Artur Aivaruly
			25. Garib Dias Ashtuly
			26. Kabiev Nazarbek Balabayevich
			27. Kakimishov Yerbol Adilkhanuly
			28. Rakanova Asel Erlanovna
			29. Yulia Vasilievna Rudkovskaya
			30. Omiralli Imangali Dosymzhanuly
			31. Huseyyn Alisherovich Sultonov
			32. Shertai Olzhas Zhenisbekuly
			33. Dosmukhametova Balzhan
			34. Akylbek Bota
			35. Aizhimgereeva Aizhan
			36. Kadirov Kanat
			37. Imangaliyeva Ayazhan

			38. Arina Tynymova
			39. Susuzov Alisher
			40. Aliaskar Sofia Saruarkyps

Undergraduates
1. Absamatov Aral Umirzakuly
2. Askarbekkyzy Akbota
3. Ermekov Erasyl Ermekuly
4. Damir Serikovich Kadyrov
5. Kenesbek Zhasulan Ruslanuly
6. Zamir Alievich Khazarov
7. Nurlybay Asel Kanatkyzy
8. Nysanbayeva Zhanerke Turmanovna
9. Omirzak Dinmukhamed Sabyruly
10. Rahmatulla Orken Mustafauli
11. Talgat Aydin Erdenuly
12. Tazhikenova Nurzhanar Kabykenkyzy

Doctoral students:
1. Azimkhan Amir Auezkhanuly
2. Tleuberdin Saken Tokatovich
3. Baқut Makhabbat Askhatkyzy
4. Yesenbayeva Araylym Lemisovna
5. Alnur Ramashevich Kusainov
6. Musa Ashar Shukiruly
7. Nurzhanov Aslan Begaidaruly
8. Nurzhaubaev Akniyet Alibievich
9. Ospanov Ruslan Maratovich
10. Saғadat Nurmukhammed Berikұly
11. Syzdykbayev Kuanysh Serikovich

	Master's degree program	*Development, implementation and implementation of joint educational programs, including double degree programs with foreign universities included in the QS 700+rating*	The Department implements joint master's degree programs with the following universities: 1. North Caucasus Federal University-7M06306-Information Security Systems (QS EECA 251-300) 2. Federal State Autonomous Educational Institution of Higher Education "National Research Nuclear University "MEPhI" - 7M06306-Information Security Systems (QS WUR 308)
2.5	TASK 1.2. Guarantee the quality of educational programs at the international and national level.	*Involvement of academic experts from partner universities (Kazakhstan and foreign) in the examination of the educational program (OP), catalogues of disciplines and syllabuses of disciplines.*	NCFU academic experts and experts of professional associations, as well as foreign professors, were involved in the examination of educational programs: 1. Abdul Razak, PhD Doctor of New York University (USA) 2. Bishwajeet Kumar Pandey, PhD, Doctor of Jain University (India)
2.6		Involvement of students and experts from government organizations and companies and professional associations in the field of information security in the examination of the educational program, catalogs of disciplines and syllabuses of disciplines.	− Bil O. V.-virus analyst, chief architect-Head of the Malicious code Research Laboratory of RSE "State Technical Service" -Tebuova Fariza Bilyalovna, North Caucasus Federal University, Doctor of Physical and Mathematical Sciences, Associate Professor, Head of the Department of Computer Security - Vyachaslav I. Petrenko, North Caucasus Federal University, Candidate of Technical Sciences, Associate Professor, Acting Director, Head of the Department of Information Security Organization and Technology − 4th year student of the educational program Baccalaureate Usen D. B. − 2nd year Master's student Tyulemisova D. B. -докторант 2-го курса Әбдіраман Ә.С.

2.7	TASK 1.2. Guarantee the quality of educational programs at the international and national level	Ensuring the quality of educational programs through their recognition at the international level through accreditation procedures in international specialized agencies	On April 28-29, 2022, we passed an external audit for accreditation in the KAZSEE agency.: 1. 6B06306 - "Information Security systems"; 2. 7M06306 - "Information Security systems"; 3. 8D06306 - "Information Security systems".
2.8	TASK 1.2. Guarantee the quality of educational programs at the international and national level	Confirmation of the quality of the EP through recognition of the results of its implementation at the national level through participation in ratings (Atameken National Chamber of Entrepreneurs, NAAR, etc.)	Department of Information Security: 1. National CHAMBER OF Entrepreneurs OF THE Republic OF KAZAKHSTAN "ATAMEKEN" 6B06306 Information Security Systems – 1st place ([National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" (atameken.kz)](#), [Link to the certificate](#)) 2. NAAR • 6B06306 Information Security Systems – 1st place • 7M06306 Information Security systems – 2nd place https://iaar.agency/rating/1/0/2021 • 8D06306 - "Information Security systems" - 2nd place https://iaar.agency/rating/1/0/2021
2.9		Participation of students in competitions and Olympiads held by government organizations and companies in the IT industry in order to	Usen D. SIB-42. 1st place. Republican Research and Development Contest

		prepare graduates for confirmation of qualifications.	
		Participation of undergraduates in competitions and Olympiads held by government organizations and companies in the IT industry in order to prepare graduates for confirmation of qualifications.	Сағадат Нұрмұхаммед (2 курс), Жақсыбек Диас (1 курс), Жақсығали Фараби (1 курс). 3rd degree diploma. V case-RISC Information Security Championship. Moscow, Russia.
2.10		*Conducting a survey of students in order to determine the degree of satisfaction with the quality and content of the educational process*	Based on the results of the survey of students, curatorial hours were held to determine the reasons for students ' dissatisfaction, the results were discussed at a meeting of the department. Appropriate corrective actions are planned
	Strategic direction 3. Internationalization and improvement of international competitiveness " ENU-INTERNATIONAL UNIVERSITY"		
	Goal 1. Internationalization of scientific and educational activities		
3.1	OBJECTIVE 1.2. Ensure the development of academic and managerial	Attracting foreign scientists and teachers to give lectures on the subjects of the educational	**Information about attracted foreign professors in the academic year 2021-2022:** 1. Andrey S. Bereznitsky, Candidate of Economic Sciences, Associate Professor, North Caucasus Federal University (Stavropol, Russia) 2. Evgeny Ivanovich Nikolaev, Candidate of Technical Sciences, Associate

	resources based on international cooperation.	program	Professor North Caucasus Federal University (Stavropol, Russia) 3. Boltaev Sherzod Tuilibayevich, PhD, Associate Professor.Professor Mirzo Ulugbek National University of Uzbekistan (Tashkent, Uzbekistan)
3.2	OBJECTIVE 1.2. Ensure the development of academic and managerial resources through international cooperation	Attracting foreign scientists for joint research	Joint research is being conducted with leading foreign scientists, including V. Y. Goikhman, Professor of the St. Petersburg State University of Telecommunications named after Prof. M. A. Bonch-Bruevich (St. Petersburg, Russian Federation), N. A. Sokolov, specialist of the PROTEUS ST Scientific and Technical Center (Saint Petersburg, Russian Federation), Valery V. Zolotarev-Professor of the Space Research Institute of the Russian Academy of Sciences (IKI RAS), Ovechkin Gennady Vladimirovich-Professor of Ryazan State Radio Engineering University (RGRTU), Tebueva F. B.-Professor of North Caucasus Federal University, Nur Izura Udzir-Professor of Putra University in Malaysia, V. V. Meshechkin-Professor of Kemerovo State University (Russia), as well as with foreign scientific supervisors of doctoral students: 1. Nikolay Goranin, Knyaz Gediminas Vilnius Technical University 2. Peter Popov, City, University of London 3. Willian Dimitrov, University of Library Studies and Information Technologies · Computer Science 4. Alexander N. Kurbatsky, Belarusian State University 5. Sukhomlin Vladimir Aleksandrovich, Moscow State University.Lomonosov Street 6. Kopytov Vladimir Vyacheslavovich, North Caucasus Federal University 7. Vyacheslav Ivanovich Petrenko, North Caucasus Federal University 8. Abdul Razak, PhD Doctor of New York University (USA)
3.3	OBJECTIVE 1.2. Ensure the development of	Preparation of joint publications with foreign scientists in the framework of	• **Razaque A., Alotaibi B., Alotaibi M., Amsaad F., Manasov A., Hariri S.,** Yergaliyeva B., Alotaibi A. Blockchain-Enabled Deep Recurrent Neural Network Model for Clickbait Detection. IEEE ACCESS. – 2022.-

academic and managerial resources based on international cooperation.	joint scientific research	Vol. 10.- Pages: 3144-3163. DOI:10.1109/ACCESS.2021.3137078. Accession Number: WOS:000741988600001. **Impact-factor log number: 3.367 (2020). quartile: Q2**. ISSN:2169-3536

- **Razaque A**., Shaldanbayeva N., Alotaibi B., Alotaibi M., Murat A. (Murat Akhmetov), Alotaibi A. Big Data Handling Approach for Unauthorized Cloud Computing Access. ELECTRONICS ((Switzerland).- 2022. – Vol. 11, Issue 1, Article Number: 137 DOI: 10.3390/electronics11010137. Accession Number: WOS:000748003400001. **Log Impact Factor: 2.397 (2020). quartile: Q3**. eISSN:2079-9292.

- Boranbayev S., Amrenov A., Nurusheva A., Boranbayev A.,**Goranin N.** Methods and Techniques of Information Security Risk Management During Assessment of Information Systems. In: Arai, K. (eds) Advances in Information and Communication. FICC 2022. pp. 787-797. Lecture Notes in Networks and Systems, vol 439. Springer, Cham. doi.org/10.1007/978-3-030-98015-3_53. ISBN 978-3-030-98014-6. (link.springer.com/chapter/10.1007/978-3-030-98015-3_53). **IF 0,170**

- **Razaque A**., Alotaibi B., Alotaibi M., Amsaad F., Manasov A., Hariri S., Yergaliyeva B., Alotaibi A. Blockchain-Enabled Deep Recurrent Neural Network Model for Clickbait Detection. IEEE ACCESS. – 2022.- Vol. 10.- Pages: 3144-3163. DOI:10.1109/ACCESS.2021.3137078. Quartile: Q1, percentile 87. ISSN:2169-3536. Blockchain-Enabled Deep Recurrent Neural Network Model for Clickbait Detection. IF 0.587

- **Razaque A**., Shaldanbayeva N., Alotaibi B., Alotaibi M., Murat A. (Murat Akhmetov), Alotaibi A. Big Data Handling Approach for Unauthorized Cloud Computing Access. ELECTRONICS ((Switzerland).- 2022. – Vol. 11, Issue 1, Article Number: 137 DOI:10.3390/electronics11010137. **Quartile: Q2, percentile 52**. eISSN:2079-9292. Big data handling approach for unauthorized cloud computing access. **IF 0.360**

- Abdiraman A., Nurusheva A., **Goranin N**., Aldasheva L. Designing A

			Model of Information Security Risk of an Information and Communication Infrastructure Object and Its Prevention on the Example of Satellite Communication Systems. Proceedings of the University, section "Automation, Power Engineering, ICT", 2022, №3 (88), - pp. 374-379. DOI 10.52209/1609–1825_2022_1_333. N (print): 1609-1825
	Strategic direction 4. Creating and upgrading an ecosystem for students and teachers «ENU – DIGITAL UNIVERSITY»		
	GOAL 1. Modernization of the University's infrastructure ecosystem		
4.1	TASK 1.1. Create safe and comfortable conditions for students	*Expansion of the modern educational and laboratory base for the implementation of the educational process and research* with compliance with sanitary and epidemiological standards, equipping classrooms with equipment	Students have the opportunity to use the places of educational and laboratory bases for using IT Alem technology in the FITA academic building. All measures to comply with sanitary and epidemiological standards and equip classrooms with equipment have been taken.
4.2	TASK 1.1. Create safe and comfortable conditions for students	Providing support to students in providing shared spaces (openspaces, co-working platforms, etc.), removing barriers to meeting basic educational needs for inclusive education.	Students have the opportunity to use collective spaces (openspaces, co-working platforms, etc.) in the FITA academic building

	Goal 2. Creating a digital ecosystem		
4.3	TASK 2.3 . Create an intelligent learning system Smart. Learning.ENU	Use the Smart.Learning.ENU intelligent learning system for the individual educational trajectory of students of all levels using LMS, intelligent MOOCs, digital library and intelligent assessment of learning outcomes.	1. To develop courses using the "Inverted Classroom" technology and to implement distance learning, faculty members of the department develop courses on the LMS Moodle platform. 2. Digitized resources of the ENU Library are available on the library's website https://lib.enu.kz/kz/
4.4	TASK 2.5. Ensure information security	Participation of doctoral students in the development of hardware and software solutions to ensure information security of ENU infrastructure resources, intelligent video surveillance systems and behavior analysis	Don't participate

Head of the Department "Information Security"   **Satybaldina D. Zh.**