Report on Quality Assessment
(2019– 2020)

1 Development of new curricula

1.1 Project Modules development and creating e-learning environment

N	Module	Responsible person (First and last name, faculty, department, affiliation, e-mail)	Link in LMS Moodle, Google Classroom
1	Biomedical materials and structures	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science, shalomeev@radiocom.net.ua	https://moodle.zp.edu.ua/course/view.php?id=2118
2	CAD of biomedical devices and structures	Pakhomenko Anzhelika, Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, PhD, associate professor, parhom@zntu.edu.ua	https://moodle.zp.edu.ua/course/view.php?id=711
3	Embedded biomedical systems and wireless sensor networks	Pakhomenko Anzhelika, Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, PhD, associate professor, parhom@zntu.edu.ua	https://moodle.zp.edu.ua/course/view.php?id=748

1.2 Realization of Pilot teaching

N	Module	Group/ Number of students	Terms of Pilot teaching
1	Biomedical materials and structures	RT- 229 m / 13 RTz – 229 m / 2	Fall semester 2019/2020
2	Embedded biomedical systems and wireless sensor networks	RT- 229 m / 13 RTz – 229 m / 2	Fall semester 2019/2020
3	CAD of biomedical devices and structures	RT- 229 m / 13 RTz – 229 m / 2	Spring semester 2019/2020

2 Restructuring

2.1 Creating the new laboratories or modernization exist ones

N	Faculty, department	Title of laboratory, room number	Responsible person (First and last name, faculty, department, affiliation, e-mail)
1	Faculty of Computer Science and Technology, Software Tools Department	Laboratory of Intelligent Computing, Virtual and Augmented Reality, Room 25-27	Sergey Subbotin, Head of Software Tools Department, subbotin.csit@gmail.com
2	Faculty of Radio Electronics and Telecommunications, Department of Radio Engineering and Telecommunications	Room 39	Sergey Morshchavka, Head of the Department of Radio Engineering and Telecommunications

3 Equipment

3.1 Works on installation of purchased equipment

N	Module	List of equipment	Room number
1	Embedded biomedical systems and wireless sensor networks	1. Oculus Go VR (32Gb) Virtual Reality Headset (1) 2. Arduino Mega 2560 3.5" 320x480 TFT LCD Display Module (5) 3. AD8232 ECG Monitoring Module from Duinopeak, Sensor with ECG Cable and Electrodes (5) 4. GSM/GPRS/ GNSS/Bluetooth HAT Shield for Raspberry Pi (5) 5. LuaNode32 Wi-Fi ESP-32 Module (5) 6. Heart Rate Sensor Pulse Sensor (ADC190) (5) 7. BMP180 barometric pressure sensor (5) 8. MAX30100 Pulse Oximeter and Heart-Rate Sensor (5) 9. DS18B20 digital thermometer, 2m (5) 10. HC-05 Bluetooth Module (5) 11. DHT22 temperature-humidity sensor (5) 12. DS18D20 temperature Sensor (5) 13. ESP8266 Serial Wi-Fi Witty Cloud Module (5) 14. Digi International XB24-AWI-001 Xbee Module (5) 15. 1 x AAA Battery Holder 18650 (5) 16. 2 x AAA Battery Holder 18650 2S (5) 17. MB102 Breadboard Power Supply 5V/3.3V (5) 18. USB Safety Tester, Digital Power Meter Tester, 3V–30V (5) 19. Panasonic NCR18650B 3400mAh battery unprotected (11) 20. 1A microUSB 18650 Battery Charger Module (5)	Room 25-27

4 Staff (re-) training

4.1 Information about teachers' mobility

N	Teacher (First and last name, faculty, department, affiliation, e-mail)	Place of training	Date of training
1	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science, shalomeev@radiocom.net.ua	KU Leuven, Belgium	02-06 September 2019
2	Valeriy Naumyk, vice-rector on Research and International Activities	KU Leuven, Belgium	02-06 September 2019
3	Sergey Silenko, Deputy Dean of the Faculty of Construction, Architecture and Design	KU Leuven, Belgium	02-06 September 2019
4	Byelikov Sergiy, rector, rector@zntu.edu.ua	Holon Institute of Technology (Israel)	02-07 November 2019
5	Sergiy Subbotin, Head of Software Tools Department, subbotin.csit@gmail.com	Holon Institute of Technology (Israel)	02-07 November 2019
6	Galyna Tabunshchyk, Professor of Software Tools Department, galina.tabunshchik@gmail.com	Holon Institute of Technology (Israel)	02-07 November 2019

5 Students activities

5.1 Competition of students` works on the project (May, 2020)

N	Faculty, department	Title of competitive work	First and last name of student, group	First and last name of supervisor, affiliation, department
1	Faculty of Engineering Physics, Department of Physical Materials Science	Refining of magnesium alloys for medical purposes	Nikita Aykin., PhD student	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
2	Faculty of Engineering Physics, Department of Physical Materials Science	Development and research of a biosoluble magnesium alloy system Mg-Zr-Nd for implants in osteosynthesis	Eduard Demidenko, IF-219m	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
3	Faculty of Computer Science and Technology, Software Tools Department	Research and development of Home automation system software for people with special needs	Yevhenii Yaremchenko, CST-116	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
4	Faculty of Computer Science and Technology, Software Tools Department	Development and research of structural optimization methods of neural networks for medical diagnosis	Serhii Leoshchenko, PhD student	Sergey Subbotin, Faculty of Computer Science and Technology, Software Tools Department, Head of the department

5.2 Students scientific work related to project theme (Science Week-2020)

N	Faculty, department	Title of scientific work	First and last name of student, group	First and last name of supervisor, affiliation, department
1	Faculty of Engineering Physics, Department of Physical Materials Science	Investigation of the influence of casting cooling rate on the microstructure and properties of a new biosoluble magnesium alloy Mg-Zr-Nd for osteosynthesis	Nikita Aykin (PhD student)	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
2	Faculty of Engineering Physics, Department of Physical Materials Science	Development of rational modes of heat treatment of biosoluble magnesium alloy	Nikita Aykin., (PhD student)	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
3	Faculty of Computer Science and Technology, Software Tools Department	Using the MAX30102 sensor to development a paramedic bracelet	Valery Kozlov (CST-137), Artem Tulenkov (PhD student)	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
4	Faculty of Computer Science and Technology, Software Tools Department	Evaluation of the quality of video content for the medical industry on the YOUTUBE platform	Anastasia Kushch (CST-219m)	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
	Faculty of Computer Science and Technology, Software Tools Department	Development of voice notification of home automation system for users with special needs	Yevheniy Yaremchenko (CST-116)	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
4	Faculty of Radio Electronics and Telecommunications, Department of Radio Engineering and Telecommunications	Research and development of a prototype of human heart activity monitoring device	Eduard Polyansky (RT-229m)	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
5	Faculty of Radio Electronics and Telecommunications, Department of Radio Engineering and Telecommunications	Development of a web service for monitoring the health of mobile patients	Olga Symonenko, Vasyl Popovych, (RT-229m)	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
6	Faculty of Computer Science and	Analysis of digital signal processing methods for	Volodymyr Lytvyn	Sergey Subbotin, Head of Software Tools

	Technology, Software Tools Department	constructing diagnostic models	PhD student	Department, Professor
7	Faculty of Computer Science and Technology, Software Tools Department	Using the method of cat packs as a swarm procedure for the synthesis of neural networks	Serhii Leoshchenko, PhD student	Sergey Subbotin, Head of Software Tools Department, Professor
8	Faculty of Computer Science and Technology, Software Tools Department	Constructing of diagnostic models with preliminary digital signal processing	Alexander Kornienko, PhD student	Sergey Subbotin, Head of Software Tools Department, Professor

5.3 Students course projects related to project theme

N	First and last name of student	Group	Title of course project	First and last name of supervisor, affiliation, department
1	Demidenko Eduard	IF-219m	Influence of noble metals on the structure and mechanical properties of biosoluble magnesium alloy	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
2	Kolesnik Ilona	IF-219m	Modification of magnesium alloy for implants by high temperature melt processing	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
3	Vasyl Popovych	RT-229m	Development of the website for monitoring the health of mobile patients	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
4	Pavlo Shapoval	CST-219m	Design of a wearable device for physical control human condition based on Wi-Fi	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
5	Anastasia Kushch	CST-219m	Development of an electronic part for a prototype of a robotic arm prosthesis	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
6	Anastasia Frolova	CST-219m	Design of a part of the cyberphysical system of the manipulator of the upper limb of a person	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
7	Eduard Polyansky	RT-229m	RESEARCH AND DEVELOPMENT OF A PROTOTYPE OF A HUMAN HEART ACTIVITY MONITORING DEVICE	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor

5.4 Students diploma projects related to project theme

N	First and last name of student	Group	Title of diploma project	First and last name of supervisor, affiliation, department
1	Lukyanenko Alexander	IF-218m	Development of a new biosoluble magnesium-based alloy for osteosynthesis	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
2	Yurkevich Elena	IF-218m	Influence of low-melting elements on the structure formation and mechanical properties of the ML5 alloy	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science
3	Andriy BILEVSKY	CST-147sp	Software Development for Monitoring the Physical Condition of a Person	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
4	Mykola ILCHENKO	CST-126	Software Implementation of the Gesture Control Subsystem for the Smart House System	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
5	Yana TITARENKO	CST-216	Software Implementation of the Air Monitoring System	Olga Gladkova, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
6	Ernest Hunko	CST-119m	Research and Software Implementation of Context-aware Recommendation System to Improve The Level of Elderly People Life	Olga Gladkova, Faculty of Computer Science and Technology, Software Tools Department, Associate professor
7	Svitlana Soberzhanska	CST-219m	Research and software implementation of the bot-consultant for healthcare	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor

6 Dissemination

6.1 Activities and dissemination materials:

- **List of published articles and conference proceedings**

N	Title of publication	Publication data	Authors	Faculty, department
1	Magnesium-based alloys for implants in osteosynthesis.	Zaporozhye, "Motor Sich", 2020, 127 pp.	Boguslaev V.A., Belikov S.B., Shalomeev V.A. other	«Motor Sich» OJSC, NU «Zaporizhzhya Polytechnic»
2	Magnesium-based casting alloy with improved ductility.	Patent 141769 Ukraine, IPC C22C 23/00.. Applicant and patent owner of ZNTU. - № u201910382; declared 15.10.19, publ.27.04.20, Bull. № 8. - 4 p.	Aikin MD, Shalomeev VA, Chorny VM, Silenko SA, Zelenyuk OM, Klochikhin VV, Lukyanenko OS	«Motor Sich» OJSC, NU «Zaporizhzhya Polytechnic»
3	Foundry magnesium alloy of high strength.	Patent 142203 Ukraine, IPC C22C 23/00. Applicant and patent owner of ZNTU. - № u201910379; declared 15.10.19, publ.25.05. 20, Bull. № 10. - 4 p.	Shalomeev VA, Chorny VM, Tabunshchik GV, Zelenyuk OM, Klochikhin VV, Aikin MD,	«Motor Sich» OJSC, NU «Zaporizhzhya Polytechnic»
4	Development of rational modes of heat treatment of biosoluble magnesium alloy	XII International Scientific and Technical Conference: "New Materials and Technologies in Mechanical Engineering-2020": Coll. abstracts, April 28-29, 2020, Kyiv, NTUU "KPI". - p. 48.	Shalomeev VA, Aikin MD	NU «Zaporizhzhya Polytechnic»
5	Investigation of the influence of casting cooling rate on the microstructure and properties of a new biosoluble magnesium alloy Mg-Zr-Nd for osteosynthesis	XII International Scientific and Technical Conference: "New Materials and Technologies in Mechanical Engineering-2020": Coll. abstracts, April 28-29, 2020, Kyiv, NTUU "KPI". - p. 45.	Shalomeev VA, Aikin MD	NU «Zaporizhzhya Polytechnic»
6	Biosoluble casting alloy based on medical magnesium	Metallurgy and metal processing. - 2019. - № 4 (93). - P.38 - 46.	Shalomeev VA, Aikin MD, Tsivirko EI	NU «Zaporizhzhya Polytechnic»
7	Steel corrosion resistance in the technological process	Materials Science& Technology 2018: The Collected Proceedings. Pittsburg, Pennsylvania, USA, 2019. – p. 535 – 543	Mishchenko V, Evseeva, N., Shejko, S., Shalomeev V	NU «Zaporizhzhya Polytechnic», ZNU
8	Manufacture of biosoluble alloy MS10 for implants at «Motor Sich»	Proceedings of the IV scientific-practical conference: "Current issues of treatment of joint pathology and endoprosthesis" 2019, Zaporozhye-Primorsk:	Belikov S.B., Shalomeev VA, Tsivirko E.I., Zelenyuk A.N., Chorny V.N.	«Motor Sich» OJSC, NU «Zaporizhzhya Polytechnic»

	OJSC	ZSMU.- P. 94-95.		
9	Remote Heart Rate Monitoring of the Hospital Patients	Proceedings of the 2019 10th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS) (September 18-21, 2019, Metz, France), pp. 991-996	A.Parkhomenko, Y.Presaizen, O.Gladkova, A.Tulenkov, M.Kalinina	Faculty of Computer Science and Technology, Software Tools Department
10	Method of Monitoring of Young Athletes' Physical State Indicators Based on Wearable Devices Usage	Proceedings of the Third International Workshop on Computer Modeling and Intelligent Systems CMIS-2020, Zaporizhzhia, ZNTU, 27 April- 1 May, 2020 pp. 436-449	A.Parkhomenko, A.Volynska, Y.Zalyubovskiy, A.Parkhomenko, M.Kalinina	Faculty of Computer Science and Technology, Software Tools Department
11	Adaptation of Smart House System for People with Special Needs Based on Wireless Technologies	Proceedings of the 5th IEEE International Symposium on Smart and Wireless Systems within the International Conference on Intelligent Data Acquisition and Advanced Computing Systems, 17-18 September, 2020, Dortmund, Germany, Pp.12-17	A.Tulenkov, Y.Yaremchenko, Y.Zalyubovskiy, A.Parkhomenko, M. Kalinina	Faculty of Computer Science and Technology, Software Tools Department
12	Recommendation system for improving the living standards of the elderly	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Hunko E.V., Gladkova O.M., Parkhomenko A.V.	Faculty of Computer Science and Technology, Software Tools Department
13	QUALITY ASSESSMENT OF MEDICAL TRAINING VIDEO CONTENT ON YOUTUBE PLATFORM	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Kushch A.V., Gladkova O.M., Parkhomenko A.V	Faculty of Computer Science and Technology, Software Tools Department
14	INFORMATION TECHNOLOGY OF DESIGNING A VIRTUAL PROTOTYPE OF A ROBOTIC PROSTHESIS	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Frolova A.Yu., Parkhomenko A.V, Gladkova O.M.	Faculty of Computer Science and Technology, Software Tools Department
15	RESEARCH AND SOFTWARE IMPLEMENTAT	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering,	Soberzhanska S.Yu., Parkhomenko A.V.,	Faculty of Computer Science and Technology,

	ION OF A BOT-CONSULTANT FOR THE MEDICAL FIELD	telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Zalyubovsky Ya.I.	Software Tools Department
16	THE FRACTAL ANALYSIS OF SAMPLE AND DECISION TREE MODEL	Radio Electronics, Computer Science, Control. 2020. № 1 http://ric.zntu.edu.ua/article /download/201691/201609	Subbotin S. A., Gofman Ye. A.	Faculty of Computer Science and Technology, Software Tools Department
17	Radial-Basis Function Neural Network Synthesis on the Basis of Decision Tree	Optical Memory and Neural Networks volume 29, pages7–18(2020) https://link.springer.com/ article/10.3103/S1060992X20010051	S. Subbotin	Faculty of Computer Science and Technology, Software Tools Department
18	Smart crossover mechanism for parallel neuroevolution method of medical diagnostic models synthesis	Proceedings of the Third International Workshop on Computer Modeling and Intelligent Systems CMIS-2020, Zaporizhzhia, ZNTU, 27 April- 1 May, 2020 pp.57-69	S. Leoshchenko, S. Subbotin, A. Oliinyk, V. Lytvyn, M. Ilyashenko	Faculty of Computer Science and Technology, Software Tools Department
19	Definition of locally sensitive hashes for construction of recognition and diagnostic models	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Subbotin S.O.	Faculty of Computer Science and Technology, Software Tools Department
20	Swelling cata-ract diagnosing using neural network	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Diachuk T.S., Skrupsky S.Yu., Diachuk I.V., Kylukovska N.A.	Faculty of Computer Science and Technology, Department of Computer Systems and Networks
21	Optimization of the chemical composition of magnesium alloy for biodegradable implants	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Shalomeev V.A., Lukyanenko O.S., Aikin M.D.	Faculty of Engineering and Physics, Department of Materials Science
22	Simplifying peak detection algo-	Proceedings of the IX International Scientific and Practical Conference	Sumariuk S., Morshchavka S.,	Faculty of Radio

	rithms for finite biomedical signals	on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Luengo D.	Electronics and Telecommunications, Department of Radio Engineering and Telecommunications, Madrid Polytechnic
	Possibilities of telemedicine involvement in the diagnostic process	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Samoilyk S.S., Samoilyk K.V.	Faculty of Radio Electronics and Telecommunications, Department of Radio Engineering and Telecommunications,
	Electronic service "Medical reform for people"	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Bakurova A.V., Tereshchenko E.V., Shirokorad D.V.	Faculty of Computer Science and Technology, Department of Systems Analysis and Computational Mathematics
	Risk control model of medical systems	Proceedings of the IX International Scientific and Practical Conference on Current issues and achievements in the field of radio engineering, telecommunications and information technology (October 07-09, 2020, Zaporozhye). Zaporozhye: NUZP	Shitikova O.V., Tabunshchyk G.V.	Faculty of Computer Science and Technology, Software Tools Department

«Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc/MSc Degrees – BIOART»
586114-EPP-1-2017-1-ES-EPPKA2-CBHE-JP

14^{00}	**ЗАЛА №4**	**07.10.2020**
продовження 9^{00}	**ЗАЛА №4**	**08.10.2020***

1 **Diachuk T.S., Skrupsky S.Yu., Diachuk I.V., Kylukovska N.A.** Swelling cataract diagnosing using neural network
2 **Shalomeev V.A., LukyanenkoO.S., Aikin M.D.** Optimization of the chemical composition of magnesium alloy for biodegradable implants
3 **Sumariuk S., Morshchavka S., Luengo D.** Simplifying peak detection algorithms for finite biomedical signals
4 **Васильєва Л.В., Житченко А.С.** Використання Web-технологій для реалізації методів редукції і динамічної візуалізації багатовимірних даних
5 **Гунько Е.В., Гладкова О.М., Пархоменко А.В.** Рекомендаційна система для вдосконалення рівня життя людей похилого віку
6 **Куш А.В., Гладкова О.М., Пархоменко А.В.** Оцінка якості медичного навчального відео-контенту на платформі YouTube
7 **Миронова Н.О., Сиротенко І.О.** Дослідження та програмна реалізація засобів інтеграції навчальних курсів онлайн платформ в системи дистанційного навчання
8 **Миронова Н.О., Чадаєва А.К.** Дослідження засобів діджиталізації для систем дистанційного навчання
9 **Самойлик С.С., Самойлик К.В.** Можливості залучення телемедицини у діагностичний процес
10 **Собержанська С.Ю., Пархоменко А.В.** Дослідження та програмна реалізація бота-консультанта для медичної галузі
11 **Фролова А.Ю., Пархоменко А.В., Гладкова О.М.** Інформаційна технологія проєктування віртуального прототипу роботизованого протезу
12 **Бакурова А.В., Терещенко Е.В., Широкорад Д.В.** Електронний сервіс «Медична реформа для людей»
13 **Шитікова О.В., Табунщик Г.В.** Модель контролювання ризиків медичних систем

***можливі зміни аудиторії та розкладу за узгодженням з модератором секції.**

- **List of articles in Newspapers**

1) Vizit to Izrael https://zp.edu.ua/projects/newspaper/uploads/2019/me-05-16122019.pdf
2) TRAINING OF TEACHERS OF NU ZAPORIZHZHIA POLYTECHNIC AT THE CATHOLIC UNIVERSITY OF LEUVEN (BELGIUM) https://zp.edu.ua/projects/newspaper/uploads/2019/me-04-29102019.pdf

- **Web-publications**

1) Erasmus + BIOART project competition: changes in the form of submission of works https://zp.edu.ua/konkurs-za-proyektom-erasmus-bioart-zminy-u-formi-podannya-robit
2) The integration of National University Zaporizhzhia Polytechnic into the European educational space continues https://zp.edu.ua/?q=node/7852

3) New equipment for laboratories https://zp.edu.ua/nove-obladnannya-dlya-osnashchennya-laboratoriy
4) Remote participation of representatives of the software department in international events https://zp.edu.ua/dystanciyna-uchast-predstavnykiv-kafedry-programnyh-zasobiv-u-mizhnarodnyh-zahodah

7 Sustainability

7.1 Agreements on cooperation with Enterprises in the framework of the project

N	Title of Enterprise/Company	Date of signing the cooperation agreement	Responsible person from university (First and last name, affiliation, department)	Responsible person from Enterprise/Company (First and last name, affiliation)
1	«Motor Sich» OJSC	February 2020	Vadim Shalomeev, Faculty of Engineering and Physics, Professor of the Department of Materials Science	Vladimir Klochikhin Chief Metallurgist «Motor Sich» OJSC
2	LLC PKF MOTOR	May 2019	Anzhelika Parkhomenko, Faculty of Computer Science and Technology, Software Tools Department, Associate professor	Oleksandr Fisyuk, General director