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# DISSEMINATION REPORT

## 586114-EPP-1-2017-1-ES-EPPKA2-CBHE-JP

## Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc/MSc Degrees

**NAME OF PARTNER: P12- VINNYTSIA NATIONAL TECHNICAL UNIVERSITY**

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**PLEASE SEND FILLED REPORT UP TO 31.07.2021 TO:**

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## 1. Dissemination activities

*Table 1. DISSEMINATION ACTIVITIES*

| **Dissemination** | **YES /** | **Details** |
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| Project web-site and information on the university web-site | **YES** | https://bioart.iucc.ac.il/<br><br>http://bmi.vntu.edu.ua/bioart_project.php?lang=uk |
| Web-site of National Erasmus+ Offices or other related activities | **YES** | https://erasmusplus.org.ua/ |
| Social media | **YES** | Erasmus+ BIOART:<br><br>https://www.facebook.com/groups/ErasmusBIOART |
| Press releases | **YES** | Was made publications on the Internet and the VNTU newspaper "Impulse"<br><br>«Innovative multidisciplinary educational program on artificial implants for bio-engineering for bachelors and masters "at VNTU.<br><br>Newspaper Impulse VNTU. 19.09.2018<br><br>http://impuls.vntu.edu.ua/index.php?option=com_content&view=article&id=4993%3A2018-09-19-12-06-30&catid=4%3A2014-02-07-12-35-57&Itemid=2&lang=en<br><br>Teachers of VNTU took part in the BIOART Development Week at the Catholic University of Leuven (Belgium)<br>Newspaper Impulse VNTU. 03.10.2019<br>https://impuls.vntu.edu.ua/index.php?option=com_content&view=article&id=6085%3A-bioart-&catid=9%3A2014-02-09-08-50-23&Itemid=1&lang=en<br><br>Pilot teaching on the project "Innovative multidisciplinary educational program on artificial implants for bioengineering for bachelors and masters" (BIOART) at VNTU.<br>Newspaper Impulse VNTU.09.06.2021<br>http://impuls.vntu.edu.ua/index.php?option=com_content&view=article&id=7457%3A2021-06-09-06-46-51&catid=9%3A2014-02-09-08-50-23&Itemid=1&lang=en<br><br>Biomedical Engineering students study the latest experience in implantology with the assistance of the EU Erasmus + program |

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| | | Newspaper Impulse VNTU.09.06.2021<br>http://impuls.vntu.edu.ua/index.php?option=com_content&view=article&id=7668%3A2021-09-23-08-29-45&catid=4%3A2014-02-07-12-35-57&Itemid=2&lang=en<br><br>VNTU Rector Viktor Bilichenko and university scientists Oleksandr Hrushko and Leonid Koval took part in the final meeting of the EU Erasmus + project in Madrid.<br>Newspaper Impulse VNTU.12.10.2021<br>http://impuls.vntu.edu.ua/index.php?option=com_content&view=article&id=7739%3A2021-10-12-09-21-07&catid=9%3A2014-02-09-08-50-23&Itemid=1&lang=en&fbclid=IwAR1qTq6anQxmRTFV9mamoUxgBVaUL04QTCmTzEn4IDB7zNANA8dwKgQ9kZk |
| Flyers /brochures / other | YES | 6 (seminar flyers for each seminar teaching for teachers and 2 workshops) |
| Conference presentations / posters | YES | Participating in the II, III and IV International Scientific and Technical Conference "Modern Information Technologies, Automation Means and Electric Drive" of the DSEA (2018, 2019, 2020) (section within the framework of the "BIOART" project)<br><br>Hrushko A. V., Tymchyk S. V. Features of Calculations of Endoprosthetic Joints Using FEM // Modern information technologies, automation tools and electric drive: materials of the II All-Ukrainian scientific and technical conference, April 19-21, 2018 / According to the general. ed. OF Tarasov. - Kramatorsk: DSEA, 2018. - P. 11-12.<br><br>Zlepko S. M., Tymchyk S. V., Kozerenko M. P. Components of the module of decision support of information technology monitoring and decision support for determining the state of health of students // Modern information technologies, automation and electric drive: materials of the II All-Ukrainian scientific and technical conference, April 19-21, 2018 / For general. ed. OF Tarasov. - Kramatorsk: DSEA, 2018. - P. 37-38.<br><br>Vishtak I. V., Hrushko O. V., Tymchyk S. V. Prospects for the use of nanocoatings in friction pairs of high-speed equipment // Modern information technologies, automation tools and electric drive: materials of the III All-Ukrainian scientific and technical conference, April 20-22, 2019 ./ For the general. ed. OF Tarasov. - Kramatorsk: DSEA, 2019. - P.87-88<br><br>Hrushko O. V., Vishtak I. V. Map of medical titanium for modeling its cold pressure treatment in the manufacture of artificial implants // Modern information technologies, automation tools and electric drive: materials of the IV All-Ukrainian scientific and technical conference / For general. ed. OF Tarasov. - Kramatorsk: DSEA, 2020.<br><br>I-th International scientific and technical conference «Prospects for the development of mechanical engineering and transport – 2019», 13 – 15 may 2019, Vinnytsia.<br>Section: Problems of development of the field of artificial implants in mechanical bioengineering and training in the concept of the BIOART project |

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| | | http://bmi.vntu.edu.ua/bioart/doc/PRMT_2019.pdf<br><br>Yurii Bezsmertnyi, Viktor Shevchuk. Ability to use 3d- modeling in the initial assembly and revisional hip replacement of the hip joint // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - P.117.<br><br>Yurii Bezsmertnyi, Viktor Shevchuk. Application of modern materials and methods in the production of endoprostheses in traumatology and orthopedics // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. – 2019. – P.118-119.<br><br>David Luengo, Oleksandr Hrushko. BIOART: Education for smart artificial implants // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. – 2019. – p.p. 120-121.<br><br>Oleksandr Tarasov, Pavlo Sahaida, Sergey Podlesny, Liudmyla Vasylieva. Ontological modeling of students' it competencies in bioengineering // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. – 2019. – p.p. 122-123.<br><br>Oleg Avrunin, Vladimir Pyatikop, Tatiana Nosova Evgeny Chugui, Sofia Khudayeva. Possibilities of rapid prototyping in the manufacture of models of cranial implants // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 124-125.<br><br>Oleg Avrunin, Yana Nosova, Natalia Shushlyapina, Ibrahim Yunus Abdelhamid. Possibilities of full-scale modeling for planning rhinological surgical interventions // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 126-127.<br><br>Inna Vishtak. Prospects for the use of nanomaterials based on titanium in medicine // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - P.128.<br><br>Vadim Golik, Konstantin Dyadyura. Modeling of mass transfer in systems with solid phase based on synthetic calcium deficiency hydroxyapatite // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 129-130.<br><br>Serhiy Zlepko, Serhiy Tymchyk, Oleksandr Hrushko, Inna Vishtak. |

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| | | Intelligent implants in dentistry: realities and prospects // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 131-132.<br><br>Serhiy Zlepko, Serhiy Pavlov, Dmytro Shtofel, Ivan Kryvoruchko, Mykhailo Palamarchuk, Andriy Klapoushchak. Assessment of the state of blood microcirculation in the gums before and after implant placement // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 133.<br><br>Serhiy Zlepko, Dmytro Shtofel, Serhiy Tymchyk, Ihor Lyulya. Dental implants: biomechanical aspect of development // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 134-135.<br><br>Alexander Meshkov, Victor Gomolinsky, Gennady Novitsky, Kirill Ludanov. Speaker authentication algorithm // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - P. 136.<br><br>Alexander Meshkov, Leonid Koval, Ivan Kryvoruchko, Eugene Krekoten. Hardware and software complex for human authentication by voice signal // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 137-138.<br><br>Vladimir Mikhalevich, Vladimir Kraevsky, Alexey Mikhalevich, Alexander Grushko. Modeling of patterns of consumption and resource recovery of objects of different nature // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 139-140.<br><br>Serhiy Pavlov, Oleksandr Barylo, Serhiy Zlepko, Serhiy Tymchyk, Andriy Klapoushchak, Ihor Lyulya. Optoelectronic complex for determining blood microcirculation in the maxillofacial region // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - P. 141.<br><br>Sergey Podlesny, Alexander Tarasov, Vladimir Tankut. The use of stem-steam-stream-technologies in the creation of multidisciplinary educational programs for students in the field of bioengineering // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 142-143.<br><br>Alexander Romanyuk, Sergey Pavlov, Leonid Polishchuk. Technologies |

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| | | and materials for bioprinting // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 144-147.<br><br>Olena Sorochan, Serhiy Tymchyk. Biocompatible implants in traumatology and orthopedics // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - P. 148.<br><br>Elena Sorochan, Alexander Azarkhov, Valery Krivonosov, Yaroslav Yaroslavsky. Biotechnical system of bone osteosynthesis // I International scientific and technical conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - P. 149.<br><br>Halyna Tabunshchyk, Anzhelika Parkhomenko, Serhiy Subbotin, Serhiy Morshchavka, Serhiy Tsotsorin. Innovative training for the introduction of innovative technologies in the field of artificial implants // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 150-151.<br><br>Alexander Tarasov, Alexander Altukhov, Andrey Kovalenko. The use of information technology in the design and manufacture of implants // I International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport - 2019": Collection of abstracts. - Vinnytsia: EDELWEISS. - 2019. - p.p. 152-153.<br><br>Jiao Hankun, Maxim Tymkovich, Oleg Avrunin, Irina Moroz, Olga Shevchenko. Possibilities of modern means of fast prototyping for development of training models in phthisiology // I International scientific and technical conference "Prospects of development of mechanical engineering and transport - 2019": Collection of theses. - Vinnytsia: EDELWEISS. - 2019. – p.p. 154-156<br><br>I International scientific and technical conference «MODERN PROBLEMS OF INFOCOMMUNICATIONS, RADIOELECTRONICS AND NANOSYSTEMS (MPIRN-2019)», 14-16 november, 2019, Vinnytsia.<br>Section: Information, biotechnical systems and artificial implants in bioengineering (within the BIOART project)<br>http://bmi.vntu.edu.ua/bioart/doc/CPIRN_2019.pdf<br><br>O.V. Hrushko, I.V. Vishtak. Challenges of multidisciplinary training of students in the field of artificial implants (within the BIOART project at VNTU) // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 26-28 |

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| | | O. A. Danilchenko, D. V. Chernetchenko, N. P. Botsva, S. O. Kochubey. Wireless portable device for photopletismogram registration // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 136-138<br><br>O.G. Avrunin, Ya. V. Nosova, M. Yu. Tymkovych, G.M. Moskovska. The use of 3d printing technologies for full-scale modeling of the upper respiratory tract // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials I International Scientific and Technical Conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 139-140<br><br>J.J. Bilinsky, O.I. Nikolsky, A.B. Guralnik. Algorithm of computer diagnostics of 2D ultrasound images of hip dysplasia // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 141-143<br><br>I.V. Vishtak, V.V. Fedotova. Methods and promising solutions using artificial implants in the treatment of fractures of the nasal bones // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I International Scientific and Technical Conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 144-145<br><br>M.I. Voloshin, M.M. Milikh, D.V. Chernetchenko, M.P. Motsny, S.M. Zlepko. Automated system of analysis of physiological signals // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 146 -148<br><br>S.M. Zlepko, S.V. Tymchyk, M.P. Kozerenko, E.G. Krekoten. Prospects of low-intensity light stimulation of servicemen // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 149<br><br>S.M. Zlepko, S.V. Timchik, M.I. Palamarchuk, I.V. Vishtak. Intelligent dental implants - the future of dental implantology // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 150-151<br><br>S.M. Zlepko, T.A. Chernyshova, O. Yu. Azarkhov, D.H. Shtofel. Improving the method of detecting circulating tumor cells // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I International Scientific and Technical Conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 152-153 |

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| | | O.A. Isayeva, O.O. Trubitsyn. Methods of diagnosing skin diseases // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 154- 155<br><br>O. Yu. Malakhov, TV Nosova, TV Zhemchuzhkina. On violations of the biomechanics of the mandible due to the use of removable prostheses // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I International Scientific and Technical Conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 157-158<br><br>S.V. Pavlov, J.I. Yaroslavsky, I.O. Kryvoruchko, E.G. Krekoten. Application of DICOM 3.0 standard and PACS system in modern telemedicine systems// Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I International Scientific and Technical Conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - pp. 159-160<br><br>O.N. Romanyuk, S.O. Romanyuk, O.V. Romanyuk. Formation of highly realistic 3D-images of human faces in biotechnical systems // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019 - pp. 161-163<br><br>O.M. Sorochan, N.A. Bukhlal, S.V. Timchik. Biocompatible implants in traumatology and orthopedics // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - P. 164-165<br><br>G.E. Filatova, M. Fahs. Development of a generalized model of electrocardiological examination // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - P. 166 -167<br><br>C.L. Khizhko, D.V. Chernetchenko, N.P. Botsva, O.V. Yelina, S.M. Zlepko. Software and hardware solution for automated control and visualization of environmental parameters // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU , 2019. - P. 168-170<br><br>T.A. Chernyshova, D.H. Shtofel, N.D .Akojura, I.S. Kokhan. Analysis of approbation of the method of detection of circulating tumor cells // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - C 171 |

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| | | Ya. I. Yaroslavsky, S.M. Zlepko, S.V. Pavlov, V.B. Vasylenko. Telemedicine network for the exchange of medical video images // Modern problems of infocommunications, radio electronics and nanosystems (MPIRN-2019): materials of the I international scientific and technical conference, Vinnytsia, November 14-16, 2019 - Vinnytsia, VNTU, 2019. - P. 172-173.<br><br>All-Ukrainian scientific-practical Internet conference "Youth in science: research, problems, prospects (MN-2019)", 11/05/2019 - 30/05/2019, Vinnytsia<br>Section: Section of Biomedical Engineering and Intelligent Artificial Implants (BIOART)<br>https://conferences.vntu.edu.ua/index.php/mn/mn2019/schedConf/presentations<br><br>E.L. Zagoruyko, S.M. Zlepko. Devices for measuring the purity of heart rate and blood pressure // All-Ukrainian scientific-practical Internet conference "Youth in Science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6332/5228<br><br>M.V. Bondarchuk, D. H. Shtofel. Optical sensors // All-Ukrainian scientific-practical Internet conference "Youth in science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6326/5229<br><br>A.V. Lavrenchuk. Research and development of a system for the diagnosis of human psychomotor reactions // All-Ukrainian scientific-practical Internet conference "Youth in Science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6381/5257<br><br>I.M. Domingos. Research and development of a system for the diagnosis of visual acuity // All-Ukrainian scientific-practical Internet conference "Youth in Science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6405/5259<br><br>Nakonechna A.V. Research of a device for bioresonance therapy // All-Ukrainian scientific-practical Internet conference "Youth in science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6428/5324O. |

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| | | S. Kharchuk. Device for monitoring the functional status of the bluetooth channel // All-Ukrainian scientific-practical Internet conference "Youth in Science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6458/5325<br><br>R.I. White, S.M. Zlepko. Review of modern ultrasound scanners // All-Ukrainian scientific-practical Internet conference "Youth in science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6314/5326<br><br>Yu. M. Nazarenko. Apparatus for ultrasound therapy // All-Ukrainian scientific-practical Internet conference "Youth in Science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/8105/6774<br><br>A.O. Pastushenko. Research and development of a device for angiography // All-Ukrainian scientific-practical Internet conference "Youth in science: research, problems, prospects (MN-2019)", 11.05.2019 - 30.05.2019, Vinnytsia. - Access mode: https://conferences.vntu.edu.ua/index.php/mn/mn2019/paper/viewFile/6418/6779<br><br>II International scientific and technical conference «Prospects for the development of mechanical engineering and transport – 2021», 13 – 15 may 2021, Vinnytsia<br>Section: Problems of development of the field of artificial implants in mechanical bioengineering and training in the concept of the BIOART project<br>https://conferences.vntu.edu.ua/index.php/prmt/pmrt2021/schedConf/presentations<br><br>Pavlo Sagaida, Maxim Vasiliev. Information support for the selection of suppliers of materials for artificial implants using methods of intelligence data analysis // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 162-164.<br><br>Alexander Lukyanenko, Vadim Shalomeev. Improving the structure and properties of magnesium alloys for medical purposes // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 165-166.<br><br>Kateryna Shevchuk, Dmitry Gavrilov. Blood pressure measurement based |

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| | | on signals from pressure sensors // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 167- 169.<br><br>Alexander Peremenko, Dmitry Gavrilov. Radiofrequency radiation treatment // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 170-172.<br><br>Elena Sorochan, Alexander Shaiko-Shaikovsky. Influence of mechanical factors when using artificial implants to fix the fracture site // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 173 - 174.<br><br>Alexander Tarasov, Alexander Altukhov, Lyudmila Vasilieva, Alexander Kasyanyuk. Automation of the process of designing titanium sheet implants and equipment for their manufacture // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 175 - 177.<br><br>Oleksandr Tymoshenko, Olga Musienko, Kuan Dick Fam, Elizaveta Skonechnykh. Research of mechanical properties of titanium alloy for 3d printing of implants // Prospects of development of mechanical engineering and transport - 2021: collection of abstracts of the II International scientific and technical conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 178 - 179.<br><br>Oleg Avrunin, Yana Nosova, Ibrahim Abdelhamid. Possibilities of 3D-visualization in computer planning in functional-aesthetic rhinosurgery // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 180 - 181.<br><br>Yana Nosova, Maksym Tymkovych, Natalia Shushlyapina. Possibilities of rapid prototyping in modeling the structures of the nasal cavity // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 182-183.<br><br>Yuriy Seniuk, Kateryna Dyachenko. Bioeconomic priorities for innovation transformation of industry and education // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 184-186. |

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| | | Waldemar Vujcik, Indira Shedreeva. Application of fiber Bragg grids for determination of mechanical properties in biotechnical systems // Prospects of development of mechanical engineering and transport - 2021: collection of abstracts of reports of the II International scientific and technical conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 187-188.<br><br>Sergey Pavlov. Ways and prospects of development of interaction in the field of biomedical engineering of universities of Ukraine and foreign universities // Prospects of development of mechanical engineering and transport - 2021: collection of abstracts of the II International scientific and technical conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 189-191.<br><br>Ivan Sili, Alexander Azarkhov. Support of microclimate parameters in health care facilities microclimate parameters support in healthcare institutions // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 192-193.<br><br>Inna Vishtak, Victoria Fedotova. The use of artificially synthesized implants in medicine during osteosynthesis surgery // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 194-195.<br><br>Yuri Bezsmertny, Serhiy Pavlov, Viktor Shevchuk, Halyna Bezsmertna. Automated diagnosis of patology of the human muscle-motor system on the basis of statographic research // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021. - Vinnytsia, 2021. - P. 196-198.<br><br>Yuriy Bezsmertny, Serhiy Tymchyk, Viktor Danylevych, Yuriy Huminsky, Halyna Bezsmertna. Modeling individual parameters of the sum in size of the intervertebral discs of the lumbar spine in norm in girls and women // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, Vinnytsia. - Vinnytsia, 2021. - P. 199-202.<br><br>Victoria Marfin, Inna Vishtak. The use of nanotechnology to create immunobiological drugs // Prospects for the development of mechanical engineering and transport - 2021: a collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 203-205.<br><br>Leonid Koval, Vladislav Mateush, Viktor Gomolinsky. Application of 3D scanning and printing technologies for prosthetics of the upper extremities // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International |

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| | | Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 206-207.<br><br>Yuri Bezsmertny, Shevchuk Shevchuk, Halyna Bezsmertna, Leonid Koval, Jiang Yankai. Prospects for biodegradable implants in traumatology and orthopedics // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 208-211.<br><br>Kateryna Shevchuk, Serhiy Tymchyk. Nanotechnologies in the cosmetic industry // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 212-213.<br><br>Waldemar Wojcik, Kenzhegali Shilibek, Gayni Karnakova. APPLICATION OF BRAGGIAN SENSORS IN MECHANICS // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 214-215.<br><br>Oleksandr Hrushko, David Luengo. IMPLEMENTATION OF THE INTERNATIONAL ERASMUS+ BIOART PROJECT AT VINNYTSIA NATIONAL TECHNICAL UNIVERSITY // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 216-218.<br><br>Nazar Panchenko, Dmitry Gavrilov. Theoretical modeling of radio frequency ablation // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 219-221.<br><br>Set Jr Setson Panduleni, Dmytro Havrilov. DESIGN AND IMPLEMENTATION OF PORTABLE MULTI PARAMETER LIFE MONITOR // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021, 2021. - P. 222-223.<br><br>Anna Poplavska, Valentyna Vasylenko, Serhiy Pavlov, Oleksandr Anatoliyovych Poplavsky. The use of additive technologies for modeling biomedical implants // Prospects for the development of mechanical engineering and transport - 2021: collection of abstracts of the II International Scientific and Technical Conference, May 13-15, 2021, Vinnytsia. - Vinnytsia, 2021. - P. 224-225. |
| Conference /seminary - organization | **YES** | I-th International scientific and technical conference «Prospects for the development of mechanical engineering and transport – 2019», 13 – 15 may 2019, Vinnytsia.<br>Section: Problems of development of the field of artificial implants in |

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| | | mechanical bioengineering and training of specialists in the concept of BIOART project implementation.<br>Number of participants - 29.<br>http://bmi.vntu.edu.ua/bioart/doc/PRMT_2019.pdf<br><br>I International scientific and technical conference «MODERN PROBLEMS OF INFOCOMMUNICATIONS, RADIOELECTRONICS AND NANOSYSTEMS (MPIRN-2019)», 14-16 november, 2019, Vinnytsia.<br>Section: Information, biotechnical systems and artificial implants in bioengineering (within the BIOART project).<br>Number of participants - 25.<br>http://bmi.vntu.edu.ua/bioart/doc/CPIRN_2019.pdf<br><br>All-Ukrainian scientific-practical Internet conference "Youth in science: research, problems, prospects (MN-2019)", 11/05/2019 - 30/05/2019, Vinnytsia<br>Section: Section of Biomedical Engineering and Intelligent Artificial Implants (BIOART).<br>Number of participants - 9.<br>https://conferences.vntu.edu.ua/index.php/mn/mn2019/schedConf/presentations<br><br>II International scientific and technical conference «Prospects for the development of mechanical engineering and transport – 2021», 13 – 15 may 2021, Vinnytsia<br>Section: Problems of development of the field of artificial implants in mechanical bioengineering and training of specialists in the concept of BIOART project implementation.<br>Number of participants - 35.<br>https://conferences.vntu.edu.ua/index.php/prmt/pmrt2021/schedConf/presentations |
| Events, including lectures, demonstration and workshops, internal information meetings | **YES** | Please give details in Table 2. |
| Reports and other documents | | See http://bmi.vntu.edu.ua/bioart_events.php?lang=en<br>http://bmi.vntu.edu.ua/bioart_cur.php?lang=uk |
| Other activities, including on-line promotion | | See http://bmi.vntu.edu.ua/bioart_events.php?lang=en<br>http://bmi.vntu.edu.ua/bioart_cur.php?lang=uk |

## 2. Dissemination events - details

*Table 2.DISSEMINATION EVENTS*

| No | Date | Title | Target Audience | Number of participants | Is there a press-release of the event (YES/NO). If YES, provide it. |
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| 1 | 6-10-2021 | Future biomedical engineers studying the state of art in implantology | Teachers, students | 24 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=24&lang=en |
| 2 | 31.05-4.06.2021 | Pilot teaching project «Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc/MSc Degrees» (BIOART) at VNTU | Teachers, students, stakeholders | 80 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=23&lang=en |
| 3 | 13-15.2021 | Second International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport-2021" | Teachers, students, stakeholders | 35 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=22&lang=en |
| 4 | 29.12.2020 | Student contest under the project "Innovative multidisciplinary educational program on artificial implants for bioengineering for bachelors and masters" (BIOART) at | Teachers, students, stakeholders | 22 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=21&lang=en |

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| | | VNTU | | | |
| 5 | 17-18.2020 | Defense of master's theses in the specialty 163-Biomedical Engineering at VNTU | Teachers, students, stakeholders | 17 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=20&lang=en |
| 6 | 8-9.09.2020 | Series of educational and practical seminars "Development of the project" Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc / MSc Degrees" in VNTU | Teachers, students, stakeholders | 40 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=19&lang=en |
| 7 | 14-15.11.2019 | Seminars «Development of the project Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc/MSc Degrees» (BIOART) at VNTU | Teachers, students, stakeholders | 25 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=18&lang=en |
| 8 | 11.11.2019 | Seminar with BIOART project management at VNTU | Teachers, students, stakeholders | 32 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=17&lang=en |
| 9 | 3-6.11.2019 | Seminar of BIOART at Sami Shamoon College of Engineering and Holon Institute of Technology | Teachers | 2 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=16&lang=en |

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| | | (Israel) | | | |
| 10 | 7-10.10.2019 | Seminars "Development of the project" Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc / MSc Degrees" in VNTU (by DUK and KU Leuven materials) | Teachers, students, stakeholders | 62 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=15&lang=en |
| 11 | 13.09.2019 | Workshop on BIOART project development at the Materials Strength and Applied Mechanics Department meeting materials at KU Leuven (September 2019) and DUK (June 2019) | Teachers, students, stakeholders | 15 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=14&lang=en |
| 12 | 2-8.06.2019 | BIOART Seminar at the KU Leuven (Belgium) | Teachers | 3 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=13&lang=en |
| 13 | 21.06.2018 | Series of seminars "Development of the project" Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc / MSc Degrees" in VNTU on the results of trainings at the Danube | Teachers, students, stakeholders | 58 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=12&lang=en |

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| | | University Krems (DUK) (Austria | | | |
| 14 | 10-11.06.2018 | Protection of bachelor works by the specialty Biomedical Engineering at Vinnytsia National Technical University | Teachers, students, stakeholders | 19 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=11&lang=en |
| 15 | 2-8.06.2019 | BIOART Seminar at the Danube University Krems (DUK) (Austria) | Teachers | 2 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=10&lang=en |
| 16 | 13-15.05.2019 | First International Scientific and Technical Conference "Prospects for the development of mechanical engineering and transport-2019" | Teachers, students, stakeholders | 29 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=9&lang=en |
| 17 | 24-26.04.2019 | Participation of the delegation of VNTU in the meeting of coordinators and implementers of the BIOART project in Kharkov | Teachers | 3 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=8&lang=en |
| 18 | 13-15.03.2019 | The second cycle of seminars «Development of the project «Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc/MSc Degrees | Teachers, students, stakeholders | 70 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=7&lang=en |

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| | | (BIOART)» in VNTU: Signal processing in biomedical engineering. | | | |
| 19 | 28.01-01.02. 2019 | Second BIOART Seminar "Signal Processing in Biomedical Engineering" at the Madrid Polytechnic University (Spain) | Teachers | 3 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=6&lang=en |
| 20 | 03-04.10. 2018 | The first project meeting of BIOART project participants in Zaporizhzhya National Technical University | Teachers | 3 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=5&lang=en |
| 21 | 12-14.09. 2018 | Training by “Innovative Multidisciplinary Curriculum in Artificial Implants for Bio-Engineering BSc/MSc Degrees in VNTU | Teachers, students | 40 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=4&lang=en |
| 22 | 25-29.06. 2018 | Training by BIOART project on biomaterials and nanostructures in Krakow Technical University (Poland) | Teachers | 3 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=3&lang=en |
| 23 | 06-07.02. 2018 | Kickoff meeting at Madrid Polytechnic University | Teachers | 2 | http://bmi.vntu.edu.ua/bioart_events_detail.php?id=2&lang=en |

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| | | (Spain) | | | |