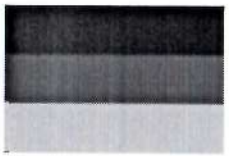
THEMATIC PLAN
of International Research Grants and Projects
implemented by Kyiv National University of Technologies and Design

№ з/п	Title of Research Grant/Project Category of Work Registration Number Scientific Supervisor (Full Name, Academic Degree	Basis for Implementation – Date, Document No.	Implementation Period	Funding for Current Year (thousand UAH)	Expected Outcomes for Current Year	Scientific Sections by Specializations
1	2	3	4	5	6	7
1	Project: Graphite resilience for lithium-ion battery anodes through a sustainable European end-to-end supply chain International Project 101103752 - GR4FITE under the Horizon Europe programme Call: HORIZON-CL5-2022-D2-01-01 Scientific Supervisor D.Tech., Assoc. Prof. Volodymyr Khomenko	Confirmation Letter No. from the EK: Ares(2022)8407142 – 05/12/2022	2023-2026	€1004,01 thousand	The aim of the project is to demonstrate the creation of a sustainable supply chain for European industrial graphite and carbon materials for specialized use, namely for lithium-ion battery anodes intended for application in electric vehicles and in wind and solar energy installations for renewable energy. 	Energy and Energy Efficiency

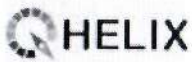
2	Project: Inhibition of Bacterial Settlement and Biofilm Formation through Physical Control of the Environment (PHYBI) International Project No. G6053 under NATO "Science for Peace and Security" programme Scientific Supervisor Ph.D. in Biology, Assoc. Prof. Olga Yungin	Confirmation Letter No. ESC(2023) 0096 (SPS.MYPG6 053) dated 17.03.2023	2023-2025	€95,0 thousand	The project is focused on studying the inhibition of biofilm formation through the application of physical technologies for metal surface treatment. The planned treatment methods include: laser-based nanoscale surface structuring, cathodic protection using electric current, and the application of low-frequency electromagnetic waves via water flow.	New Substances and Materials. Targeted Applied Research on the Development, Combination, and Processing of New Materials
3	Joint Ukrainian-Lithuanian Research Project: Functional Textile Materials and Products for the Needs of Military, Medical Staff, and Civilians (ORTOKNIT) Scientific Supervisor D.Tech., Prof. Liudmyla Halavska		2024-2025	₴199,0 thousand	The aim of the research is to combine the expertise and capabilities of scientists from Kyiv National University of Technologies and Design and Kaunas University of Technology in the development of functional textile materials and tubular products based on them with compression effects. These products are designed to provide effective protection of intact skin during UV irradiation of wound areas, possess antimicrobial properties, and maintain optimal compression levels for post-operative care, rehabilitation, and prosthetics of amputated limbs.	New Substances and Materials. Targeted Applied Research on the Development, Combination, and Processing of New Materials

4	Joint Ukrainian-German Research Project: Digitalization of Development of Advanced Rehabilitation Products for People with Special Needs (Post-Limb Amputation) Scientific Supervisor Ph.D. in Tech., Assoc. Prof. Liudmyla Melnyk		2024-2025	₴199,0 thousand	The objective of the work is to develop a design algorithm for a rehabilitation compression garment for a residual limb that matches the individual shape of a specific person, provides the necessary physiotherapeutic effect, and forms the basis for digitalizing the production process, ensuring performance comparable to global analogues. 	New Substances and Materials. Targeted Applied Research on the Development, Combination, and Processing of New Materials
5	Project SusWearTex: Baltic Neighbourhood Cooperation in Sustainable Workwear Initiatives – Driving Recycled Fiber Excellence in Workwear Textiles Scientific Supervisor Ph.D. in Tech., Assoc. Prof. Liudmyla Melnyk		2024-2026	113050 SEK	The aim of SusWearTex is to create a network and collaboration platform that promotes the use of recycled fibers in the production of workwear textiles through an integrated, research-based approach *(Sweden, Estonia, Latvia).* Project activities include providing young researchers and postgraduate students in textile engineering with knowledge on the use of recycled fibers in workwear textile production, as well as developing a model and prototype of workwear textiles based on recycled fibers. 	New Substances and Materials

6	Project: IMPACT-Campus: Knowledge Valorization Centres for Sustainable Entrepreneurship and Digital Transformation EIT Higher Education Initiative, Horizon Europe Scientific Supervisor D.Econ., Prof. Alla Kasych		2025-2027	€85,371 thousand	IMPACT Campus is a Europe-wide initiative aimed at transforming higher education institutions into drivers of systemic innovation, sustainable development, and social resilience. By creating 15 Knowledge Valorization Centres (KVCs) across Europe, the project aims to overcome regional disparities, increase inclusivity, and foster interconnected innovation ecosystems capable of addressing global challenges such as climate change, digital transformation, and socio-economic inequality.	Innovation Management and Development of Innovation Ecosystems
					EIT HEI Initiative Innovation Capacity Building for Higher Education Funded by the European Union	
7	Project ERASMUS+ KA2, 101183393 – InnovaTex – ERASMUS-EDU-2024-CB-VET "Innovation in Smart and Digital VET Skills for Advanced Textile Industry" Scientific Supervisor D.Tech., Prof. Kalyna Pashkevych		2025-2027	€55,040 thousand	The aim of the project is to enhance digital and smart skills in the textile sector of Ukraine and Moldova by creating an international network for professional education in digital/smart textiles based on green technologies and innovative, generative, and adaptive learning methods. 	Information and Communication Technologies

8	Project ERASMUS+ KA2, ERASMUS-EDU-2021-VIRT-EXCH, 101083856 – VIRTUAL YOUTH BUSINESS HUBS INTERNATIONAL NETWORK Scientific Supervisor D.Econ., Prof. Mariana Shkoda		2022-2025	€59,95621 thousand	The aim of the project is to organize an International Network of Virtual Youth Business Hubs to provide business training for high school students, college students, and university students. One of the key expected outcomes for the current year is the implementation of online simulations for participants of asynchronous virtual exchanges. These asynchronous virtual exchanges will create a platform for the development of essential competencies such as analytical thinking, decision-making under uncertainty, risk management, and teamwork.	Information and Communication Technologies
9	Project ERASMUS+ KA2, ERASMUS-EDU-2023-CBHE-STRAND-2, Project ID 101128856 – 3D Concepts for Fashion Education in Ukraine (3D4U) Scientific Supervisor D.Tech., Assoc. Prof. Nataliia Pervaia		2023-2026	€154,8891 thousand	The project addresses the shortage of qualified specialists in 3D fashion concepts for education in Ukraine by establishing three 3D concept centers in three Ukrainian higher education institutions (KNUTD, KNU, LTU). The project's implementation this year will achieve the following outcomes: coordinate the establishment and equipping of three 3D hubs with the necessary hardware and software for 3D modeling and prototyping at the participating higher education institutions.	Construction Technologies, Design, and Architecture

10	Project ERASMUS+ KA2, ERASMUS-EDU-2024-VIRT-EXCH, 101193445 – Skills Enrichment for Adaptive Leadership in the New Reality Scientific Supervisor D.Econ., Prof. Alla Kasych		2025-2028	€81,00 thousand	The SEAL-NR project aims to develop a new generation of youth and educators prepared for 21st-century challenges by fostering the necessary skills through innovative virtual learning technologies. In the current year, activities include conducting surveys of target audiences (2,250 respondents), preparing a comprehensive analytical report (monograph) to summarize virtual exchange practices and provide recommendations, and holding an international conference to disseminate research results.	Information and Communication Technologies
11	Project DIGITAL-2024-ADVANCED-DIGITAL-07-KEYCAPACITY – Specialized Educational Programmes in Key Capacity Areas ID 101226215, 3D Printing for Sustainable Textiles and Fabrics (3DP STeF) Scientific Supervisor D.Tech., Assoc. Prof. Nataliia Pervaia		2025-2029	€195,649 thousand	The project promotes sustainable innovations in the textile and manufacturing sectors by upskilling and reskilling students of vocational and higher education institutions through the implementation of additive manufacturing tools, such as 3D printing, in the context of textiles and fashion. Targeted at students in areas such as fabric production, fashion, interior design, architecture, and engineering, the project aims to transform the textile industry into a more sustainable producer and market. By integrating advanced digital competencies, including artificial intelligence, data analytics, AR/VR technologies, and machine learning, the project seeks to develop educational pathways for green digital skills and prepare a new generation of professionals capable of managing the dual green and digital transition. The project promotes sustainable development and circular economy principles across the entire supply chain, encourages the use of sustainable raw materials, reduces environmental impact, and supports efficient on-demand manufacturing methods.	Construction Technologies, Design, and Architecture

12	Project within the international Q-Helix Alliance under the European Universities Support Programme "Scientific Vectors" Scientific Supervisor D.Econ., Prof. Liudmyla Hanushchak-Yefimenko		2025-2027	€35,00 thousand	The international Q-Helix Alliance research project is designed to develop a multi-level innovation ecosystem within the university, providing students at all levels and doctoral candidates with new opportunities for research, networking, and access to the necessary infrastructure for implementing scientific results in strategic priority areas of the Q-Helix Alliance, including security, healthcare, environment, and smart spaces utilizing artificial intelligence in these thematic domains. 	Innovation Management and Development of Innovation Ecosystems

Vice-Rector for Research and International Cooperation

Liudmyla HANUSHCHAK-YEFIMENKO