**ZARZĄDZENIE NR 146**

**Rektora Zachodniopomorskiego Uniwersytetu Technologicznego w Szczecinie z dnia 14 grudnia 2023 r.**

**zmieniające zarządzenie nr 125 Rektora ZUT z dnia 30 października 2023 r.   
w sprawie opisów efektów uczenia się w tłumaczeniu na język angielski  
dla kierunków studiów prowadzonych na Wydziale Techniki Morskiej i Transportu**

Na podstawie art. 23 ustawy z dnia 20 lipca 2018 r. Prawo o szkolnictwie wyższym i nauce (tekst jedn. Dz. U. z 2023 r. poz. 742, z późn. zm.) w związku z § 3 ust. 7 zarządzenia nr 64 Rektora ZUT z dnia 1 października 2019 r. w sprawie zasad sporządzania i wydawania dyplomów ukończenia studiów i suplementów do dyplomu (z późn. zm.) zarządza się, co następuje:

**§ 1.**

W zarządzeniu nr 125 Rektora ZUT z dnia 30 października 2023 r. w sprawie opisów efektów uczenia się w tłumaczeniu na język angielski dla kierunków studiów prowadzonych na Wydziale Techniki Morskiej i Transportu załącznik nr 9 otrzymuje brzemiennie, jak stanowi załącznik do niniejszego zarządzenia.

**§ 2.**

Zarządzenie wchodzi w życie z dniem podpisania.

Rektor

dr hab. inż. Jacek Wróbel, prof. ZUT

załącznik do zarządzenie nr 146 Rektora ZUT z dnia 14 grudnia 2023 r.

Logistyka studia drugiego stopnia (na podstawie uchwały nr 68 Senatu ZUT z dnia 27 kwietnia 2020 r.)

**Programme of studies:** *logistics*

**Level of qualification:** second cycle studies

**Educational profile:** general academic

**Fields of science:** Engineering and technology, Social sciences

**Discipline of science:** civil engineering and transport (76%), mechanical engineering (11%), management and quality studies (13%)

**Name of qualification (Title conferred): magister inżynier**

**Description of the planned educational effects**

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| **Code** | **Learning outcome for programme of studies** |
| **Knowledge** | |
| LO\_2A\_W01 | He/she has advanced knowledge in the technical aspects of supply chain operations, the conditions for conducting service activities in logistics on both local and global scales. |
| LO\_2A\_W02 | He/she possesses expanded and in-depth knowledge in the field of computer science and tools aiding decision-making in logistics, including complex information systems that enhance the operations of logistics enterprises |
| LO\_2A\_W03 | Has a well-organized and in-depth knowledge in the field of design: logistics processes and systems, objects, devices, and other technical-technological solutions applied in logistics |
| LO\_2A\_W04 | Has well-structured, theoretically grounded knowledge in the field of machinery and equipment operation, as well as objects and technical systems used in logistics. Also understands the impact of operation on their lifecycle. |
| LO\_2A\_W05 | Has in-depth knowledge in the field of methods and tools for ensuring safety in logistics, including risk management in supply chains |
| LO\_2A\_W06 | Has well-organized knowledge in the field of operations research, including computational and optimization models applied in logistics. |
| LO\_2A\_W07 | Has expanded knowledge regarding the robotization and automation of processes, utilizing complex technical devices |
| LO\_2A\_W08 | Has organized knowledge in the field of warehouse management and e-commerce |
| LO\_2A\_W09 | Has extensive knowledge in logistics management, including strategic management and quality management. |
| LO\_2A\_W10 | Has knowledge in the field of directions and trends in logistics development, as well as major achievements in scientific disciplines related to logistics operations. |
| LO\_2A\_W11 | Has the knowledge necessary for initiating, preparing, and conducting scientific research, ensuring proper organization of research or project work in the area related to logistics issues |
| LO\_2A\_W12 | Understands the principles of human functioning in social structures, including professional contexts, as well as their role as creators of culture, communities, and social groups. Is familiar with the fundamental dilemmas of contemporary civilization |
| LO\_2A\_W13 | Has the knowledge necessary for understanding the social, economic, legal, environmental, ethical, and other non-technical factors influencing engineering activities and their incorporation into engineering practices |
| LO\_2A\_W14 | Has knowledge in the principles of creating and developing individual entrepreneurship forms." |
| LO\_2A\_W15 | Has knowledge about the principles of intellectual property protection, including patents and copyright, as well as workplace safety and hygiene. |
| **Skills** | |
| LO\_2A\_U01 | The ability to gather information from literature, databases, and other appropriately selected sources, and to understand and utilize the necessary information; the capacity to analyze and evaluate the gathered information, to synthesize, creatively interpret, draw conclusions, and formulate and comprehensively justify opinions, and to present this information effectively |
| LO\_2A\_U02 | The ability to select and apply appropriate methods and tools, including advanced information and communication technologies, assess the usefulness and limitations of routine methods and tools used to solve engineering tasks. |
| LO\_2A\_U03 | Can utilize analytical, simulation, and experimental methods for formulating and solving engineering tasks. Capable of formulating and testing hypotheses related to simple research problems. |
| LO\_2A\_U04 | Can plan and conduct research and experiments in the field of logistics, perform measurements and computer simulations, interpret the obtained results, and draw conclusions. |
| LO\_2A\_U05 | Can interpret economic calculations in logistics, conduct preliminary economic assessments, and estimate the economic effects of proposed solutions and engineering activities. |
| LO\_2A\_U06 | Can recognize non-technical aspects, including environmental, economic, legal, and ethical aspects, when formulating and solving engineering tasks. Can systematize acquired knowledge, apply occupational health and safety principles, and has the necessary preparation for working in an industrial environment. |
| LO\_2A\_U07 | Can critically analyze the functioning of systems and assess existing technical solutions used in logistics. |
| LO\_2A\_U08 | Can formulate and creatively solve complex and atypical problems, adapt existing methods, or propose new ones for their resolution. Capable of innovatively performing tasks in changing conditions. |
| LO\_2A\_U09 | Can design a simple device, object, system, or implement processes typical for logistics issues, in accordance with given specifications. Utilizes appropriate methods, techniques, tools, and materials. |
| LO\_2A\_U10 | Can identify and interpret basic social phenomena and processes using knowledge from the field of logistics. |
| LO\_2A\_U11 | Can use normative systems, access patent information resources, and assess the possibility of intellectual property protection. |
| LO\_2A\_U12 | Can identify and specify simple practical engineering tasks related to issues of logistics techniques and technologies. |
| LO\_2A\_U13 | Is proficient in a foreign language at the B2 level of the Common European Framework of Reference for Languages, sufficient for communication as well as for reading and understanding publications and scientific papers in the field of logistics, logistics documentation, and other documents used in logistics companies' activities. |
| LO\_2A\_U14 | Can communicate effectively with both professionals and non-professionals, disseminate knowledge, participate in and lead discussions, comprehend and create scientific reports, including verbal presentations, in Polish, English, or other foreign languages. |
| LO\_2A\_U15 | Can work independently and collaborate effectively in a team. Capable of planning individual and team work, developing and implementing work schedules, estimating the time required for planned tasks, leading a team's work, and taking a leading role in teams. |
| **Social competences** | |
| LO\_2A\_K01 | Can critically assess existing knowledge, acquired information, and the directions of actions taken in the field of logistics. |
| LO\_2A\_K02 | Recognizes the importance of knowledge in solving logistics problems, is aware of the need for continuous self-improvement and further education, and understands the value of seeking opinions from experts. |
| LO\_2A\_K03 | Is aware of the social role of a graduate from a technical university, understands the need to disseminate information and opinions about achievements in the field of logistics, and is capable of initiating, inspiring, and organizing activities for the benefit of the social environment and public interest. |
| LO\_2A\_K04 | Can think and act in a creative and entrepreneurial manner. |
| LO\_2A\_K05 | Is aware of the responsibility for individual and team work, the decisions made, and the tasks carried out collaboratively. |
| LO\_2A\_K06 | He/She is prepared for professional conduct, understands the importance of professional development and building professional expertise, as well as adhering to professional ethics, upholding the professional ethos, and considering changing societal needs. |