

Description of intended learning outcomes for degree courses

Field of study: Logistics Education Area: technical and social sciences and social Field of study: technical and economic sciences Disciplines of education: management science, economics, computer science, construction and operation of machines Level of education: Bachelor's degree - Engineering Profile of education: academic		
Symbole	Description of directional learning outcomes After completing the first cycle majoring in Logistics graduate:	The reference to learning outcomes in education in the field of technical sciences and social (symbols)
KNOWLEDGE		
K_W01	knows and understands the rules of selection theory in mathematics and physics as decision-support tools in the management of logistics	T1A_W01 T1A_W07
K_W02	has an elementary knowledge of economics, finance, statistics, operations research, management and infrastructure related to the conduct of logistics	T1A_W01 T1A_W02 S1A_W01
K_W03	Is familiar with the key concepts of modern logistics, organization and terms related to the provision, manufacture and distribution of a specific life cycle, also in English	T1A_W03 T1A_W06
K_W04	understands the interdependence between the way of logistics management and cost effectiveness, organizational and qualitative	T1A_W04
K_W05	has an elementary knowledge of modern development trends in the area of logistics, both in the production and service activities	T1A_W03 T1A_W05
K_W06	Is familiar with the basic terminology known in the art, understanding the life cycle of the equipment, facilities, materials, and technical systems used in logistics	T1A_W06
K_W07	Has knowledge of common engineering-related problems, logistics of supply, production and distribution, as well as basic methods, techniques, tools and materials used in the design of logistics services	T1A_W07
K_W08	Has general understanding that is necessary to understand the bond between man and non-technical business elements: social sciences, economic and legal aspects	S1A_W02 S1A_W04 S1A_W03 S1A_W05 T1A_W08
K_W09	has an elementary knowledge of the terminology, concepts, and methods of organization and management, including quality management and business practices	T1A_W08 T1A_W09 T1A_W11
K_W10	understands the nature and importance of technology transfer in the development of logistics, including rules for the protection of industrial property and copyright law	S1A_W10 T1A_W10
K_W11	has a basic knowledge about the types of organizational structures, their socio-technical elements and their relations and linkages	S1A_W02 S1A_W11

	between different types of institutions	S1A_W09
K_W12	explains the methods and techniques for the collection, sorting and processing of data, appropriate for solving logistical problems	S1A_W06
K_W13	has a basic knowledge of civil law and economic, as well as health and safety, understands the standards and rules that determine the organization of economic structures and social institutions	S1A_W07
Skills		
1) GENERAL SKILLS (external to the field of engineering education)		
K_U01	obtains information from literature, databases and other sources, being able to analyze, combine, interpret, draw conclusions and formulate written and oral opinions in English	T1A_U01 S1A_U02 S1A_U09 S1A_U10 T1A_U05 T1A_U03 T1A_U14 T1A_U04
K_U02	has language skills in the fields of economics and technology relevant to the logistics, according to the requirements for level B2 of the European Framework of Reference for Languages	T1A_U06 T1A_U17 S1A_U11
K_U03	speaks specialized language in logistics, using a variety of information technology	T1A_U02
K_U4	resolves dilemmas arising in the decisions of logistics, using the knowledge of economics, law, finance, management, commodities, and other disciplines	S1A_U06 S1A_U01 S1A_U03 S1A_U07
K_U05	analyzes social phenomena associated with running a business, including logistics	S1A_U02 S1A_U08 S1A_U04
2) BASIC SKILLS ENGINEERING		
K_U06	uses information and communication technologies in the area of systems design and logistics processes	T1A_U07
K_U07	takes measurements and computer simulations, interpreting results and drawing conclusions concerning the improvement of logistics processes	T1A_U07 T1A_U08
K_U08	formulates and solves engineering tasks, using a variety of methods, including analytical, simulation and experimental methods	T1A_U08 T1A_U09 S1A_U04
K_U09	recognizes and analyzes aspects of the system and non-technical aspects, including social engineering activities	S1A_U03 T1A_U10
K_U10	Is guided by the principles of ethics and safety in manufacturing and services	T1A_U11 S1A_U03 S1A_U05
K_U11	indicates the important considerations and financial consequences for the company, due to logistical decisions	S1A_U06 T1A_U12

DIRECTLY RELATED SKILLS solving ENGINEERING JOB		
K_U12	examines ways of functioning and evaluates the existing technology including equipment, facilities, systems, processes, services, etc. in the field of logistics	T1A_U08 T1A_U09 T1A_U12 T1A_U13
K_U13	establishes specifications for typical engineering tasks, in logistics	T1A_U08 T1A_U09 T1A_U10 T1A_U12 T1A_U14
K_U14	evaluates the usefulness of standard methods, techniques, and tools to solve engineering tasks that are appropriate for logistics and selects and applies optimal ways to solve the problem	T1A_U09 T1A_U15
K_U15	designs typical system or logistics process, adequate to specifications, using the appropriate methods, techniques and tools	T1A_U09 T1A_U14 T1A_U16
SOCIAL SKILLS		
K_K01	understands the need to improve professional and personal competences, the need for continuous training, including English language skills	S1A_K01 S1A_K06
K_K02	is aware of the impact of non-technical aspects and the effects of engineering activities, including their impact on the environment, as well as liability associated with making decisions about the nature of logistics	T1A_K01
K_K03	identifies and solves the logistics activities in ethical, moral, legal, economic and organizational dilemmas including teamwork	T1A_K02 T1A_K05 S1A_K04
K_K04	Is able to meet the challenges of teamwork and understands the synergistic effect of good cooperation	T1A_K03 S1A_K02
K_K05	is willing and able to undertake a variety of tasks in an active, innovative and enterprising way	T1A_K06 T1A_K07 S1A_K07
K_K06	understands the need to popularize the achievements of logistics	T1A_K08 S1A_K05
K_K07	sets preconditions, objectives and priorities of the task at hand or logistics project	T1A_K02 T1A_K04 S1A_K03

Explanation of symbols:

K - (before the underscore) directional effect of education,

W, U, F - (the underscore) category effect (W - knowledge, U - skills

K - social competence)

01, 02, 03 - the number of training effect