NJSC «Kazakh National Research Technical University named after K. Satbayev»
Institute of Metallurgy and Industrial Engineering
Department «Technological machines, transport and logistics»

EDUCATIONAL PROGRAM

"6B11301Transport services "

Bachelor in Services

1st edition
in accordance with the State Educational Standard of Higher Education 2018

Almaty 2020

СӘТБАЕВ УНИВЕРСИТЕТІ SATBAYEV UNIVERSITY

The program is compiled and signed by the parties:

From KazNTU them K.Satbayev:

1. Head of the Department _____ K. K. Elemessov

2. Director of the Institute _____ K.K. Elemessov

3. The member of UMG. _____ G.S. Mukhanova

From employers:

1. Representative of the Specialty Council «Transport Engineering", Director LLP«Жәкен Қалша»_____ M.K. Azimbekov

From a partner university:

Head of the Department "Logistics and marketing" TURAN University
K.S.Chakeyeva

Approved at the meeting of the Educational and Methodological Council of the Kazakh National Research Technical University named after K. I. Satbayev. Protocol No. 4 of 14.01.2020

Qualification:
Level 6 of the National Qualifications Framework:

6B11301 – Transport services

Professional competence:logistics infrastructure, organization of movement and operation of transport, logistics, functional areas of logistics.

Brief description of the program

- ***The area of professional activity of graduates who have mastered the bachelor's program includes*** :

- organization of transportation;

- modeling and design of vehicle traffic;

- technology, organization, planning and management of technical and commercial operation of transport systems based on modern management and marketing;

- organization, based on the principles of logistics, for the rational interaction of modes of transport, inventory management, supply and storage;

- organization of a system of relationships to ensure traffic safety in transport.

The educational program covers training along the following trajectories:

- Organization of transportation, traffic and operation of transport;
- Transport logistics;
- Production logistics.

These areas provide an opportunity for graduates of higher professional-oriented in-depth education, which allows him to successfully work in the field of organization and management of transport processes or in the field of transport logistics.

The objects of professional activity of bachelors in three directions are:

- organizations and enterprises of public and non-public transport engaged in the transportation of passengers, cargo, cargo luggage and luggage, provision of infrastructure for use, performance of loading and unloading operations, regardless of their forms of ownership and organizational and legal forms;
- traffic safety services of public and private transport enterprises;
- logistics services for manufacturing and trade organizations;
- freight forwarding enterprises and organizations;
- State transport inspection services , marketing services and departments for the study and maintenance of the transport services market ;
- production and sales systems, organizations and enterprises of information support of production and technological systems;

- research and development organizations engaged in activities in the development of transport and logistics services , organization and traffic safety;

- organizations carrying out educational activities in the basic professional educational programs and in the basic vocational training programs.

- **Scope and content of the program (goal, objectives and content of the educational program)**

The purpose of the educational program: preparation of bachelors who are able to effectively solve professional problems in the field of transport in the following types of professional activities: production and technology; settlement and design; experimental research; organizational and managerial.

Professional tasks:

*production and technological activities***:**

– participation in the team of performers in the development, based on the requirements of market conditions and modern achievements of science and technology, measures to improve the systems of organization and management in transport and logistics services;

– participation as part of a team of performers in the implementation of the enterprise's strategy to achieve the highest production efficiency and quality of work in organizing the transportation of passengers, cargo and baggage;

– analysis of the state of existing control systems and participation in the team of executors in the development of measures to reduce logistics costs;

– development and implementation of rational transport and technological routes for the delivery of goods based on the principles of logistics and the expansion of value-added services;

– efficient use of material, financial and human resources when performing logistics services;

– ensuring the safety of the transportation process in various conditions;

– ensuring the implementation of existing technical regulations and standards in the field of transportation of goods, passengers, cargo and luggage;

– participation as part of a team of performers in the development and implementation of systems for the safe operation of transport and transport equipment and the organization of vehicle traffic;

– participation as part of a team of performers in monitoring compliance with the environmental safety of the transport process;

settlement and design activities:

– implementation, as part of a team of performers, of the set goals of the project for solving transport problems, criteria and indicators of achieving

goals, building the structure of their relationships, identifying priorities for solving problems, taking into account indicators of economic and environmental safety;

– participation as part of a team of performers: in the development of generalized options for solving problems of in-plant transport , analysis of these options, forecasting the consequences, finding compromise solutions in conditions of multi-criteria, uncertainty of project implementation planning ;

– participate in the composition of the group of performers in the development of land development plans for transport, transport enterprises, systems of organization of motion;

– use of modern information technologies in the development of new and improvement of existing land transport and transport and technological schemes for the delivery of goods ;

experimental research activities:

– participation in a team of performers in fundamental and applied research in the field of professional activity;

– analysis of the state and dynamics of changes in the quality indicators of land transport, systems for organizing passenger and cargo transportation using the necessary research methods and tools ;

– search and analysis of information on research objects ;

– technical support of research;

– analysis of research results ;

– participation in the group of performers in the analysis of production and economic activities of the transport o logistics enterprises;

– participation as a member of a team of performers in a comprehensive assessment and improvement of the efficiency of functioning of the systems of organization and traffic safety ;

– Creation of models of the processes of functioning of transport and technological systems and traffic flows as part of a team of performers based on the principles of logistics, allowing to predict their properties;

– participation in a team of performers in forecasting the development of regional transport systems;

– assessment of the environmental safety of the functioning of transport systems;

organizational and management activities:

– participation in the team of performers in the assessment of production and non-production costs for ensuring the safety of transport processes;

– participation in the team of performers in the assessment of production and non-production costs for the development of transport and technological schemes for the delivery of goods and passengers;
– participation as part of a team of performers in monitoring the operation of transport and technological systems;
– participation in the team of performers in the control and management of traffic management systems ;
– participation as a member of a team of performers in the preparation of initial data for the selection and justification of technical, technological and organizational solutions based on economic analysis;
– participation in the team of performers in the preparation of documentation for the creation of a quality management system of the enterprise;
– participation as part of a team of performers in the analysis of costs and results of the activities of production units and services.

The educational program regulates the goals, expected results, content, conditions and technologies for the implementation of the educational process, assessment of the quality of graduate training in two areas. The main educational program for training specialists includes a calendar curriculum, curriculum, annotations of the working programs of training courses and other materials that ensure the quality of training of students, as well as programs for educational and industrial practice.

The main goal of developing a new educational program is to open a new way for the integration of domestic higher education into the common European educational space and to ensure a close connection between the education system and the labor market, to create conditions for attracting employers in educational activities.

Tasks implemented by the educational program:

- training of highly qualified competent specialists for the transport and logistics sector of the economy of the Republic of Kazakhstan, capable of quickly adapting to rapidly changing socio-economic conditions;

- to form a student's certain set of personal qualities, general cultural and professional competencies, sufficient to form a modern transport industry and an advanced organization for the provision of logistics services in the country (region) ;

- to form the student's ability to reasonably combine the commercial principles of business activities, meeting public needs for the services of enterprises in the transport industry with the humanitarian tasks of personnel development and social values of Kazakhstani society;

- to orient the educational process towards the student, so that he can independently build his educational trajectory;

- to use credits (credit units) as a measure of the complexity of the educational program;

- to form a unified credit rating system for training specialists, in which it is clearly indicated which disciplines (modules) ensure the formation of certain competencies;

- to search for new effective methods of teaching and quality control of education.

*Scope of the program***.** The volume of the undergraduate educational program is at least 240 academic credits. The process of mastering the program of each credit unit by the student is supported by the system of point-rating assessment.

The term for obtaining an education under the bachelor's program, including vacations provided after passing the state final certification, is from 4 to 7 years. The volume of baccalaureate programs in the full-time form of training, implemented for one academic year is not less than 60 academic credits.

Educational activities under the program " Transport services "carried out in the state, Russian and English languages.

The curriculum includes general disciplines, a cycle of basic disciplines and a cycle of major disciplines. Most majors are student-selected disciplines. All general and basic disciplines are compulsory for students to study. The structural elements of the curriculum are: the schedule of the educational process; summary data on student's time budget; plan of the educational process, which includes a list, volumes and sequence of studying disciplines, their distribution by type of training, forms of intermediate and final control and final certification. The working curriculum provides: the sequence of studying disciplines based on their continuity; rational distribution of disciplines and practices by semester from the standpoint of uniformity of student's academic work; effective use of the personnel and material and technical potential of the university.

The goal of the cycle of general education disciplines (OOD) is to provide social and humanitarian education based on knowledge of the laws of social and economic development of society, the history of Kazakhstan, modern information technologies, the state language, foreign and Russian languages, as means of interethnic communication.

The purpose of the cycle of basic disciplines (DB) is to provide in-depth knowledge of natural science, general professional and economic nature as the foundation of professional education.

The purpose of the cycle of profiling disciplines (PD) is to provide deep theoretical knowledge and practical experience in the field of logistics , organization of transportation and production logistics.

Requirements for applicants

 Description of compulsory standard requirements for admission : carried out according to the applications of the applicant who completed secondary, secondary specialized education in full on a competitive basis in accordance with the points of the certificate issued based on the results of a single national test with a minimum score of at least 65 points.

 special requirements for admission to the program, including for graduates of 12 summer schools, colleges of applied bachelor's programs, etc., there are no special requirements .

Credit Transfer Rules for Accelerated (Reduced) Education Based on 12-Year Secondary, Technical and Higher Education

The code	Competence type and	Description of competence	Competence Result	Responsible
GENERAL (This implies full training with possible additional training depending on the level of knowledge)				
G1	Communicativeness	- Fluent monolingual oral, written and communication skills - the ability not to fluent communication with the second tongue Ability to use in various situations communicative communication - there are basics of academic writing on native language - diagnostic test for language level	Full 4-year study with a minimum of 240 academic credits (of which 120 are contact classroom academic credits) with possible transfer of credits in a second language where students have an advanced level. The level of the language is determined by passing a diagnostic test	Department of Kazakh and Russian languages, Department of English
G2	Mathematical literacy	- Basic mathematical thinking on communication level - the ability to solve situational problems based on the mathematical apparatus of algebra and the beginnings of mathematical analysis - diagnostic test for mathematical literacy in algebra	Full 4-year study with a minimum of 240 academic credits (of which 120 are contact classroom academic credits). With positive surrender diagnostic test level Mathematics 1, with negative - level Algebra and the beginning of analysis	Department of Math

G3	Basic literacy in science disciplines	- basic understanding of the scientific picture of the world with understanding the essence of the basic laws of science - understanding basic hypotheses, laws, methods, formulating conclusions and error estimation	Full 4-year study with a minimum of 240 academic credits (of which 120 are contact classroom academic credits). With positive surrender diagnostic test level Physics 1, General Chemistry, with negative - the level of the Beginning of Physics and Basic foundations of chemistry	Departments in the field of natural sciences
SPECIFIC (implies reduced training through credit transfer, depending on the level of knowledge in competencies for graduates of 12-year schools, colleges, universities, including humanitarian and economic areas)				
S1	communicativeness	- Fluent bilingual oral, written and communication skills - the ability not to fluent communication with the third tongue - skills of writing text of different style and genre - skills of deep understanding and interpreting your own work of a certain level of complexity (essay) - basic aesthetic and theoretical literacy as a condition for full-fledged perception, interpretation original text	Full credit transfer by language (Kazakh and Russian)	Department of Kazakh and Russian languages
S2	Mathematical literacy	- Special mathematical thinking using induction and deduction, generalization and concretization, analysis and synthesis, classification and systematization, abstractions and analogies - the ability to formulate, substantiate and prove provisions	Credit transfer for the discipline Mathematics (Calculus) I	Department of Math

		- application of general mathematical concepts, formulas and extended spatial perception for math problems - a complete understanding of the basics of mathematical analysis		
S3	Special literacy in natural sciences disciplines (Physics,)	- Broad scientific perception of the world, with a deep understanding of natural phenomena - critical perception for understanding scientific phenomena of the surrounding world - cognitive ability to formulate scientific understanding of the forms of existence of matter, its interaction and manifestations in nature	Credit transfer for Physics I; Study practice, etc.	Departments in the field of natural sciences and graduating
S4	English language	eadiness for further self-study in English in different fields of expertise - willingness to gain experience in project and research work using English	Transfer of English credits above academic to professional level (up to 15 credits)	Department of English
S5	Computer skills	- Basic programming skills in one modern language - use of software and applications for training in various disciplines -existence of a global standard of language level certificate	Credit recalculation by discipline Information and communication technologies	Department of Programming engineering

S6	Social and humanitarian competences and behavior	- understanding and awareness of the responsibility of each citizen for development country and world - Ability to discuss tethical and moral	Recalculation of credits on the Modern History of Kazakhstan (excluding the state examination)	Department of Public disciplines
		aspects in society, culture and science		
		- Critical understanding and ability to argue for debating on modern scientific hypotheses and theories	Transfer of credits for philosophy and other humanitarian disciplines	
PROFESSIONAL (implies abbreviated training at the expense of credit transfer, depending on the knowledge level of competency for college graduates, AB schools, universities, in including humanitarian and economic areas)				
P1	Professional competence	- critical perception and deep understanding of professional encies at level 5 or 6 - Ability to discuss and argue on professional issues within the framework mastered program	Credit transfer by basic professional disciplines	leasing chair
P 2	Socio-economic competence	- Critical insight and cognitive ability reason on contemporary social and economic issues - Basic understanding of the economic evaluation of objects of study and the profitability of projects industries	Recalculation of loans in socio-humanitarian and technical-economic disciplines in the offset of the elective cycle	leasing chair

The university may refuse to transfer credits if a low diagnostic level is confirmed or the final grades in completed disciplines were below A and B.

Requirements for completing studies and obtaining a diploma

- Description of the compulsory standard requirements for graduation and the award of an academic bachelor's degree: mastering at least 240 academic credits of theoretical training and final thesis
- special requirements for graduation in this program.

Working curriculum of the educational program

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN
SATBAEV UNIVERSITY

APPROVED
Rector of Satbaev University
I. K. Beisembetov
«__»_____ 2021 г.

MAJOR CURRICULUM for 2020-2021 academic year admission
6B11301 - "Transport services"

Full-time study Study duration : 4 years Academic degree: bachelor in services

Name of modules	Code	Code of discipline	Name of discipline	semester	Cycle	Credits	lec/lab/pr	Prerequisites
Multilingual education module		LNG 1051	Beginner (A1)	1	G	6	0/0/3/3	Diagnostics. Test
		LNG 1052	Elementary English (A1)					
		LNG 1053	General English 1 (A2)					
		LNG 1054	General English 2 (A2)					
		LNG 1055	Academic English (B1)					
		LNG1056	Business English (B2)					
		LNG1012	Kazakh (Russian) language	1	G	4	0/0/2/2	Diagnostics. Test
		LNG1012.1	Академический казахский (русский) язык (B1)					
		LNG1012.2	Деловой казахский (русский) язык (B2)					
		LNG 1052	Elementary English (A1)	2	G	6	0/0/3/3	LNG 1051
		LNG 1053	General English 1 (A2)					LNG 1052
		LNG 1054	General English 2 (A2)					LNG 1053
		LNG 1055	Academic English (B1)					LNG 1054
		LNG1056	Business English (B2)					LNG 1055
		LNG 1057	Professional English (B2+)					LNG1056
		LNG1102.1	Академический казахский (русский) язык (B1)	2	G	6	0/0/3/3	LNG1012
		LNG1102.2	Деловой казахский (русский) язык (B2)					LNG1012.1
	1111	LNG10761	Kazakh language. Culture of business communication (C1)					LNG1012.2
		LNG10751	Kazakh language. Rhetoric (C1)					
		LNG10711	Elementary Kazakh language (A1)					
		LNG10741	Business Kazakh language (B2)					
		LNG10742	Advanced Russian language (B2)					
		LNG10762	Russian language. Culture of business communication (C1)					
		LNG10752	Russian language. Rhetoric (C1)					
		LNG 1053	General English 1 (A2)	3	G	6	0/0/3/3	LNG 1052
		LNG 1054	General English 2 (A2)					LNG 1053
		LNG 1055	Academic English (B1)					LNG 1054
		LNG1056	Business English (B2)					LNG 1055
		LNG 1057	Professional English (B2+)					LNG1056
		LNG 1054	General English 2 (A2)	4	G	6	0/0/3/3	Eng 1103
		LNG 1055	Academic English (B1)					Eng 1104
		LNG1056	Business English (B2)					Eng 1105
		LNG 1057	Professional English (B2+)					Eng 1106
	2113	LNG109	IELTS Preparation					LNG 1057
		LNG110	Intercultural Communication					
		LNG117	Technical Writing					
		LNG118	Public speaking					
		LNG119	Productivity skills					
		LNG120	GRE preparation					
		LNG121	Academic Writing					
Social discipline Module		HUM 113	Modern history of Kazakhstan	1	G	4	0/0/2/4	no
		HUM124	Philosophy	3	G	6	1/0/2/3	no
		HUM126	Social-political knowledge	4	G	8	4/0/0/4	no
Physical fitness module		KFK101	Physical education I	1	G	4	0/0/2/2	no
		KFK102	Physical education II	2	G	4	0/0/2/2	no

	Code	Code of discipline	Name of discipline	semester	Cycle	Credits	lec/lab/pr	Prerequisites
Physical and mathematical training and informatics module		PHY110	Heat treatment of materials	1	B	6	1/1/1/3	Diagnostics. Test
		PHY111	Physics I	1				
		PHY112	Physics II	2	B	6	1/1/1/3	PHY111
		MAT00110	Algebra and introduction to calculus	1	B	6	1/0/2/3	Диагност. Тест
		MAT101	Mathematics I					
		MAT102	Mathematics II	2	B	6	1/0/2/3	MAT101
		MAT103	Mathematics III	3	B	6	1/0/2/3	MAT102
		MAT126	Ordinary differential equations. Matlab	4	B	6	1/0/2/3	MAT103
		MAT127	Partial differential equations. Matlab.	5	B	6	1/0/2/3	MAT126
		CSE174	Information and communication technology		G	6	2/1/0/3	no
Module of Introduction to logistics, transport systems and networks		TRA198	Introduction to the specialty	1	B	6	2/0/1/3	no
		GEN149	Transport infrastructure	2	B	8	2/0/2/4	no
		TRA164	Transport systems	3	B	6	2/0/1/3	GEN149
	2211	TRA449	Transport network and its role in the economy	3	B	6	2/0/1/3	no
		TRA168	Intelligent transport systems	3	B	6	2/0/1/3	GEN149
		TRA135	Transport logistics	5	B	3	2/0/1/3	GEN149
	4312	MNG451	Global Logistics Systems	7	S	6	2/0/1/3	TRA135
Module of Information systems , innovative technologies and modeling in logistics and transportation organization, automation basics	2211	TRA468	Data management in logistics	3	B	6	2/1/0/3	no
	2212	MNG121	Logistics: information technology and systems	4	B	6	2/1/0/3	no
	2114	TRA428	Data Analysis in Excel	4	B	6	2/1/0/3	TRA198
	3303	TRA434	Innovative directions in the organization of freight transportation	5	B	6	2/1/0/3	TRA422
	3306	TRA450	Evolution and innovation of warehouse logistics		S	6	2/1/0/3	
	4310	TRA408	Innovative mechanisms for forwarding services		S	6	2/1/0/3	TRA422
		GEN138	Information technologies in transport	7	S	6	2/1/0/3	TRA135
	4311	TRA438	WMS (WAREHOUSE MANAGEMENT SYSTEM)	7	S	6	2/1/0/3	MNG453
		AUT146	Basics of automation	6	B	6	2/1/0/3	
	3304	TRA448	Economic and mathematical methods and models of transport logistics	5	B	6	2/1/0/3	TRA198
	3302	TRA410	Mathematical Statistics in Transportation	5	B	6	2/1/0/3	TRA198
	3303	TRA432	Modeling Production and Logistics	5	B	6	2/1/0/3	TRA198
	3305	MNG168	Simulation of logistics systems	6	B	6	2/1/0/3	TRA432
	4316	TRA431	Modeling of transport processes	8	S	6	2/1/0/3	TRA135
Module of Economics and Law, Security and Risk Management in Transport	3304	TRA435	Organization of transportation and economics of transport management	5	S	6	2/0/1/3	TRA422
	3301	MNG109	Economy of transport	5	S	6	2/0/1/3	TRA422
	4311	TRA414	Quality management in transportation	7	S	6	2/0/1/3	TRA135
	4312	TRA187	The basics of FEA and regulations for international transportation	7	S	6	2/0/1/3	TRA422
		TRA418	Service marketing					TRA422
		TRA425	Organization and management of transport enterprises					TRA135
	4313	TRA445	Current trends in traffic safety in transport processes	7	S	6	2/0/1/3	TRA422, TRA135
		TRA444	Supply Chain Logistic Risk Management	8	S	6	2/0/1/3	TRA135
Transportation organization module		TRA422	Freight transportation	2	B	4	1/0/1/2	no
	3304	TRA439	Supply Chain Transportation	5	S	6	2/0/1/3	TRA422
	4310	TRA440	Organization of intermodal transport	7	S	6	2/0/1/3	TRA422, TRA135
	4311	TRA181	Logistics of freight forwarding services	7	S	6	2/0/1/3	TRA422, TRA135
	4313	TRA190	Transport and loading-unloading means		S	6	2/0/1/3	TRA422, TRA135
		TRA173	The office of freight and commercial work	7	S	6	2/0/1/3	TRA422, TRA135
	4314	TRA447	Transportation in Supply Chain Logistics	7	S	6	2/0/1/3	TRA422, TRA135

	Code	Code of discipline	Name of discipline	semester	Cycle	Credits	lec/lab/pr	Prerequisites
Module for design, production logistics, inventory and supply management	2212	MNG169	Methods of decision making in logistics	4	B	6	2/0/1/3	TRA198
	2214	TRA452	Basics of manufacturing processes	4	B	6	2/0/1/3	no
		MCH110	Logistics in automotive engineering	5	B	6	2/0/1/3	TRA198
	3302	TRA453	Logistic process management	5	B	6	2/0/1/3	TRA198
		TRA167	Supply Chain Management Systems	6	B	6	2/0/1/3	TRA422, TRA135
	3301	MNG170	Business games in logistics	6	B	6	2/0/1/3	MNG110
	3306	TRA437	Supply Chain Management	6	S	6	2/0/1/3	MNG110
		MNG453	Warehouse Logistics	6	S	6	2/0/1/3	MNG110
	3307	MNG457	Logistics of material and technical supply	6	S	6	2/0/1/3	TPM 2208
		TRA454	Enterprise resource planning (ERP systems)	6	S	6	2/0/1/3	MNG110
	4313	TRA423	Logistics systems design	7	S	6	2/0/1/3	GEN149
	4315	TRA457	Basics in industrial robots	8	S	6	2/0/1/3	TRA452
		TRA424	Fundamentals of the design of motor freight delivery systems	8	S	6	2/0/1/3	MCH121
		TRA443	Project Management in Logistics				2/1/0/3	MCH120
Final certification module		ECA101	State examination in the specialty		FA	8		
		ECA102	Writing and defense of the thesis		FA	6		
Additional training module		AAP106, 118	Physical education III,IV	3-4		0		
		AAP500	Military training	3-6		0		
Practice-oriented module		AAP101	Training Practice	2		2		
		AAP109	Industrial internship I	4		2		
		AAP103	Industrial internship II	6		4		

Number of credits for the entire period of study			
Cycle of disciplines	credits		
	compul-sary	elective	total
Cycle of general disciplines (G)	58	10	68
Cycle of basic disciplines (B)	78	54	132
Cycle of special disciplines (S)	6	60	66
Total of theoretical study :	142	124	**266**
Professional practice and ATT	8	10	**18**
Final attestation (FA)	14	0	**14**
TOTAL:	22	10	**32**

By the decision of the Academic Council Satpayev University . Protocol № 3, dated "15" 05 2020

By the decision of the Educational and Methodological Board of Satpayev University . Protocol № 4, dated "14" 01 2020

Decision of the Academic Council of the Institute of Metallurgy and Industrial Engineering Protocol №. 3 dated "25" 10 2019

Vice-rector for academic affairs **R.M. Iskakov**

Director of the Institute of Metallurgy and Industrial Engineering **K.K. Yelemessov**

Head of the Department "Technological machines, transport and logistics" **K.K. Yelemessov**

Representative of Specialty council **M.K. Azimbekov**

Descriptors of the level and amount of knowledge, abilities, skills and competencies, acquired by students of the specialty "Transport services ".

A - knowledge and understanding:

A1 - knowledge of social and ethical values based on public opinion, traditions, customs, social norms and focus on them in their professional activities and

A2 - knowledge of the basics of the legal system, trends in social development of society and the legislation of Kazakhstan;

A3 - knowledge in addition to the state and Russian languages of one of the foreign languages at a level not lower than the spoken language;

A4 - knowledge of the basic sections of mathematics, physics and information and communication technology, and the basics of professional disciplines;

A 5 - knowledge of the current state and prospects for the development of modes of transport, transport system and functional areas of logistics ;

A 6 - knowledge skills treatment with modern technology and information technology in the field of professional activity;

B - application of knowledge and understanding

B1 - independent development and promotion of various options for solving professional problems using theoretical and practical knowledge;

B2 - possession of the ability to logically correctly, reasonably and clearly build oral and written speech, create professional texts and the ability to defend one's point of view without destroying relations;

B3 - possession of the ability to respect and care for the historical heritage and cultural traditions, is able to analyze and evaluate historical events and processes;

B3 - independent research, analysis and evaluation of research results using innovative technologies;

B4 - possession of the basic methods, methods and means of obtaining, storing and processing information, has the skills to work with a computer as a means of information management and with automated database management systems;

B5 - possession of the basics of safety of transport systems and basic methods, methods and means of planning and implementation of ensuring transport safety;

B6 - the ability to use the methods of mathematical modeling, statistical analysis and economics of transport for efficient use of vehicles in transport and technological systems and used , I be logistical approaches to the organization and operation of transport systems;

C - forming judgments

C1 - the ability to analyze the main stages and patterns of the historical development of society for the formation of a civil position;

C2 - systems thinking and holistic perception of the reality of transport engineering;

C3 - independence of thought, critical, analytical, diagnostic skills;

C4 - awareness of the social significance of the profession, adherence to the principles of professional ethics;

C5 - the ability to use the foundations of legal, technical and economic knowledge in various fields of activity;

C6 - the ability to communicate in oral and written forms in the state, Russian and foreign languages for solving problems of interpersonal and intercultural interaction;

C7 - the ability to work in a team, tolerantly perceiving social, ethnic, confessional and cultural differences;

D - personality ability

D1 - the ability to solve standard tasks of professional activity based on information and bibliographic culture using information and communication technologies and taking into account the basic requirements of information security;

D2 - the ability to understand the scientific basis of technological processes in the field of technology, organization, planning and management of technical and commercial operation of land transport and transport systems;

D3 - the ability to apply the system of fundamental knowledge (mathematical, natural science and economic) to identify, formulate and solve technological problems in the field of organization, planning and management of technical and commercial operation of transport facilities and the organization of logistics services ;

D4 - the ability to apply in practice the principles of rational use of natural resources and environmental protection;

D5 - the ability to participate in a part of the collective artists in carrying out research and modeling , and transport and logistics processes and their elements;

D6 - possession of knowledge of the application of the logistics approach in the organization of transportation, warehousing, inventory management ;

D7 - possession of knowledge of economic laws in force at service and corporate service enterprises, their application to the market conditions of the country;

Completion Competencies

B - Basic knowledge, abilities and skills

B1 - Possession of basic knowledge in the field of natural science (social, humanitarian, economic) disciplines that contribute to the formation of a highly educated personality with a broad outlook and culture of thinking ;

B2 - Possession of skills in handling modern technology, the ability to use information technology in the field of professional activity;

B3 - Possession of the skills of acquiring new knowledge necessary for daily professional activities and continuing education in the magistracy;

B4 - Proficiency in one of the foreign languages at a level not lower than the spoken language;

B5 - Possession of basic knowledge in the field of general theoretical disciplines that contribute to the formation of the foundations of a scientific worldview, the development of logical thinking, the ability to analyze physical processes, the ability and readiness to participate in the development of modern theoretical and experimental research methods;

P - Professional competence, including according to the requirements of industry professional standards (*if any*)

P1 - a wide range of theoretical and practical knowledge in the professional field;

P2 - readiness to participate as part of a team of performers in the development of transport and transport and logistics processes, their elements and technological documentation;

P3 - the ability to select the transport ie , transport and technologically e machinery 's and equipment for various purposes, taking into account the impact of external factors and the requirements of safe and efficient operation and cost;

P4 - the ability to master technologies and methods of transportation of goods, passengers ;

P5 - possession of knowledge of technical conditions and rules for the rational operation of transport and transport-technological machines and equipment;

P6 - the ability to assess risk and determine measures to ensure the safe and efficient operation of vehicles ;

P7 - the ability to plan and organize the operation of transport complexes of cities and regions, organize the rational interaction of modes of transport that make up a single transport system when transporting passengers, luggage, cargo luggage and cargo;

P8 - the ability to organize rational interaction of various types of transport in a single transport system and effective commercial work at a transport facility, development and implementation of rational methods of working with a client;

P9 - the ability to monitor and control logistics processes;

P10 - the ability to search for ways to improve the quality of transport and logistics services to cargo owners, develop the infrastructure of the commodity market and distribution channels, as well as determine the parameters for optimizing logistics transport chains and links, taking into account the criteria of optimality;

P11 - the ability to provide consignors and consignees with services: execution of shipping documents, delivery and receipt, delivery and removal of goods; on the performance of loading and unloading and warehouse operations; for the preparation of rolling stock; cargo insurance, customs clearance of cargo and vehicles; for the provision of information and financial services;

P12 - the ability to develop the most effective schemes for organizing the movement of vehicles and apply the latest technologies for controlling the movement of vehicles;

P13 - the ability to identify priorities for solving transport problems, taking into account indicators of economic efficiency and environmental safety and use modern information technologies as a tool for optimizing management processes in the transport complex;

P14 - the ability to design logistics systems for the delivery of goods and passengers, choosing a logistics intermediary, carrier and forwarder based on a multi-criteria approach;

P15 - the ability to develop projects and implement: modern logistics systems and technologies for transport organizations, technologies for intermodal and multimodal transportation, optimal routing;

O - Human, socio-ethical competences

O1 - knowledge of the traditions and culture of the peoples of Kazakhstan and adherence to the norms of business ethics, knowledge of ethical and legal norms of behavior

O2 - to be tolerant of the traditions and culture of other peoples of the world; O3 - knowledge of the basics of the legal system and legislation of Kazakhstan;

O4 - knowledge of the tendencies of social development of society, the ability to adequately navigate in various social situations;

O5 - awareness of the social significance of their future profession, possessing high motivation to perform professional activities;

O6 - mastering the basic methods of protecting production personnel and the population from possible consequences of accidents, catastrophes, natural disasters;

C - Special and managerial competencies

C1 - independent management and control of the processes of labor and educational activities within the framework of the strategy, policy and goals of the organization, discussion of the problem, reasoning of conclusions and competent handling of information;

C2 - possession of the basics of economic knowledge;

C3 - knowledge and understanding of the goals and methods of state regulation of the economy, the role of the public sector in the economy;

C4 - the ability to search, analyze and evaluate information for the preparation and adoption of management decisions, the willingness to be responsible for them, as well as to give instructions, to manage the actions of other people, taking into account the abilities, capabilities and motivation of employees;

C5 - the ability to navigate in modern information flows and adapt to dynamically changing phenomena and processes in the world economy;

C6 - to be flexible and mobile in various conditions and situations related to professional activities;

C7 - the knowledge of classification and and assignment types of transport and vehicles , modes of transport, functional areas of logistics ;

C8 - able to carry out cost calculations when organizing transportation to determine the most optimal routes;

C9 - is able to carry out calculations for determining the capacity of the warehouse , justify their choice for the given conditions and storage volumes ;

C10 - able to take part in the calculation and design of transport systems, freight traffic.

Minor Additional Education Policy

Today, employers prefer specialists with a wide range of competencies. Our educational program allows you to simultaneously understand the ongoing transport processes, solve legal and financial issues.

As part of the educational program, you are given a unique opportunity to choose one of the additional profiles for study - MINOR.

MINOR (minor) is an additional educational trajectory for students outside of training in the main educational direction.

When mastering at least 12 credits in the following elective disciplines of the educational program, with the obligatory mastering of disciplines of the chosen educational trajectory:

1. MINOR

M1 - Innovative mechanisms of transport and forwarding services;

M2 - Management of cargo and commercial work;

M 3 - Fundamentals of foreign economic activity and rules of regulation of international transport;

2. MINOR

M1 - Project Management in Logistics;

M2 - Design of logistics systems;

M 3 - Enterprise Resource Planning (ERP systems);

M4 - Management of logistics risks in supply chains ,

an additional specialty Minor is assigned with the issuance of a diploma supplement of the established form.

ECTS Diploma Supplement

The European Diploma Supplement is issued by the Kazakh National Research Technical University named after K.I.Satbayev graduates of accredited educational programs only in strict accordance with the model developed by the Joint Working Group of representatives of the European Commission, Council of Europe and UNESCO.

The European Diploma Supplement does not contain any judgments of the assessment plan, comparisons with other study programs and recommendations regarding the possibility of recognition of this diploma or qualification.

The European Diploma Supplement should consist of eight sections (information on the identity of the holder of the qualification; information on qualifications, information on the level of qualifications, information on the content of education and results obtained, information on the functions of qualifications; additional
information, testimonial applications, national higher education system) and must contain information on all sections.

In the absence of information in any of the sections of the European Diploma Supplement, the reasons for refusing to provide mandatory information are indicated.

Thus, the European Diploma Supplement issued by the K.I. Satbayev, developed according to all the standards of the European Commission, Council of Europe and UNESCO. It contains information about the holder of the diploma, the qualifications he has received, the level of this qualification, the content of the training program, the results, the functional purpose of the qualification, as well as information about the national education system. The

most important part of the European application is the conversion of loans from the Republic of Kazakhstan into a generally accepted and understandable system of credit in Europe - **ECTS loans .**

Conditions for obtaining the European Diploma Supplement at the KazNRTU named after K.I. Satbayev

- The European application is issued to graduates of full-time and distance learning, upon individual request in English.

To obtain the European application, you must have the following documents:

- A copy of the diploma.
- A copy of the Diploma Supplement.
- Application addressed to the rector.
- Copy of identity card.

Bachelor in Services, level 6 of the national qualifications framework with the right to work in transport and logistics companies, must master the following general education, basic and major disciplines:

Algebra and beginning of mathematical analysis

CODE - MAT00120
CREDIT - 3 (1/0/2)
PREQUISIT - diagnostic test

PURPOSE AND OBJECTIVES OF THE COURSE

The aim of the course is to familiarize students with the basic ideas and concepts of algebra and mathematical analysis and the formation of the basic knowledge necessary to study the course "Mathematics 1".

The objectives of the course are the formation of skills for the study of mathematical disciplines and the effective use of mathematical methods for solving scientific research and practical problems in the professional field.

SHORT DESCRIPTION OF THE COURSE

The course "Algebra and Introduction to Analysis" provides basic concepts of algebra, mathematical analysis, differential and integral calculus.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

Student

must know:

- basic concepts of algebra;
- basic concepts of mathematical analysis;
- basic elementary functions;

should be able to:

- find solutions to equations and inequalities, systems of equations and inequalities;
- convert algebraic and trigonometric expressions;
- solve word problems;
- find the derivative of elementary functions;
- explore functions using a derivative;
- find the indefinite integral of elementary functions;
- find a definite integral;
- find the area of a curved trapezoid.

Mathematics I

CODE - MAT00121

CREDIT - 3 (1/0/2)

PREREQUISIT - Elementary Mathematics-School Course / Diagnostic Test

PURPOSE AND OBJECTIVES OF THE COURSE

The main goal of the course is to give the future specialist a certain amount of knowledge on the sections of the course "Mathematics-I", which is necessary for studying related engineering disciplines. Introduce students to the ideas and concepts of calculus. The main attention is paid to the formation of basic knowledge and skills with a high degree of their understanding of differential and integral calculus.

Course objectives:

the acquisition of knowledge necessary for the effective use of rapidly developing mathematical methods; obtaining the skill of building and researching mathematical models; mastery of the fundamental sections of mathematics necessary for solving scientific research and practical problems in the professional field.

SHORT DESCRIPTION OF THE COURSE

The course "Mathematics-I" provides a presentation of the sections: introduction to analysis, differential and integral calculus

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

The study of this discipline will allow the student to apply the course "Mathematics-I" to the solution of simple practical problems, to find tools sufficient for their research, and to obtain numerical results in some standard situations.

Mathematics II

CODE - MAT00122
CREDIT - 3 (1/0/2)
PREREQUISIT - Mathematics 1

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the course "Mathematics II" is to form in bachelors ideas about modern mathematics as a whole as a logically harmonious system of theoretical knowledge.

The objectives of the course are to instill in students solid skills in solving mathematical problems with bringing the solution to a practically acceptable result. To develop primary skills in mathematical research of applied issues and the ability to independently understand the mathematical apparatus contained in the literature related to the student's specialty.

SHORT DESCRIPTION OF THE COURSE

The course "Mathematics-II" provides an accessible presentation of the sections: elements of linear algebra and analytic geometry, differential calculus of functions of many variables, multiple integrals. "Mathematics II" is a logical continuation of the course "Mathematics I".

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

The study of this discipline will make it possible to apply in practice the theoretical knowledge and skills obtained with a high degree of understanding in the sections of the course, to use them at the appropriate level; translate into mathematical language the simplest problems posed in terms of other subject areas; acquire new mathematical knowledge using educational and information technologies; solve applied problems in the field of professional activity

Mathematics III

CODE - MAT00123

CREDIT - 3 (1/0/2)

PREREQUISIT - Mathematics 1, Mathematics II

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the course "Mathematics-III" is the formation of basic knowledge and skills *with a* high degree of understanding of the sections of the course, helping to analyze and solve theoretical and practical problems.

Objectives of the course: instilling in students the ability to independently study educational literature, to carry out probabilistic-theoretical and statistical analysis of applied problems; development of logical thinking and raising the general level of mathematical culture.

SHORT DESCRIPTION OF THE COURSE

The course "Mathematics-III" includes sections: the theory of series, elements of the theory of probability and mathematical statistics and is a logical continuation of the discipline "Mathematics II".

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

Student

must know:

- the theory of number series;
- the theory of functional series;
- rows of Fourier;
-elements of the theory of probability and mathematical statistics;

should be able to:

- solve problems in all sections of the theory of series;
- find the probabilities of events;
- find the numerical characteristics of random variables;
- use statistical methods to process experimental data;

Physics I, II

CODE - PHYS111-112

CREDIT - 6 (2/2/2)

PREQUISIT - diagnostic test / PHYS110-111

PURPOSE AND OBJECTIVES OF THE COURSE

the main goal of teaching the course Physics I and Physics II is to form ideas about the modern physical picture of the world and the scientific outlook.

SHORT DESCRIPTION OF THE COURSE

Disciplines Physics I and Physics II are the basis of theoretical training for engineering and technical activities of graduates of a higher technical school and represent the core of physical knowledge necessary for an engineer operating in the world of physical laws. The course "Physics 1" includes sections: physical foundations of mechanics, structure of matter and thermodynamics, electrostatics and electrodynamics. The discipline "Physics II" is a logical continuation of the study of the discipline "Physics 1", and forms a holistic view of the course of general physics as one of the basic components of the general theoretical training of bachelors of engineering and technical profile. The discipline "Physics II" includes sections: magnetism, optics, nanostructures, fundamentals of quantum physics, atomic and nuclear physics.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

- the ability to use knowledge of fundamental laws, theories of classical and modern physics, as well as the use of physical research methods as the basis of a system of professional activity.

Modern history of Kazakhstan
CODE - HUM113
CREDIT - 3 (1/0/2)
PREREQUIST - no

PURPOSE AND OBJECTIVES OF THE COURSE

The aim of the course is to familiarize students of technical specialties with the main theoretical and practical achievements of domestic historical science on the problems of the history of modern Kazakhstan, a comprehensive and systematic study of the main stages of the formation and development of Kazakhstani society.

- to analyze the peculiarities and contradictions of the history of Kazakhstan in the Soviet period;
- to reveal the historical content of the foundations of the laws of political, socio-economic, cultural processes at the stages of the formation of an independent state;
- contribute to the formation of students' civic position ;
- to educate students in the spirit of patriotism and tolerance, belonging to their people, fatherland;

SHORT DESCRIPTION OF THE COURSE

The course Modern history of Kazakhstan is an independent discipline and covers the period from the beginning of the twentieth century to the present day. The modern history of Kazakhstan studies the national liberation movement of the Kazakh intelligentsia at the beginning of the 20th century, the period of the creation of the Kazakh ASSR, as well as the process of formation of a multinational society.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

- knowledge of events, facts and phenomena of the modern history of Kazakhstan;
- knowledge of the history of ethnic groups inhabiting Kazakhstan;
- knowledge of the main stages of the formation of Kazakh statehood;
- the ability to analyze complex historical events and predict their further development;
- ability to work with all types of historical sources;
- the ability to write essays and scientific articles on the history of the Fatherland;
- the ability to operate with historical concepts;
- the ability to conduct a discussion;
- skills of independent analysis of historical facts, events and phenomena;
- public speaking skills .

Kazakh /Russian
THE CODE -
CREDIT - 4 (0/0/4)
PREQUISIT - diagnostic test

PURPOSE AND OBJECTIVES OF THE COURSE

- to teach students to listen to statements on well-known topics related to home, study, free time;
- understand texts on personal and professional topics containing the most common words and expressions;
- be able to conduct a conversation on everyday topics; describe your experiences; tell your opinion; retell and evaluate the content of the book read, the film seen ;
- be able to create simple texts on well-known topics, including those related to professional activities.

SHORT DESCRIPTION OF THE COURSE

The language material of the course is selected in such a way that the student, assimilating the lexical and grammatical minimum, had the opportunity to get acquainted with typical communicative situations and himself in such situations found himself, was able to correctly evaluate them and choose the appropriate model (strategy) of speech behavior.

At the same time, the main emphasis of teaching is transferred from the process of transferring knowledge to teaching the ability to use the target language during the implementation of various types of speech activities, which are reading (subject to reading comprehension), listening (under the same condition) and the production of texts of a certain complexity with a certain degree of grammatical and lexical correctness.

The material for classes is selected so that students, while studying the Kazakh / Russian language, acquire the skills of reading, writing and understanding sounding speech based on the simultaneous mastering of the basics of grammar (phonetics, morphology and syntax) and word usage in the course of constant repeated repetition with a gradual complication of tasks.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

A student, subject to active organization of work in the classroom and conscientious completion of homework, by the end of the first semester, acquires skills and abilities corresponding to the European level A2 (Threshold according to ALTE classification), that is, is on the threshold of the level of independent language proficiency.

English

CODE - LNG1051-1057

CREDIT - 12(0/0/12)

PREQUISIT - diagnostic test / LNG1051-1056 LNG1051

PURPOSE AND OBJECTIVES OF THE COURSE

The discipline in English “Beginner English” is designed primarily for learning from scratch. This course is suitable also , and those who have only a general basic knowledge of the language. After passing this level, the student will be able to confidently communicate on basic topics in English, learn the basics of grammar and lay a certain foundation that will allow them to improve their skills at the next stage of learning English.

Course post-requisites: Elementary English.

LNG1052

PURPOSE AND OBJECTIVES OF THE COURSE

The discipline "Elementary English" is the foundation of learning English, which is aimed at developing students' receptive skills (reading and listening) and productive skills (writing and speaking), analyzing basic knowledge, using and memorizing the main grammatical rules and mastering the features of pronunciation and elementary vocabulary as well as encouraging self-study and critical thinking.

Course prerequisites: Beginner.

Course post-requisites: General 1.

LNG1053

PURPOSE AND OBJECTIVES OF THE COURSE

The aim of the General English 1 course is to provide students with the opportunity to acquire sufficient knowledge to become more free in their everyday social and academic conditions. Students are working to improve pronunciation, vocabulary and grammar. At this level, the main task will be to consolidate the skills acquired earlier, learn how to compose and correctly apply complex syntactic constructions in English, as well as achieve really good pronunciation.

Course prerequisites: Elementary English. Course post-requisites: General 2.

LNG1054

PURPOSE AND OBJECTIVES OF THE COURSE

The General English 2 course is intended for students who continue to study General English 1. The course is focused on the ability to actively use in practice most aspects of the tenses of the English language, conditional sentences, passive phrases, etc. At this stage, the student will be able to maintain a conversation with several interlocutors or express their point of view. The student significantly expands his vocabulary , which will allow him to freely express his thoughts in any environment. In this case, speech will be replenished with various synonyms and antonyms of already familiar words, phrasal verbs and stable expressions.

Course prerequisites: General 1.

Course post-requisites: Academic English.

LNG1055

PURPOSE AND OBJECTIVES OF THE COURSE

The main goal of the “Academic English” course is to develop academic language skills. The discipline is a language style that is used when writing academic papers (paragraph, abstract, essay, presentation, etc.) This course is designed to help students become more successful and effective in their learning, developing critical thinking skills and independent learning.

Course prerequisites: General 2.

Course post-requisites: Professional English.

LNG1056

PURPOSE AND OBJECTIVES OF THE COURSE

“Business English” is the English language for business communication, business and career. Knowledge of business English is useful for negotiating and business correspondence, preparing presentations and informal communication with business partners.

The peculiarities of training are that it is necessary not only to master the vocabulary, but also to master new skills: presentation, communication, language, professional.

Prerequisites course : IELTS score 5.0 , and / or Academic English Postrekvizity course : Professional English, IELTS score 5.5-6.0

LNG1057

PURPOSE AND OBJECTIVES OF THE COURSE

The “Professional English” course is designed for B2 + level students, the goal of which is to improve the language competence of students in their respective professional fields. The main goal of the course is to teach students to work with texts, both audio and written, in their specialty.

The curriculum is built on the necessary vocabulary (words and terms), often used in English for specific purposes. Students acquire professional English language skills through integrated education on the basis of content and language, master the vocabulary margin for order to read and understand the original sources with a large degree of independence, and to practice different communication patterns and vocabulary in specific professional situations.

Course prerequisites: Business English.

Course post-requisites: any elective course.

Information and Communication Technologies (in English)

CODE - CSE174
REDIT - 3 (2/1/0)
PREREQUISIT - no

PURPOSE AND OBJECTIVES OF THE COURSE

Training in the skills of applying modern information technologies in the field of professional activity. The objectives of the course include:

- Expand the basic concepts of the architecture of computer systems;
- Expand the basic concepts of information and communication technologies and subject terminology;
- To teach to work with software interfaces of operating systems;
- To teach how to work with data in various representations, both tabular structured and unstructured form;
- Teach to apply the basic principles of information security;
- Expand the concepts of data formats and multimedia content. To teach how to work with typical applications for processing multimedia data. Use modern approaches to material presentation ;
- Expand the concepts of modern social, cloud and email platforms and how to work with them;
- To teach how to use algorithms and programming methods to solve problems of automating business processes

SHORT DESCRIPTION OF THE COURSE

The course contains a training program aimed at leveling the basic knowledge of students in the field of information and communication technologies. Contains a full range of topics, according to the Standard Curriculum of the State Educational Standard, with a predominance of developing practical skills in working with data, algorithmization and programming. The course is structured in such a way as to teach students not only the basic concepts of architecture and modern infrastructure of information and communication technologies, but also to teach how to use these tools to solve problems of an applied nature. To teach how to optimize processes, apply adequate models and methods for solving practical problems using modern methods and tools of information technology, automate routine processes, be productive and efficient.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

Students will know:

- Computer device ;

- Computing systems architecture ;
- Information and communication technology infrastructure ;
- Interfaces of modern operating systems;
- Modern tools for working with data of various nature and purpose;
- Types of information security threats , principles, tools and methods of data protection ;
- Python programming language.

Students will be able to:

- Work with interfaces of modern operating systems;
- Work with modern application software for working with data of various nature and purpose;
- Apply modern social, cloud, email platforms to organize business processes;
- Program in an algorithmic programming language ;
- Analyze, model, design, implement, test and evaluate information and communication technology systems

Philosophy
CODE - HUM124
CREDIT - 3 (1/0/2)
PREREQUISIT - The modern history of Kazakhstan

PURPOSE AND OBJECTIVES OF THE COURSE

The aim of the course is the formation of cognitive, operational, communicative, self-educational competencies for solving problems:

 contribute to the development of adequate worldview guidelines in the modern world;

 form creative and critical thinking in students;

 distinguish between the ratio of spiritual and material values, their role in the life of a person, society and civilization;

 contribute to the definition of their attitude to life and the search for harmony with the surrounding world.

SHORT DESCRIPTION OF THE COURSE

"Philosophy" is the formation of a holistic worldview that has developed in the context of the socio-historical and cultural development of mankind. Acquaintance with the main paradigms of the methodology of teaching philosophy and education in the classical and post-classical traditions of philosophy. Philosophy is called upon to develop stable life guidelines, the acquisition of the meaning of one's being as a special form of spiritual production. Contributes to the formation of a moral character of a person with the ability to critical and creative thinking. The theoretical sources of this course are the concepts of Western, Russian, Kazakh scientists on the history and theory of philosophy.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

- knowledge of terms, main concepts and problems of philosophy, philosophical ways of solving worldview issues in the context of culture;
- the ability to analyze the history of the development of philosophical thought;
- the ability to identify alternative ways of posing and solving worldview issues in the history of human development;
- the ability to identify the main theoretical approaches in the relationship of a person with society;
- the ability to master the technique of performing independent work;
- search skills for organizing material;
- skills to freely discuss and make rational decisions;
- skills of ethical principles in professional activities.

Matlab ordinary differential equations

CODE - MAT105

CREDIT - 3 (1/0/2)

PREREQUISIT - Mathematics I-III

PURPOSE AND OBJECTIVES OF THE COURSE

The aim of teaching the course “Ordinary differential equations. Matlab "is the formation of basic knowledge on the sections of the course that help to analyze, model and solve theoretical and practical problems both by analytical and numerical methods using Matlab; instilling in students the ability to independently study educational literature.

The objectives of the course are to teach to recognize the types and forms of integrable equations and systems, integrate them and apply differential equations for the mathematical solution of applied problems.

SHORT DESCRIPTION OF THE COURSE

Ordinary differential equations of the 1st order. Ordinary differential equations of higher orders. Systems of differential equations. Linear Equations with Variable Coefficients. Numerical integration of differential equations and systems. Using Matlab to numerically solve differential equations.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

- master the methods of solving ordinary differential equations;
- set math problems;
- be able to build mathematical models;
- be able to solve problems modeled by differential equations, both analytical and numerical methods using Matlab

Partial differential equations. Matlab.

CODE - MAT105

CREDIT - 3 (1/0/2)

PRE-REQUISIT

PURPOSE AND OBJECTIVES OF THE COURSE

The aim of teaching the course “Partial Differential Equations. Matlab. " is the formation of basic knowledge on the sections of the course, helping to analyze, model and solve theoretical and practical problems.

Course objectives: to apply the theory of partial differential equations to solve and research applied problems from various fields of natural science, economics, medicine, biology and ecology; form ideas about the implementation of numerical methods for solving boundary value problems using Matlab

SHORT DESCRIPTION OF THE COURSE

Basic equations of mathematical physics. Classical boundary value problems for partial differential equations. Analytical and numerical methods for solving classical boundary value problems. Using Matlab for the numerical solution of boundary value problems.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

- to master this mathematical apparatus that allows you to analyze, simulate and solve classical boundary value problems;
- master the methods of solving classical boundary value problems;
- to be able to pose a problem, choose methods of solution, both in analytical form and using computer technologies;
- to use modern software - Matlab;
- master the methodology and skills of the numerical implementation of the mathematical model, the analysis of the results obtained, their interpretation to refine the model;
- independently expand your mathematical knowledge

Introduction to the specialty

CODE - TRA198
CREDIT - 6 (2/0/1/3)
PRE - REQUISIT -

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the discipline "Introduction to the specialty" is the initial acquaintance of students with the future specialty, with the general structure and role of the transport industry, the organization of transportation and management of transport, the system of professional and scientific requirements for university graduates when they are appointed to primary positions for work in transport enterprises, as well as with the condition of successful adaptation of students to the development of educational material in the process of studying at the university.

The objectives of studying the discipline are:

- formation of students' general understanding of the features of the production activity of land transport, directions and problems of its development;
- orientation of students in the main issues of the chosen profession, modern requirements for specialists with higher education;
- minimizing the time of adaptation of students to the conditions of study at the university.

SHORT DESCRIPTION OF THE COURSE

The discipline "Introduction to the specialty" is an introductory subject of the specialty " Transport services ". The main purpose of the discipline is to familiarize students with the specifics of studying at the university, the system of training using credit technology, the qualification characteristics of the specialty, and the educational process. When studying the discipline, students get acquainted with the general structure and role of the transport industry, the type of ground equipment, types, their classification, the specifics and scope of applied activities of specialist in logistics specialists , the prospects for the development of the logistics services market , ensuring the safety of transportation , obtaining basic concepts for organizing transportation and management on transport.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

The course "Introduction to the specialty" gives students knowledge about the specifics of the organization of the educational process at the university, the formation of a conscious, professional interest in the development of knowledge necessary to solve the main problems in the framework of future activities as a specialist.

Upon completion of the course, the student must:

Know: the main types of land transport, classification, their functionality and applications; the nature of the production activity of a specialist in the field of services ; duties of a student in a higher education institution; organization of the educational process at the university; qualification requirements for a specialist; history and prospects for the development of logistics and organization of transportation ; organization of transportation and management of transport; the impact of transport on the environment ; development prospects of the logistics services market; functional areas of logistics .

Be able to: highlight specific physical content in applied problems of future activities; predict the consequences of their professional activities in terms of innovation processes; use reference and special literature; to correctly distribute study hours and hours of independent work to complete assignments in the disciplines of the educational process.

Possess: methods of ecological support of production and engineering protection of the environment; the initial engineering and technical level of preparation for solving the problems set by the educational process at the university for the acquisition of professional skills and qualities that correspond to the qualification characteristics of a specialist in this educational program .

Transport infrastructure

CODE - GEN 149

CREDIT - 8 (2/ 0 / 2/4)

PREREQUISIT -

PURPOSE AND OBJECTIVES OF THE COURSE

Objectives of mastering the discipline: studying the features and principles of operation of transport terminals, gaining knowledge on organizing the operation of transport terminals.

Discipline objectives:

- to gain initial experience in solving issues related to the calculation of transport terminals;
- know and be able to use methods for calculating the main parameters of transport and cargo complexes

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. General information about highways and city streets. Classification of highways and city streets. Highway elements. Transport performance indicators of highways. Intersections of highways and railways. Railroad track facilities. Waterways of communication. Air Transport. Other types of transport. Air corridors. Airports: classification, structure, special territories. Technical equipment of airfields. Pipeline transport, its varieties and classification, the main technical and economic characteristics. Cable cars. Transport infrastructure of the city. Urban communication lines. Features of transport management. Transport management structure. Functions of departments and services of transport management.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

know:

- basic provisions of the device and operation of the transport infrastructure;

be able to:

- calculate the main parameters of transport and cargo complexes;
- to rolling stock and loading and unloading facilities for specific operating conditions;
- to select the means of mechanization and automation of technological processes and assess the throughput, safety, plan the operation of transport infrastructure facilities;
- organize the acceptance, storage, readdressing and delivery of goods;
- own:
- methods of choosing the optimal container and packing of goods;

- methods of choosing the optimal type of rolling stock for the carriage of goods according to the criteria of safety and security;
- rules for carrying out loading and unloading operations and storage of goods;
- main provisions of the methods of optimization of technological processes and design of transport infrastructure facilities.

Freight transportation

CODE - TRA422

CREDIT - 4 (1/0/1 / 2)

PREREQUISIT - Introduction to the specialty .

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the discipline is to teach students the methods of organizing road transport, aimed at increasing the efficiency of using the rolling stock of road transport.

Discipline objectives: familiarization with the basics of the organization of road freight transport. studying the technology of freight road transport. study of methods for calculating the process of road transport. understanding by students that the cost and safety of transportation are largely determined by their correct organization.

SHORT DESCRIPTION OF THE COURSE

The discipline "Freight transport" refers to a cycle of disciplines of specialization and has as its goal the formation of students' system of scientific and professional knowledge and skills in the field of organizing freight traffic; specific features of transport management; the formation of a system of the transport process and the mutual influence of its elements, interaction with the system of the national economy and the external environment.

The discipline will be studied. Introduction. Fundamentals of cargo handling. Cargoes and their classification. Container, packing and marking of goods. Non-standard cargo and their transportation. Cargo capacity of vehicles. Technical and operational performance of vehicles. Technical and operational meters and performance indicators of the vehicle fleet. The concept of the transport process and its elements. Transportation process gauges. Determination of the elements of the transport process. Selection of rolling stock for the carriage of goods. Selection of rolling stock, formation of the structure and rational use of the transport fleet. The choice of automatic telephone exchange for the carriage of goods. Formation of the structure and rational use of the transport fleet. Regulation of transport activities. Characteristics of public roads. Regulation of transport activities. Cargo transportation routing . Types of routes and their development. Construction of cartograms and diagrams of cargo flows. Organization of cargo transportation. Regulation of transport activities. Documentation for the transportation of goods. Organization of work of drivers. Expenses for the operation of the automatic telephone exchange during transportation Electronic declaration of cargo transportation. Freight cost and tariffs. The cost of freight transportation. Transportation tariffs cargo. Transportation of packaged goods. Railway tariffs for the transportation of goods. Freight transport technology. Transportation of

packaged goods. Package transportation. The container transporting. Transportation of bulk, perishable and dangerous goods. Transportation of containers. Transportation of construction materials, agricultural products and mail. Loading and unloading and transport and storage operations. Loading and unloading operations. Warehouses and warehouse operations. Loading and unloading works. Address storage in a warehouse. Cargo packing. Freight transport management. Freight traffic management system. Service of operation of the transport organization. Dispatching management of transportation and control of the automatic telephone exchange. Accounting and analysis of the results of transportation. Freight transport management. Monitoring of cargo transportation. Operational leadership.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

Know:

- on the organization and management of various types of transport;
- regulatory and legal requirements ;
- technical documents on the organization of freight road transport;
- charter of road transport;
- traffic rules, the law of the Republic of Kazakhstan "On transport and forwarding activities";
- Civil and Labor Code of the Republic of Kazakhstan;
- fundamentals of cargo handling;
- structure, composition of the cost of freight road transport, ways to reduce the cost, the procedure for setting tariffs;
- requirements of legal and regulatory documents for the organization of road freight transport;

be able to:

- to calculate and analyze the quality indicators of freight traffic, based on the organization and technology of transportation, requirements to ensure the safety of the transportation process;
- apply the legal, regulatory, technical and organizational framework for organizing the transportation process and ensuring the safety of vehicles in various conditions;

own:

- methods of choosing types of transport and vehicles for the delivery of goods;
- rules for the safe operation of vehicles for the delivery of bulky and heavy cargo, the delivery of perishable goods, the delivery of dangerous goods in various conditions on public roads ;

- methods of organizing the work of loading and unloading points;
- monitoring and management of transport processes;
- methods of claim work;
- apply science and technology to increase efficiency in the use of basic production assets, reduce labor costs, improve quality and work, reducing the consumption of fuel and energy resources.

Intelligent transport systems

CODE - TRA168

CREDIT - 6 (2/1/0 / 3)

PREREQUISIT - Transport infrastructure .

PURPOSE AND OBJECTIVES OF THE COURSE

The discipline "Intelligent transport systems" refers to the basic cycle and has as its goal: obtaining bachelors of knowledge of the theoretical foundations of intelligent transport systems .

As a result, studying the discipline, future specialists should know:

- general concepts of intelligent transport systems;
- history, current state and development trends of ITS in the Republic of Kazakhstan;
- the purpose of the ITS, the systems that are part of them, the ITS services ;
- the place of ITS in road projects;
- hardware and software for collecting and processing information.

SHORT DESCRIPTION OF THE COURSE

Modern road maintenance processes are characterized by the ever wider introduction of modern technical means and information technologies. In connection with the increased requirements for the level of traffic safety, the safety of goods during transportation by road, the spatial distribution of roads and the geographically distributed nature of their management, the use of information technologies and software tools that provide the user with a high level of service is becoming increasingly important. Such technologies and technical means form the basis of intelligent transport systems (ITS).

The content of the course aims to familiarize students with the basics of ITS, the possibilities of their use in the maintenance of roads of high categories.

The study of the discipline "Intelligent Transport Systems" should make the necessary contribution to the training of road workers of a wide profile, who own modern technical means of ITS and information technologies.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must: know:

- general concepts of intelligent transport systems, history, current state and development trends of ITS in the Republic of Kazakhstan, purpose and services of ITS;

be able to:

- apply ITS technologies in solving problems of design, reconstruction and operation of highways;

own:

- skills in assessing the impact of ITS on the level of traffic safety, technologies for collecting and processing information, making decisions when choosing technical means of ITS.

Transport systems

CODE - TRA164

CREDIT - 6 (2/0/1/3)

PREREQUISIT - Introduction to the specialty .

PURPOSE AND OBJECTIVES OF THE COURSE

The goals and objectives of the discipline "Transport systems" are to determine the place and role in the life of society of the transport system and its constituent processes, the acquisition of knowledge related to the composition of the technological process of transportation, methods of calculating the work of rolling stock on routes, the functioning of transport systems, their individual elements.

The main tasks of studying the discipline:

- to study the structural diagram of the transport system and its constituent processes, to determine the qualitative and quantitative indicators of the operation of land transport;
- to acquire knowledge related to the composition of the technological process of transportation;
- to get practical skills in calculating the work of rolling stock on routes;
- to understand the principles of functioning of transport systems, their individual elements;
- to study the features and principles of planning the work of transport complexes and their subsystems;
- to study the privileges of innovative systems in transport technology, conduct a technical and economic analysis of the functioning of transport systems, search for ways to increase their efficiency.

SHORT DESCRIPTION OF THE COURSE

The course "Transport Systems" occupies an important place among general technical disciplines that determine the theoretical level of professional training of specialists in the modern education system. The discipline deals with the issues of transport innovation, i.e. issues of introducing new knowledge, improving technologies aimed at solving social and environmental problems, increasing productivity and reducing production and time costs in the transport system. It is proposed to apply intelligent transport systems, i.e. intelligent systems using innovative developments in modeling transport systems and regulating traffic flows, providing end users with greater information content and safety, as well as qualitatively increasing the level of interaction between road users in comparison with conventional transport systems. The transition to a new direction of innovative transport is being promoted: the transition of the transport system to a more developed technological level of freight and

passenger transportation, including competent automation, informatization and electronicization of all departments of the transport system in conjunction "Passengers / cargo - control". Moving away from the automation of individual processes to absolute automation in order to reduce the cost of manual labor and time costs . It is shown that ignoring this problem reduces profits and reduces competitiveness due to low labor productivity. Absolute automation leads to increased efficiency and reduced transportation costs. The priority directions are considered, such as the creation of environmentally friendly transport, endowed with the potential to organize super-high-speed traffic, their introduction into operation, the development of the network and the reduction of costs for their production. The course offers the coordinated use of road transport. The bottom line is to minimize the number of vehicles on the road by renting the same vehicles. The issues of development and implementation of an intelligent system in road transport, with full or partial automation of control processes are also considered. Commissioning of toll roads to reduce traffic congestion. Modernization of "high intelligence" in public transport for the systematic management of human flows and timely satisfaction of the need for a vehicle "here and now".

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

Upon completion of the course, the student will receive:

- skills and abilities to carry out operations for the implementation of the transportation process using modern information technologies for transportation management;
- independently make the choice of the type of transport and vehicles for effective transport services in the region;
- ability to apply methods of optimal planning of transport systems;
- skills to perform calculations and analyze indicators of various types of transport, freight and passenger traffic;
- ability to explain the basic principles of the formation, functioning and development of transport processes, transport systems and the transport complex of the country;
- ability to explain the technical and economic characteristics of certain types of transport and the main indicators of their activities;
- ability to organize the work of personnel to ensure the safety of transportation and the choice of optimal solutions when working in non-standard and emergency situations;
- ability to draw up documents regulating the organization of the transportation process;
- ability to organize the work of personnel in planning and organizing the transportation process;

- skills to ensure traffic safety and solve professional problems through the application of regulatory documents;
- ability to organize the work of personnel on the technological maintenance of the transportation process.

Socio-political knowledge module

CODE - HUM126
CREDIT - 8 (4/0/0/4)
PREREQUISIT - No

This course involves the study of four scientific disciplines - psychology, political science, sociology and cultural studies, each of which has its subject, terminology and research methods. Interactions between these scientific disciplines are carried out based on the principles of information complementarity; integrability; methodological integrity of research approaches of these disciplines; generality of result-oriented teaching methodology; unified system representation of the typology of learning outcomes as formed abilities.

The theoretical sources of this course are the concepts of Western, Russian, and Kazakh scientists in the field of sociology, political science, and cultural studies.
Learning outcomes are defined as a system of formed abilities (competencies) of a certain type. The cognitive type of learning outcomes presupposes the formed ability to demonstrate possession of subject knowledge as the context of its key objects through the interpretation and systematization of their meanings. The functional type of learning outcomes is characterized by the ability to use basic subject knowledge in solving applied problems, to recognize the conflict of interpretations of the same situations by different sources; analyze and evaluate specific situations in various areas of communication (social, political, cultural, interpersonal communication). The systemic type of learning outcomes is characterized by the ability to synthesize in the form of specific products: to make and reasonably present their own decision (assessment, positioning of ideas, individuals, etc.); create programs aimed at improving or positively developing conflict situations, including in professional activities; produce new knowledge in project activities, evaluate and summarize information in analytical essays, etc. The social (communicative) type of learning outcomes is characterized by the ability to demonstrate and defend their civic and ideological positions in discussions on professional, social, and cultural topics. Expected learning outcomes. Upon completion of the study of the disciplines of the module, students will be able to: -explain and interpret subject knowledge (concepts, ideas, theories) in all areas of science that form the disciplines of the module (sociology, political science, cultural studies, psychology); -explain the socio-ethical values of society as a product of integration processes in the systems of basic knowledge of the disciplines of the socio-political module; communication based on the content of theories and ideas of scientific areas of the studied disciplines; -reasonably and reasonably provide information about the various stages of development of the Kazakh society, political programs, culture, language, social and interpersonal relations; -analyze the features of social, political, cultural, psychological institutions in the context of their role in the modernization of

Kazakhstani society; -analyze various situations in different areas of communication from the standpoint of correlation with the value system, social, business, cultural, legal and ethical norms of Kazakhstani society; -distinguish strategies for different types of research on society and justify the choice of methodology for analyzing specific problems; - evaluate the specific situation of relations in society from the standpoint of a particular science of the social and humanitarian type, project the prospects for its development, taking into account possible risks; - develop programs for resolving conflict situations in society, including professional society; - carry out research project activities in various areas of communication, generate socially valuable knowledge, present it; - correctly express and reasonably defend their own opinion on issues that have social knowledge value.

Transport logistics

CODE - TRA135

CREDIT - 6 (2/0/1 / 3)

PREQUISIT - Introduction to the specialty

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the discipline is to master the applied theory of logistics as a type of entrepreneurial activity, training and development of practical skills in conducting logistics operations in the economic field.

Discipline objectives:

- participation as part of a team of performers in the implementation of the enterprise's strategy to achieve the highest production efficiency and quality of work in organizing the transportation of passengers, cargo, cargo and luggage;
- development and implementation of rational transport and technological schemes for the delivery of goods based on the principles of logistics;
- implementation, as part of the team of performers, of the set goals of the project for solving transport problems, criteria and indicators of achieving goals, building the structure of their relationships, identifying priorities for solving problems, taking into account indicators of economic and environmental safety;
- participation in the team of performers in the development of plans for the development of transport enterprises, traffic management systems ;
- participation as part of a team of performers in monitoring the operation of transport and technological systems;
- creation, as part of a team of performers, models of the processes of functioning of transport and technological systems and traffic flows based on the principles of logistics, which allow predicting their properties.

SHORT DESCRIPTION OF THE COURSE

The course "Transport logistics" occupies an important place among the general technical disciplines that determine the theoretical level of professional training of specialists in the modern training system; in the process of technical preparation of vehicles for the transport process, their reliability and prerequisites for effective operation are ensured.

The discipline studies: introduction to transport logistics; importance, goals and objectives of logistics; basic concepts, methods, prerequisites and stages of logistics development; concepts, technologies and functions of logistics; organization of cargo delivery; formation and regulation of stocks and flows; logistics systems; fundamentals of procurement, production, distribution and warehouse logistics; logistics information system; interaction in transport and logistics systems; application of a logistic approach to solving cargo delivery problems.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of mastering the discipline, the student must;

know:

- the specifics of logistics in the production process;
- types of logistics costs;
- theoretical foundations of modern logistics systems for market movement of goods.

be able to:

- to determine the relationship between the logistics infrastructure of the commodity market and the market of transport services;
- apply theoretical skills in practice ;
- to carry out aggregated calculations of the costs of production and sales of products;
- find ways to improve the quality of transport and logistics services for cargo owners.

own:

- the basics of logistics;
- issues of ensuring economic efficiency from the use of logistics in conditions of limited production resources.

Demonstrate ability and willingness :

- to apply the acquired knowledge in practice.

Logistics in the automotive industry

CODE - MCH110

CREDIT - 6 (2/0/1/3)

PRE-REQUISIT -

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of the discipline is to form students' knowledge, skills and abilities to build logistics management systems and organize material flows in the automotive industry.

SHORT DESCRIPTION OF THE COURSE

- basic logistic concepts of material flow management in the automotive industry;
- planning the needs for material resources;
- production inventory management system;
- systems and methods of operational planning and material flow management.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of mastering the discipline, the student must:

Know:

- conceptual apparatus and the essence of logistics in the automotive industry;
- the principles of organization and struktu Dr. manufacturing process, which is organized in the framework of the mat ble flow;
- types of movement of material flows;
- Systems and Methods operative term planning and control material flow, including IP polzuemye in concepts MRP I , MRP II , ERP , JIT and system *KANBAN* .

be able to:

- practice the techniques operative term planning and management of material flow
- calculate and analyze the duration of the production cycle of a simple process.
- to calculate and analyze the duration of the production cycle of a complex process.

own:

- skills of independent assimilation of new knowledge in the field of theory and practice of logistics;
- methods of analysis of the functional links of the supply chain: purchase, production, stocks, warehousing, transport, distribution and sales, service, information

Supply chain management systems

CODE - TRA167

CREDIT - 6 (2/0/1 / 3)

PREQUISIT - Logistics in the automotive industry

PURPOSE AND OBJECTIVES OF THE COURSE

The goal of mastering the discipline "Supply chain management systems" is to form a system of knowledge and skills in the field of planning, organizing and monitoring the activities of integrated supply chains based on a logistics concept.

The objectives of the discipline are:

- in shaping an understanding of the essence of integration in supply chains among bachelors;
- in the development of skills for building and controlling supply chains ;
- to familiarize bachelors with approaches to the formation of a logistics strategy, the forms and means of its implementation in the context of globalization of economic processes.
- in mastering a variety of combinations of methods and technologies that can significantly increase business efficiency by reducing costs in the supply chain.

SHORT DESCRIPTION OF THE COURSE

The concept of the logistics system and the management of chains of deliveries; Essence and current trends in the development of supply chains; Integration in supply chain management; Functional cycle of logistics; Customer service as part of the supply chain; Interaction in the supply chain; Global supply chains; Strategic planning and supply chain design methods; Controlling key processes in supply chains; Design of logistics systems and supply chains; Inventory management in the supply chain; Logistic audit of supply chains; Ways to improve supply chain management; Information integration of processes in supply chain management; Information logistics resources: purpose, structure, data exchange standards; Logistic chain transport infrastructure; Warehouse management and cargo handling; Packaging of goods as part of the supply chain .

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of mastering the discipline, the student must:

Know :

- principles of organization, planning and regulation of operational logistics activities in supply chains ;

- economic indicators of links in the supply chain, criteria for the efficiency of the supply chain;
- basic methodological principles and concepts for designing supply chains for high technology products.

Be able to:

- apply methods of organization, planning and regulation of operational logistics activities in the supply chains of high technology products;
- calculate and analyze the economic indicators of the links in the supply chain;
- apply methods and tools for designing optimal supply chains for high technology products.

Own:

- methods of integrating logistics business processes in the supply chain;
- methods of calculating logistics costs for individual links and the entire supply chain;
- modern methods of designing business processes in the supply chains of high technology products.

Fundamentals of Automation

CODE - AUT146

CREDIT - 6 (2/0/1 / 3)

PREQUISIT - no

SHORT DESCRIPTION OF THE COURSE

The discipline "Fundamentals of Automation" examines the main measuring instruments of electrical and non-electrical quantities, primary transducers (sensors) of technological parameters, actuators with pneumatic, hydro, electric drives, microcontrollers and automatic control systems for machines and technological equipment of discrete industries. In addition to the sections mentioned, the questions of the description of the elements of automation systems with the help of transfer functions are considered, the time and frequency characteristics of typical links, the structural diagrams of automatic control systems, the criteria for studying linear systems for stability, and methods for assessing process quality.

Defense of the thesis / diploma project

CODE - TRA

CREDIT - 3 (2/1/0)

PREQUISIT - Transport equipment, Processes and devices in transport equipment, Fundamentals of technical operation of transport equipment, Transport logistics, Transport innovation systems, Vehicles, Power plants of transport equipment, Automatic systems of ground transport and technological machines, Computer design systems for transport engineering, Control systems supply chains.

PURPOSE AND OBJECTIVES OF THE COURSE

Carrying out research on real objects, independent performance of professional tasks in industrial, research, educational organizations and other areas of activity in accordance with the specialty.

The main objectives of the thesis / thesis project are:

- systematization, consolidation and expansion of theoretical and practical knowledge in the specialty, the application of this knowledge in solving research and specific practical problems;
- development of skills for conducting independent research in solving problems and questions developed in the thesis / graduation project ;
- finding out the degree of professional preparedness of a graduate for independent work after graduation ;
- increasing the level of general scientific and special training of a graduate, developing his abilities and skills to apply theoretical and practical knowledge in solving specific problems facing a specialist in modern conditions;
- development of a research program, including the formulation of the problem, definition of the object, subject, tasks and research methods, the formation of an information-empirical base;
- analysis of a large number of monographs and scientific articles on the topic, generalization of the information available in them, comparison and assessment of the points of view of various authors;
- development of skills for systematizing and analyzing the data obtained , conducting observations and surveys, forming meaningful conclusions and generalizations based on reliable information.

SHORT DESCRIPTION OF THE COURSE

A qualified work should be an author's, completed development of an urgent problem of modern transport engineering. Graduation qualified work in the transport specialty must be:

- relevant, to correspond to the current state of the world and Kazakhstani transport equipment and technology, to reflect the prospects for the development of market business structures;

- be of a research nature;

- contain both theoretical materials and analytical sections, as well as sections in which the author's results on the design of a particular company, corporation or their groups are presented ;

- reflect the ability of the diploma student to theoretically comprehend the problems of modern transport equipment and technology, adapt them to real practice, formulate appropriate conclusions on the basis of the completed design decisions and make specific proposals;

- reflect the student's conscientiousness in the use of reporting data and published works of Kazakhstani and foreign scientists.

In all cases of using materials from official statistical directories, resources of electronic information networks, texts of other authors, it is required to make references to the sources of their publication, indicating the name of the work, publishing house, place and year of publication, page or email address. Thesis / diploma projects without references to the sources of the material used are not allowed for defense. The author's conscientiousness is confirmed by checking the work on the program
"Antiplagiat". The basis for admitting a student to write and defend a thesis / diploma project is the implementation of the curriculum and the approval of the topic of work at the department. As a formal basis for admitting a student to public protection, there are: positive feedback from the supervisor and a review with a positive assessment of the work.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

It is imperative to include both the theoretical part, where the student must demonstrate knowledge of the basics of transport theory, marketing and management on the problem under study, and the practical part, in which it is necessary to show the ability to use the methods of previously studied disciplines to solve the tasks set in the work.

ELECTIVE COURSES

Transport network and its role in the economy
CODE - TRA 449
CREDIT - 6 (2/0/1/3)
PRE-REQUISIT - no

PURPOSE AND OBJECTIVES OF THE COURSE

In the study of the discipline aims to form students and appropriate attitudes and skills in the field of transportation, providing an integrated view of transport, system, importance and role of transport in modern society, in the economy and in meeting consumer traffic.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: Brief historical review of the origin and development of transport; the importance of transport for the social and economic development of the state; Characteristics of the industry. Transport control system. Industry vehicle infrastructure. Transport vehicles. The importance of transport and the main indicators of its work. Organization of transportation. Basic principles and methods of development of the transport services market, creation of a competitive environment in the field of commodity circulation. International cargo transportation

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student will be able to:
- to use the conceptual apparatus of the general course of transport;
- apply the basic methodological principles of transport analysis;
- describe the procedure for planning and organizing the work of transport complexes in cities and regions;
- to determine the criteria for the classification of transport;
-determine the indicators of transportation work, material and technical base, operational work and economic efficiency of transport;
- apply technical and economic analysis to find ways to reduce the cycle of work;
- to synthesize information about transport and the transport system to increase the economic efficiency of transport;
- assess the state of various types of transport;
- to determine the indicators of the density of the transport network, transport availability and accessibility, the level of transport services.

Global logistics systems

CODE - MNG 451

CREDIT - 6 (2/0/1/3)

PREKVISIT - Transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE

When studying the discipline, the goal is to form theoretical knowledge and practical skills in the field of logistics management, methods, means of forming logistics systems, transport support for global business and its development trends .

SHORT DESCRIPTION OF THE COURSE

When studying the discipline , the following aspects are considered : The concept of globalization, approaches to its study. Factors influencing the development of globalization. Types of globalization. Components of globalization. The impact of globalization on logistics activities. The concept of international logistics and its features . The role and place of international logistics in the company's activities. The importance of international logistics in the country's economy. Factors and trends in the development of international logistics. Streams and flow processes of international logistics. Harmonized system of description and coding of commodity flows in international logistics. Goals and objectives of state regulation of logistics. Organization of state regulation. Customs tariff regulation of flows in international logistics. Non-tariff methods of regulation of international logistics .

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student will be able to:

– determine the possibilities of using logistic concepts at a certain enterprise focused on foreign economic activity;

– develop global logistics th strategy w;

– develop rational schemes for the delivery of foreign trade goods using logistics methods ;

– to set the tasks of increasing the competitiveness of the enterprise on the basis of logistic optimization of the management of material, financial, service and information flows, and also to solve the most common of them ;

– dec amb problems and analysis and synthesis of the logistics system specific enterprise , logistic chains logistic infrastructure in the macro-level ;

– in the mode it is knowledge of the global logistics

Logistics: information technology and systems
CODE - MNG 121
CREDIT - 6 (2/0/1/3)
PRE-REQUISIT - no

PURPOSE AND OBJECTIVES OF THE COURSE

When studying the discipline, the goal is to master the student of modern information technologies that provide information management and information management of the activities of an enterprise or organization in the functional areas of logistics and increase the reliability and efficiency of labor-intensive processes of using information resources.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: Basic terms and concepts; database management systems, data warehouse; electronic document management systems; corporate information systems; systems for modeling business processes of an enterprise; decision support systems; information technology in accounting, financial, marketing and logistics activities of the enterprise; global Internet and network information technologies; information protection in information systems.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student will be able to:

- to apply information technologies to solve management problems in the functional areas of logistics;
- apply information technologies to ensure information security and information protection in the functional areas of logistics;
- to use Internet technologies in global computer networks to solve the problems of logistics activities of an enterprise or organization;
- possess the methods and means of obtaining, storing, processing information, skills of working with a computer as a means of information management;
- work with information in global computer networks and corporate information systems;
- own methods of information management and information management methods of the activities of an enterprise or organization to solve logistics problems based on information technologies and complex automation of economic systems;
- possess the skills of working with software for working with business information and basic information technologies and automated information systems used to solve economic and managerial problems in the functional areas of logistics;
- possess the skills of working with the basics of Internet technologies for solving logistics problems in global computer networks.

Mathematical statistics on transport

CODE - TRA 410

CREDIT - 6 (2/0 / 1/3)

PREREQUISIT - Introduction to the specialty .

PURPOSE AND OBJECTIVES OF THE COURSE

Discipline objectives: on the basis of scientific approaches to the study of mathematical statistics in transport, to form students' ideas about mathematical statistics in their professional activities, to develop skills and abilities to process statistical data in road transport.

Discipline objectives: increasing the general level of fundamental and professional preparedness of a specialist; studying the methods of mathematical statistics used in transport.

SHORT DESCRIPTION OF THE COURSE

Introduction. Purpose, tasks and organization of statistics. Processing statistical data and establishing the law of distribution of random variables. Fundamentals of Mathematical Statistics. The sequence of statistical research. Determination of the numerical characteristics of the statistical distribution. Building a statistical series and a histogram. Testing the proposed hypothesis. Basic principles of organizing statistics on transport. Statistical distribution. Expected value. Dispersion. The coefficient of variation. Classification of tasks. General linear. Transport. Linear distribution boards. Technical and economic tasks. Optimal use of stationary equipment. Optimal use of rolling stock. Optimal use of materials and fuels. Operational scheduling. Comprehensive optimization of current planning. Freight and passenger traffic statistics .

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

Know: the basic concepts of mathematical statistics used in the study of general theoretical and engineering disciplines.

Be able to: apply knowledge of mathematical statistics to solving practical problems, use mathematical literature for independent study of engineering issues.

Possess: methods of mathematical statistics for the construction and study of mathematical models of problems arising in engineering practice, and numerical methods for their solution.

Simulation modeling of logistics systems
CODE - MNG168
CREDIT - 6 (2/0/1/3)
PREQUISIT - Manufacturing and Logistics Modeling

PURPOSE AND OBJECTIVES OF THE COURSE
When studying the discipline, the goal is to study the method and technologies of simulation modeling as applied to the problems of logistics and supply chain management.

SHORT DESCRIPTION OF THE COURSE
When studying the discipline , the following aspects are considered : • The importance of the simulation method . Simulation method. Process-oriented discrete simulation models. Simulation technology: the basics of a practical approach. Simulation tools. Mastering the instrumental capabilities of modern modeling systems. The most significant applications of process simulation modeling in logistics and supply chain management. Modeling and reengineering of logistics processes in supply chains. Simulation of supply chains.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
As a result of studying the discipline, the student must:
- explain the concept of simulation;
- apply principles and methodological approaches in managing service flows;
−determine the process of coordinating logistics operations necessary to provide services in the most efficient way in terms of costs and customer satisfaction;
−to accept orders for services and monitor the services provided;
–Use the concept: "simulation modeling";

Transport economics

CODE - MING 109

CREDIT - 6 (2 /0/1 /3)

PRE-REQUISIT. Freight transport .

Goals and objectives of the discipline Goal of the discipline:

Discipline objectives:

- to provide students with knowledge and practical skills in matters of economics of enterprises in the industry;
- to develop students' general scientific approach to the application of the knowledge gained for the subsequent successful development of the educational program in their specialty, in their future activities

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. Industry in market conditions. Features, structure, importance of transport in the domestic economy. Types of enterprises in the transport industry and features of their location. Water transport in the Republic of Kazakhstan and abroad. Enterprise resources and indicators of their use. Property and capital of transport enterprises. Accounting and evaluation. Financial and economic indicators of the enterprise. Labor resources. Organization, regulation and remuneration. Transport and the efficiency of the economy. The economic mechanism of the transport industry enterprises . Estimated indicators of the efficiency of the transport industry. Prospects for the development of the transport industry.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

Know:

- energy supply systems for rolling stock, transport systems and enterprises indicators of energy consumption of transport products methods of reducing energy consumption energy saving technologies fixed production assets, working capital and labor resources costs, cost, pricing and tariffs in transport general concepts of the organization of the transportation process in the industry and the safety of vehicles ways of studying and evaluating the effectiveness of traffic organization;

be able to:

- to select rolling stock and loading and unloading facilities for specific operating conditions; choose rational ways to optimize passenger and transport traffic; analyze technical, operational, economic and environmental indicators of the use of various types of transport during transportation; draw up technological and economic feasibility studies of transport and technological routes and cargo delivery schemes ;

own:

- methods of choosing the optimal type of rolling stock for the carriage of goods according to safety and security criteria methods of reducing energy consumption methods of determining the economic efficiency of the choice of vehicles and loading and unloading equipment

Innovative mechanisms of transport and forwarding services

CODE - TRA409

CREDIT - 6 (2/0/1/3)

PREREQUISIT - Freight transport .

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of the discipline is to form students' knowledge of the discipline "Innovative mechanisms of transport and forwarding services" The task of the discipline is to obtain knowledge by students:

- about the world experience of organizing the work of transport and forwarding enterprises and priority directions of development of transport and forwarding activities in the Republic of Kazakhstan;
- about modern technological systems for the delivery of goods during transport and forwarding services;
- on the organization of the conclusion of contracts for freight forwarding and methods of resolving disputes between participants in freight forwarding activities;
- on the current legislative acts of the Republic of Kazakhstan regulating the activities of freight forwarding enterprises.

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. Scientific and technical progress and innovations of the transport and forwarding process. Development of new types of freight forwarding services. Factoring. Leasing. Declaration of goods. Insurance of goods and vehicles during expeditionary operations. Information support for transport and forwarding activities.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying disciplines must:

know:

- world experience in organizing the work of freight forwarding enterprises and priority directions of development of freight forwarding activities in the Republic of Kazakhstan;
- on modern technological systems for the delivery of goods during transport and forwarding services;
- on the organization of the conclusion of contracts for freight forwarding and methods of resolving disputes between participants in freight forwarding activities;
- on the current legislative acts of the Republic of Kazakhstan regulating the activities of freight forwarding enterprises;

- essence of factoring and leasing operations in the provision of freight forwarding services;
- requirements for declaring goods;
- peculiarities of cargo insurance when forwarding by any type of transport;
- latest information technology of transport and forwarding support;
- be able to:
- draw up contracts for transportation, forwarding and transport agency, transport and related documents;
- conduct a feasibility study for the provision of freight forwarding services;
- use of literature and other means of information to acquire the necessary knowledge in professional activities;

own:

- methodology for the development of new types of freight forwarding services;
- methods of calculating lease payments;
- methods of calculating insurance compensation;
- methods for determining the customs value;
- technologies for organizing multimodal and intermodal transportation of goods;
- methods and techniques of risk assessment in international freight forwarding;
- methodology for developing a business plan for a freight forwarding company;
- technologies and methods of organizing the work of terminals.

Information technology in transport

CODE - TRA455

CREDIT - 6 (2/0/1/3)

PREREQUISIT - Transport logistics .

PURPOSE AND OBJECTIVES OF THE COURSE

Objectives of the discipline: the formation of students' stable professional knowledge and skills in the field of modern information technologies used in the control system of road transport.

Discipline objectives:

- acquisition of knowledge by students :
- on information technologies and systems used in transport;
- on information flows in transport and logistics systems, their relationship with the global system of transmission, storage and processing of information;
- on progressive automated control systems for road transport (ACS) and their interaction with similar systems used in other modes of transport.

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. Centralized information processing technology. The main components of information technology. Basic principles of building information databases. Database management system. Programming languages. Application software. Modern methods and means of determining the location and movement of land transport. Field of application of automobile navigation systems.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

know:

- domestic experience of using automated information systems in road transport in the country and abroad;
- impact of information technology on the efficiency of road transport enterprises;
- technical support of information technologies;
- information technology software ;
- features of management of road transport enterprises using automated information systems;

be able to:

- use the existing normative and technical documentation;

own:

- skills in organizing the technical operation of cars and tractors;
- ability to work in small engineering teams.

Quality management in transport

CODE - TRA414

CREDIT - 6 (2/0/1/3)

PREKVISIT - Transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE

Objectives of mastering the discipline:

- obtaining mandatory knowledge, abilities and skills in organizing activities in the field of product quality management (transportation);
- creation of an integral system of views on the essence of product (transportation) quality management in a market economy;
- the development of abilities and interest in the knowledge of methods for solving practical problems in the organization of activities for product quality management (transportation).

Discipline objectives:

- to form a student's understanding of the basic standard concepts, stages of development and methodology of qualimetry (the science of quality);
- to give the student the knowledge and ability to use in the organization of international and domestic transportation a set of issues related to the management of the quality of transportation;
- to give the primary experience in the development of enterprise standards, taking into account the requirements of the State Standardization System, as an organizational and methodological basis for integrated systems for managing product quality (transportation).

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. Qualimetry as a science, its role, methods and areas of practical application. The essence of quality and its management. Basic methods of quality management. Quality management, standardization and technical regulation. Areas of application of quality management methods. Quality management in the transport sector.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

know:

- organizational, scientific, methodological and legal foundations of metrology, standardization and certification;
- regulatory documents of the technical regulation system; - methods for assessing reliability indicators .

be able to:

- to analyze and develop recommendations to improve the efficiency of the enterprise (commercial firm);
- find ways to improve the quality of transport and logistics services for cargo owners;
- use technical regulations, standards and other regulatory documents in the assessment, quality control and certification of products. Possess: - knowledge of the modern quality management system and ensuring the competitiveness of the organization.

Organization and management of transport companies

CODE - TRA425

CREDIT - 6 (2/0/1 / 3)

PREREQUISIT - Transport logistics .

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of the discipline is to study the basics of managing a transport company, organizing traffic when transporting goods and passengers for their subsequent use in carrying out technical and economic calculations.

The objectives of the discipline are:

- to acquaint students with the basics of transport management as a sphere of material production and with the methods of its organization and management in a market economy;
- to provide information on the normative legal materials that determine the methods of carrying out economic, organizational and management activities;
- to teach to make and justify specific decisions in the process of operational activities at the electric transport enterprise .

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

know:

- methods of team building to achieve the set goals and assess the quality of performance results ;
- foreign languages as a means of business communication, active social mobility;
- normative legal documents on the economy and organization of electric transport;
- methods and means of using automated control systems for technological processes;

be able to:

- solve engineering, technical and economic problems using applied software tools ;
- apply modern research methods and evaluate the results of the work performed ;
- carry out marketing of products and services in the electric power industry and electrical engineering;
- show initiative, take on themselves the responsibility for the decisions in their professional competence;

own:

- ability to independently carry out research to solve research and production problems;
- ability to draw up practical recommendations on the use of research results;
- ability to assess the innovative qualities of new products;
- ability to implement various forms of educational work;
- ability to use knowledge of legal and ethical norms in assessing the consequences of their professional activities;
- the ability to demonstrate the skills of working in a team, willingness to generate and exploit new ideas;
- ability to draw up, present and report the results of the work performed;
- willingness to use modern and advanced computer and information technologies;

Service Industry Marketing
CODE - TRA 418
CREDIT - 6 (2 /0/1 /3)
PREREQUISIT - Freight transport .

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of the discipline is to provide knowledge of a fundamental nature on the use of marketing in the transport industry of commercial activity. Pay special attention to the goals, objectives, tools and specifics of the practical application of marketing to achieve commercial success of enterprises and organizations in the transport industry and areas of activity based on the effective use of their potential in a competitive environment with a focus on consumers.

Course objectives:

– consideration of the content of marketing in relation to the specifics of the transport industry or field of activity, taking into account the interests of consumers of goods and services;

– study of the features of the use of marketing tools in the transport industry;

– research of the problems of marketing functioning in the transport area of the economy.

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. Marketing in manufacturing sectors. Marketing in the transport industry of the manufacturing sector. Marketing in non-manufacturing sectors. Service marketing.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

Having studied the discipline, the student must:

know:

- features of marketing in various industries and fields of activity;

be able to:

- assess the role of marketing in making sound commercial decisions, in creating conditions for maximum adaptation of production, assortment and quality of products to market requirements, structure and dynamics of needs and demand;
- analyze and forecast the development of markets;
- analyze the external and internal environment of the organization;
- define market segments;

own:

- skills of decision-making on the most important marketing problems in the transport industry and field of activity;
- ways of forming a marketing complex – specific features of marketing management in the transport industry and the field of activity;
- identify the main market problems specific to the transport industry or field of activity and actively influence the market and consumers in order to form the desired level of demand.

Logistics risk management in supply chains
CODE - 444
CREDIT - (2/ 0 / 1/3)
PREREQUISIT - Transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE

The main purpose of the course is to teach students the methodology and methodology for constructing and practical application of models for representing economic risks, methods for analyzing and comparing risk alternatives, methods for managing economic risks using traditional and modern technologies.

The objectives of the discipline are:

Study and practical application of methods and models for the analysis and management of economic risks in supply chains, including,

• methods of risk analysis and management based on the classical approach of risk theory;
• methods of analysis and risk management based on the concept of utility;
• methods of analysis and risk management based on the use of a decision tree;
• methods of market risk management;
• methods of redistribution of logistics risks;
• methods of managing logistic risks based on their diversification;
• methods of insurance of logistic risks;
• methods of hedging logistic risks.

Freight and commercial work management

CODE - TRA 173

CREDIT - (2/ 0 / 1/3)

PREKVISIT - Freight transport, Transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the discipline

- mastering by students the basics of organization and management of cargo and commercial work;
- the ability of students to organize work on the implementation of cargo and commercial operations and the technology of cargo transportation;
- application of information technologies and mathematical methods in cargo and commercial work.

Objectives of the discipline: studying the basics of freight and commercial transport work.

SHORT DESCRIPTION OF THE COURSE

The discipline includes a set of issues related to the transportation process, mainly with its initial and final operations - loading and unloading; with the organization of progressive types of transportation - package, container and route; using wagons and containers in terms of time and carrying capacity, with interaction with other modes of transport, development and observance of the conditions of the Rules for the carriage of goods, ensuring their safety, planning transportation, mechanization of loading and unloading operations, and others.

The discipline will be studied. Fundamentals of cargo and commercial operations management. Concentration and technical means of cargo and commercial work. Technology for performing cargo and commercial operations. Freight rates. General principles of organizing the work of access roads. Bulk cargo transportation technology. Transportation of goods on special terms. Management of freight and commercial operations in the transport of goods in mixed routes. The technology of cargo and commercial operations in international traffic. Responsibility for transportation. Ways to improve freight and commercial work in rail and road transport.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must: have an idea of :

- on the organization and management of various types of transport;
- on international passenger transportation;
- on the work of railway stations; know:

- technical means of freight and commercial work, progressive ways of organizing transportation in transport logistics systems, including container and batch systems, the basics of commercial activities of specialists in organizing and managing transportation; the basic principles of transport law, the construction of tariffs and the organizational structure of management of freight and commercial operation of railways, the basics of operational planning of transportation, modern methods of transport and forwarding services to enterprises, organizations and citizens of the country, transportation of goods in direct, mixed and international communications;

be able to:

- use the organization of freight and commercial work based on progressive technology, automated control systems and complex mechanization and automation of loading and unloading operations, use computer technology in the conditions of an automated control system, objectively evaluate from the point of view of obtaining an economic effect measures to improve the technical equipment and technology of freight and commercial work, to carry out measures to ensure the safety of train traffic, the safety and protection of the environment when transporting various goods, especially when transporting dangerous, heavy and bulk goods;

acquire practical skills:

- solving transport problems;
- competent and skillful use of technical means of cargo and commercial work;
- operational planning of transportation. be competent:
- in matters related to the organization of transportation and traffic management in various modes of transport.

Warehouse Logistics
CODE - MNG453
CREDIT - 6 (2/0/1/3)
PREREQUISIT - Logistics in the automotive industry.

PURPOSE AND OBJECTIVES OF THE COURSE

When izucheniidistsipliny goal is to form students' corresponding theoretically ie knowledge of me and almost f skill and basic concepts, concepts and rules of storage of material assets and warehouse management techniques.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: The essence of warehouse logistics, its concept and principles. Warehouse network and storage facilities. Warehouse planning as a link in the supply chain. Warehouse logistics technology. Warehouse logistics technology. Organization and management of the logistics process in the warehouse . In- house warehousing logistics . Technical aspects of warehouse organization . Creation and management of material stocks of a warehouse . Creation and management of material stocks of a warehouse . Warehouse and logistics service . Warehouse management . Warehouse logistics and information technology **.** Warehouse staff

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student will be able to:

– highlight the area of application, describe the main tasks and functions of warehouse logistics;

– to analyze the state of the warehouse system of the enterprise;

– classify the applied storage systems, build new ones depending on the customers' requirements;

– solve a complex of problems of forming a warehouse network, choose an intermediary according to various criteria

– carry out the formulation of logistic tasks related to the organization of warehouse processes;

– use logistic approaches and methods to solve the problems of managing material, information and financial flows in warehouses ;

Inventory management in supply chains

CODE - TRA437

CREDIT - 6 (2/0/1/3)

PREQUISIT - Freight

PURPOSE AND OBJECTIVES OF THE COURSE

When studying the discipline, the goal is to form a complex of knowledge, basic skills and practical skills to effectively solve logistics problems of inventory management.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: Stocks as an object of management in logistics. Classification of reserves. Development of the theory and practice of inventory management. The concept of stocks in logistics. The costs of creating and maintaining stocks. Risks of inventory holding and shortages. Determination of stock requirements. Rationing the level of inventories and working capital invested in inventories. Model for calculating the optimal volume and frequency of the order of Harris-Wilson and its modifications. Basic inventory management systems. Algorithm for designing optimal inventory management systems in logistics. Inventory management strategies in logistics and conditions for their application. Inventory management, taking into account the classification of material and technical resources by importance. Accounting and control of information on the formation of reserves. Mathematical models for optimizing inventory management in logistics.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

- determine the norms of stocks in the organization;
- calculate indicators of the effectiveness of inventory management at the enterprise;
- apply mathematical models to optimize inventory management in logistics.

own :

- modern theoretical provisions of inventory management logistics;
- the foundations of the organization methodology and methods of optimizing the logistics of inventory management;
- methods of making decisions on the choice of inventory management systems for logistics;
- skills in calculating logistics costs associated with inventory management in logistics ;
- modern methods of resource optimization in inventory management.

Logistics systems design
CODE - TRA4 23
CREDIT - 6 (2/0/1/3)
PREKVISIT - Transport infrastructure

PURPOSE AND OBJECTIVES OF THE COURSE

When studying the discipline, the goal is to form the student's understanding of the key principles of designing logistics systems in logistics, the competencies necessary for the effective implementation of the project management process at logistics enterprises of various organizational forms and ownership and in their structural units.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: Basic concepts of project management. Types and types of projects. Classes of projects. Project participants and the project environment. Project life cycle. Organizational structure of the project. Project manager and team. Functions of the project team members. Project management processes. Planning. Change management. Completion. Implementation. Project management in logistics. The essence and methodological foundations of logistics project management. Methods for developing a project of a logistics system. Modern trends in the development of organizational structures for logistics management and organizational structures for managing logistics projects. Sources and organizational forms of financing logistics projects. Methods for the development of project documentation. Methods for conducting expertise and evaluating the effectiveness of a logistics project; project management functions in logistics. Methods and processes of project quality management in logistics; methods for minimizing project risks.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:
- explain the modern concept of project management;
- represent the main stages of development of project management in logistics;
- to state the methodological foundations of the management of logistics projects
- analyze the external and internal environment of the logistics project, assess their impact on its implementation;
- develop network models and network graphics;
- to develop project documentation;
- to develop a project of a logistics system;
- develop investment projects and evaluate them;
- assess the degree of risk of the project;
own:

- skills in evaluating logistics projects under various conditions
- methods of development and implementation of a logistics project
- skills in the practical application of methods for optimizing network models in terms of time and resources;
- the skills of calculating the analytical parameters of the network model .

Basics of designing road transport systems for the delivery of goods

CODE - TRA424

CREDIT - 6 (2/0/1 / 3)

PREREQUISIT - Transport logistics .

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the discipline is: the formation of the ability to develop measures to ensure the efficiency and safety of transport and technological systems for the delivery of goods, systems for the safe operation of vehicles and transport equipment based on the use of means of ensuring constructive and road safety and knowledge of methods for assessing the transport and operational qualities of communication routes.

The main tasks of studying the discipline are:

- development of measures to ensure the efficiency and safety of transport and technological systems for the delivery of goods, systems for the safe operation of vehicles and transport equipment based on the use of constructive and road safety means ;
- carrying out technological calculations related to the operation of the enterprise;
- determining the need for personnel, production and technical base, means of mechanization, materials, spare parts.

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. The role and place of road transport systems for the delivery of goods in the economic system of Kazakhstan. Content, purpose and objectives of the discipline. The importance of discipline in the preparation of bachelors for the program:
"Transport Engineering". Features of the transport sphere of material production. Carriage possibilities of transport. Features of the functioning of transport as a branch of material production. Technology of road transport systems for the delivery of goods. The basic principles of the technology of the transportation process of goods: dismemberment of the transportation process, coordination and stages, unambiguous actions. Selection of the technological scheme for the transportation of goods from the place of production to the place of consumption. Technological process of transportation of goods. The content of the technological project for the transportation of goods. Container transport system, its essence and importance for the country's economy. Advantages and disadvantages of package transportation. Ways to solve the problem of increasing the use of rolling stock carrying capacity. Transportation by dump trucks and auto-loaders. Mathematical methods and their role in the development of technological processes of road transport systems for the delivery of goods.

Design of road transport systems for the delivery of goods. A systematic approach to organizing the transportation process. Concept of the organization of cargo transportation. Preparation of the transportation process: economic, technological, organized. Features of the design of road transport systems for the delivery of goods: extractive industries, agricultural goods, construction goods, dangerous goods. Features of the organization of international and intercity road transport systems. Organization of rolling stock movement for intercity transportation. The basics of organizing the transportation process. Advanced transportation methods, centralized transportation. Brigade transportation organization. Intermodal transportation. Mathematical methods used in the design of road transport systems for the delivery of goods. Systems approach. Simplex method. Sensitivity analysis of models. Network models Situational games. Synergetics. Management of road transport systems for the delivery of goods. Management basics. Current state of transportation management. Stages of the management process. Dispatch management of transportation. Control and regulation systems for rolling stock. Measuring the efficiency of road transport systems for the delivery of goods. Performance indicators. Factors taken into account when assessing the effectiveness of cargo delivery systems. Evaluation of the effectiveness of road transport systems for the delivery of goods.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

Planned learning outcomes:

- ability to apply modern theoretical and experimental methods to develop physical, mathematical and economic-mathematical models of the objects and processes under study related to professional activities in the direction of training;
- ability to organize and conduct theoretical and experimental research and computer modeling using modern methods of experiment planning and computer technology;
- ability to develop measures to ensure the efficiency and safety of transport and technological systems for the delivery of goods and passengers, systems for the safe operation of vehicles and transport equipment based on the use of means of ensuring constructive and road safety and knowledge of methods for assessing transport and operational.

Modeling the transport processes

CODE - TRA431

CREDIT - 6 (2/0/1/3)

PREREQUISIT –Transport logistics.

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of discipline: to develop in students the knowledge of methods, techniques and types of traffic simulation, on applicable models simulating traffic flow software and the existing models of traffic flow.

Discipline objectives:

- gaining knowledge about the principles of a systematic approach that underlie traffic modeling ;
- gaining skills in the analysis of basic models of traffic flows and their areas of application;
- obtaining practical skills on the operation of software systems designed to simulate street-road networks of cities and traffic flows on them.

SHORT DESCRIPTION OF THE COURSE

The discipline will be studied. Theoretical foundations of modeling. Dynamic and static models. Predictive models. Simulation models. Optimization models. A systematic approach to solving problems of modeling traffic flows. Mathematical model. Analog and statistical modeling. Analytical and simulation models. Application of different methods depending on the goals of the simulation. Experiment and Evaluation. Qualitative states of the transport stream. Discrete distributions. Continuous distributions. Queuing theory. Markov chains. Simulation models of car movement. Micromodels of road traffic. Simplified dynamic models. Theory
"Following the leader". Optimal speed model. Smart driver model. Simulation with cellular automata. Mesomodels of road traffic. Macromodels of road traffic. Boundary conditions method. Heat flow analogy. Hydrodynamic model. Transport stream state equation . Continuity equation . Equation of motion. The law of conservation of momentum. Energy states of the traffic flow. Kinematic and shock waves in traffic . Gravity model. Entropy model. Equilibrium flow distribution model. Optimal strategy model. Simulation algorithm. Calibration of the model. Research methods. Analytical, experimental and probabilistic statistical research methods. The development of computer technology and the use of modern technical means for traffic simulation.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, a student of transport engineering should: know:

- program-targeted methods and methods of their use in the analysis and improvement of production;
- basics of optimization methods required to solve transport problems;

be able to:

- apply methods of mathematical analysis and modeling, theoretical and experimental research to solve transport problems;

own:

- skills in the use of modern mathematical tools for solving transport problems;
- methods of modeling production processes;
- methodology for constructing, analyzing and applying mathematical models to assess the state and forecast the development of transport processes.

Analyzing data in Excel

CODE - TRA428
CREDIT - 6 (2/0/1/3)
PREQUISIT - Introduction to the specialty

PURPOSE AND OBJECTIVES OF THE COURSE

The aim of this course is to master the basic methods of quantitative analysis of numerical and non-numerical information in logistics processes and supply chains.
The main task of studying the discipline is to get acquainted with the methods of processing statistical information, the main methods of analyzing economic data for decision-making and forecasting.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: Methods of statistical information processing . Data generation . Data analysis. Creation of macros and queries.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:

- master the basic methods of quantitative analysis of numerical and non-numerical economic information in the Excell environment;
- know the main approaches to forecasting economic indicators;
- be able to apply methods using application packages.

Organization of intermodal transport

CODE - TRA440
CREDIT - 6 (2/0/1/3)
PREQUISIT - Freight

PURPOSE AND OBJECTIVES OF THE COURSE

When studying the discipline, the goal is to form the student's knowledge of the course "Organization of intermodal transportation", to understand the essence and features of intermodal technologies, as well as the place of intermodal transportation in the general hierarchy of logistics systems, the field of practical application of modern intermodal technologies.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: Technology of operation of modes of transport in a single transport system. Fundamentals of the organization of multimodal cargo transportation systems and intermodal technologies. Elements of technical support for multimodal transportation systems. World transport systems (transport corridors). Passenger intermodal transportation. Information support for multimodal transportation systems. Legal support of multimodal transportation systems. Pricing for services of intermodal operators. Ways to improve the efficiency of multimodal transport in the transport system of the Republic of Kazakhstan.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:
- to forecast the needs for the development of the transport network;
- to carry out the organization and technology of transportation;
- to implement the methodology for choosing a logistics intermediary, carrier and forwarder based on a multi-criteria approach;
- to organize the rational interaction of various types of transport in a single transport system;
- make up a single transport system for the transportation of passengers, baggage, cargo luggage and cargo;
- apply the legal, regulatory and technical and organizational foundations of the organization of the transportation process and ensuring the safety of vehicles in various conditions;
- calculate the transport capacity of enterprises and the loading of rolling stock;

own:
- the ability to provide consignors and consignees with services: the execution of shipping documents, delivery and receipt, delivery and removal of goods;
- ability to insure cargo, customs clearance of cargo and vehicles;
- the ability to use modern information technologies as a tool for optimizing management processes in the transport complex;

- Ability to develop projects and implement: modern logistics systems and technologies for transport organizations; technologies of intermodal and multimodal transportation; optimal routing.

Data management in logistics

CODE - TRA468
CREDIT - 6 (2/0/1/3)
PREQUISIT - Introduction to the specialty

PURPOSE AND OBJECTIVES OF THE COURSE

When studying the discipline, the goal is the theoretical and practical training of students to such an extent that they can choose the necessary decisions on the choice of a DBMS, the development of databases, their operation, be able to explain the principles of their functioning and use them correctly.

SHORT DESCRIPTION OF THE COURSE

When studying the discipline, the following aspects are considered: Basic concepts of data banks and knowledge; information and data. Classification of data banks. Requirements for data banks. The role and place of data banks in information systems; users of data banks; database as an information model of the subject area; database management system. Database administrator; data bank architecture. Functions of the databank administrator. DBMS functions. Client / server architecture. Database presentation levels. Scheme and subcircuit concepts Hierarchical model Network model Relational model Post-relational model Multidimensional Model Object Oriented Model Data Types

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student will be able to:
Know:
- purpose and structure of databases, basic concepts in the field of databases;
- modern trends in the development of databases and information systems;
- modern means of interaction with computers;
- basic design principles, logical and physical structure of databases.

Be able to:
- analyze information processes of the subject area;
- to use basic operational and information retrieval works;
- work with modern database management systems;
- develop infological and datalogical database models;
- use the SQL programming language for the purpose of extracting and processing data in modern DBMS.

Own:
- skills of user requirements and definition of all significant objects of the database subject area;
- the skills of using a computer as a means of obtaining information on the Internet;
- skills in the development of graphical interfaces;
- technologies of modeling, design and implementation of databases.

Organization of transportation and economics of transport management

CODE - TRA435
CREDIT - 6 (2/0/1/3)
PREREQUISIT - / General course of transport

PURPOSE AND OBJECTIVES OF THE COURSE

When studying the discipline, the goal is to form a student's theoretical and practical knowledge in the field of transport, instilling a professional interest in the transport system, as one of the most important components of the material and technical base of the country's economy.

SHORT DESCRIPTION OF THE COURSE

The role of transport and organization of transportation in a market economy. The economics of rolling stock, production resources and the efficiency of their use. Economic indicators of the transport company and their analysis. Analysis of transport costs.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

Know:

- pricing and tariffs in transport general concepts of the organization of the transportation process in the industry and the safety of vehicle traffic; methods of studying and assessing the efficiency of traffic organization;

be able to:

- select rolling stock and loading and unloading facilities for specific operating conditions; choose rational ways to optimize passenger and transport traffic, analyze technical, operational, economic and environmental indicators of the use of various types of transport during transportation, draw up technological and economic justifications for transport and technological routes and schemes delivery of goods;

own:

- methods for choosing the optimal type of rolling stock for the carriage of goods according to safety and security criteria methods for reducing energy consumption methods for determining economic efficiency for the choice of vehicles and handling equipment

Inventory Management in Supply Chain

CODE - TRA437

CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of teaching the discipline is to form students' ideas about the mechanism of stock formation, the principles and methods of inventory management in logistics systems, develop skills to determine the optimal level of stock and the ability to manage the process of stock formation.

Objectives of the discipline:

- mastering the basic concepts of inventory management and methods for their analysis;

- the study of the theory of inventory management and modern capabilities and experience in applying various inventory management strategies;

- the acquisition of skills to identify opportunities to reduce overall logistics costs and total costs.

SHORT DESCRIPTION OF THE COURSE

Inventory as an object of management in logistics. Classification of reserves. Development of the theory and practice of inventory management. The concept of stocks in logistics. The costs of creating and maintaining stocks. Risks of inventory holding and shortages. Determination of stock requirements. Rationing the level of inventories and working capital invested in inventories. Model for calculating the optimal volume and frequency of the order of Harris-Wilson and its modifications. Basic inventory management systems. Algorithm for designing optimal inventory management systems in logistics. Inventory management strategies in logistics and conditions for their application. Inventory management, taking into account the classification of material and technical resources by importance. Accounting and control of information on the formation of reserves. Mathematical models for optimizing inventory management in logistics.

Innovative directions in the organization of freight transportation

CODE - TRA434CREDIT - 6 (2/0/1/3)

PREREQUISIT – Freight transportation

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of the course is to master the concepts of innovative technologies
Objectives of the course - familiarization with innovative technologies in the organization of freight traffic; application of modern technologies to reduce costs, improve the transport process

SHORT DESCRIPTION OF THE COURSE

The concept and importance of innovative directions in the organization of freight transportation; ways to improve the organization of the transportation process;

ways to reduce the cost of operating rolling stock; innovative technologies in the organization of freight transportation; an integrated approach to the organization of road transport at a motor transport enterprise (ATP) in the context of the commercialization of the sale of motor transport services.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COUR

- **principles of innovation;**
- **innovative technologies in transport;**
- **ways to reduce transport costs**

Evolution and innovation of warehouse logistics

CODE - TRA450

CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation, Transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE
The purpose of the course is to master the skills of applying innovative technologies in warehouse management
Objectives of the course - familiarization with modern warehouses in world practice; innovative technologies in warehousing and their application
SHORT DESCRIPTION OF THE COURSE
The concept of innovation. Stages of development of the field of warehouse logistics. Modern warehouses: classification and their characteristics. Innovations in the management of material, information and financial flows in the field of warehousing.

A systematic approach to managing warehouse processes in the enterprise;

Ways to minimize warehouse costs based on an innovative approach; Information systems in warehouse logistics. Innovative warehouse management technologies.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
Modern technologies in warehouse management: role and application

WMS (WAREHOUSE MANAGEMENT SYSTEM)

CODE - TRA438

CREDIT - 6 (2/0/1/3)
PREREQUISIT – warehouse management

PURPOSE AND OBJECTIVES OF THE COURSE
The purpose of the course is to familiarize students with an automated warehouse management system

SHORT DESCRIPTION OF THE COURSE
The basics of logistics warehousing and its principles. Models and methods of building a warehouse network of an enterprise. Methods of planning material flows. Functioning and management of the storage system. Automated Warehouse Management System (WMS). Modern trends of technical equipment of the warehouse (warehouse). Methods for modeling business processes in warehousing logistics. Paperless and wireless technology in stock.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
modern information warehouse management systems;
- principles of the warehouse management system;
- paperless and wireless technologies in stock.

Current trends in traffic safety in transport processes

CODE - TRA445

CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation

PURPOSE AND OBJECTIVES OF THE COURSE
Study of modern methods, theoretical and practical foundations of the safety of transport systems, methods of assessing the impact of various threats on the level of safety, methods of planning and implementing measures to reduce and eliminate hazard factors. The main objective of the course is to give an idea of the legal regulation and control in the field of ensuring the safety of transport systems.

SHORT DESCRIPTION OF THE COURSE
The essence of the problem of ensuring traffic safety in transport processes. Organization and traffic safety of the transport process. Factors of influence on traffic safety. Methods of ensuring traffic safety. Active and passive vehicle safety. Transport and operational characteristics of roads. Description of the road network of the Republic of Kazakhstan, countries of near and far abroad. Methods for ensuring environmental friendliness of traffic safety schemes in transport processes. Methods of engineering and theoretical calculations to ensure traffic safety. Modern technologies for optimizing control processes in the transport sector. Characteristics of transport systems for safety control. Methods of modeling, calculation and experimental studies of effective traffic management schemes in transport processes.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

 demonstrate the acquired skills of professional activity in the field of transport systems security;
 know the structure of the unified transport system of the country, the role and place in it of the safety of transport systems;
 promptly make decisions and take the necessary actions aimed at preventing and eliminating the consequences of man-made emergencies and the safe work of personnel;
 formulate criteria and methods for determining threats to transport security;
 Provide a basic basis for assessing the vulnerability of transport infrastructure and vehicles, categorizing transport infrastructure and vehicles;
 consider equipping transport infrastructure facilities and vehicles with engineering and technical means and transport security systems, taking into account the possibility of their expansion and the creation of centralized distributed systems;

 to form an idea and prepare for the practical application of organizational and technical measures aimed at increasing the security of the population in transport from acts of unlawful interference, including terrorist ones, as well as from natural and man-made emergencies;
 to form theoretical ideas and practical skills in the use of advanced technical means to ensure transport safety in land transport;
 give the basic principles of the correct choice of solutions in extreme situations in order to reduce or prevent environmental damage
 solve the assigned tasks using the studied methods and techniques;
 analyze the found solutions to the assigned tasks and draw conclusions or several recommendations;
 independently make decisions within their professional competence

Economic and mathematical methods and models of transport logistics

CODE - TRA438

CREDIT - 6 (2/0/1/3)
PREREQUISIT – **WAREHOUSE MANAGEMENT**

PURPOSE AND OBJECTIVES OF THE COURSE

The subject of the discipline is the meaningful formulation of economic problems, examples of constructing mathematical models, theoretical methods of solving and methods of implementing methods on a computer.

The task of studying the course "Economic and mathematical modeling" is to familiarize students with a number of economic and mathematical models and methods in solving problems of managing production and transport processes, the processes of resource allocation and sales of products.

SHORT DESCRIPTION OF THE COURSE

Substantial and formalized descriptions of transport logistics tasks: transport task; tasks with intermediate points; supply and distribution tasks; transportation routing problems. Classification of the problem and methods for their solution.

Theoretical foundations and methods for solving linear, nonlinear, discrete and integer programming problems in transport logistics.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

• meaningful and formalized descriptions of economic tasks;
• theoretical foundations and algorithms for solving problems of linear, nonlinear, discrete and integer programming.

The main skills acquired during the study of the discipline:

• compilation of mathematical models of problems and their classification;
• solving problems using well-known methods;
• work with software packages.

THE BASICS OF FEA AND REGULATIONS FOR INTERNATIONAL TRANSPORTATION

CODE - TRA187

CREDIT - 6 (2/0/1/3)
PREREQUISIT –

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of the discipline is the formation of theoretical ideas about international trade flows and practical skills of carrying out logistical operations in the field of international transport and the specifics of transport provision for international goods traffic.

SHORT DESCRIPTION OF THE COURSE

Transport in the field of foreign trade. Material and technical base of transport. Transport support in the implementation of foreign economic activity.

The main types of documents on various modes of transport. Transport work in the system of the foreign economic complex. Stages of transport support of foreign economic relations. The process of organizing the delivery of goods; INCOTERMS rule.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of studying the discipline, the student must:
- Identify features of regulatory support for logistics operations of international goods movement and the composition of international transport operations;
-to solve the tasks of managing logistics processes associated with international goods movement;
-define criteria for the economic evaluation of management decisions in logistics systems at all stages of international commodity circulation;
- analyze the economic indicators of the links in the supply chain and provide economically justified estimates of options for building logistics systems;
- conduct analysis, plan and compile routes for international cargo transportation;
-to solve managerial tasks related to the logistics operations of international commodity circulation;
- to carry out the analysis of economic indicators of the links of international commodity circulation;

own:
- Skills of acceptance of administrative decisions in the field of the international товародвижения;
- methods of planning and regulation of operations in international transport and logistics systems;

- skills of valuation of logistics systems of international commodity circulation;
- the ability to solve managerial tasks related to operations on world markets in the context of globalization;
- the ability to organize, plan and regulate operational logistics activities in supply chains (procurement, transportation, warehousing, customs clearance, information support, etc.).

Supply Chain Transportation

CODE - TRA438
CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportaton

PURPOSE AND OBJECTIVES OF THE COURSE

The purpose of the discipline is to form students' skills in designing transport networks in the supply chain.
Objectives of the discipline:
• Understand the role of transport in the supply chain.
• Discuss the role of infrastructure and transportation policies.
• Consider various design options for transport networks
• Identify the relative strengths and weaknesses of transport networks

SHORT DESCRIPTION OF THE COURSE

Stages of logistics development and logistics. Logistic system and its properties. Coordination of material management. Providing integrated logistics. Modern trends in the development of logistics integration. Decisions on the logistics integration of business. Management of integrated logistics systems. Formation of information support in conditions of integration. Information and communication systems and technologies in the logistics system. The subject area, place and role of information and communication systems and technologies in logistics. Modern directions in the development of information logistics of logistics. Automation of material flow management. Logistic administration. Integration information systems for planning and resource management.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE

As a result of mastering the discipline, the student must:
- explain the conceptual basis of logistical integration;
- To present logistic paradigms;
- Design a logistics system (element, link, network, chain, channel);
- coordinate the management of material flow;
-form information support in the context of integration;
own:
-Methodical evaluation of logistics integration attractiveness;
-mechanisms of management of the logistic integrated system;
- the SCM tool as an integral approach to business

Transport and loading-unloading means

CODE - TRA190

CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation, transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE
The purpose of the discipline: obtaining theoretical knowledge about the rolling stock of road transport and modern handling equipment used for loading and unloading various types of goods, their classification and basic operational properties. Discipline objectives: -creation of conceptual unity and a general concept of design and operational features, as well as the technical capabilities of transport technology and mechanization of loading and unloading operations. - study of the main technical and operational properties, estimated indicators and characteristics of the operational properties of transport and handling facilities ; - study of normative and technical documentation.
SHORT DESCRIPTION OF THE COURSE
The discipline will be studied. Total TPRS device, concepts and definitions. Designation system and vehicle markings. Classification of cars and buses, their designation and marking. Classification of goods vehicles, their designation and marking. Classification of automobile engines, and their comparative evaluation. Classification of handling equipment on various grounds. Function and configuration manual forklifts, trucks and forklifts. Function and configuration manual hoists and winches. Function and configuration of conveyors. Purpose and electric indexing. Main electric components and assemblies. Appointment, classification and indexing of forklifts. Basic units and components of lift trucks. Autotrains- selfloaders for heavy containers. Design features. Purpose and types samopogruzchikov vehicles with removable body and tail-lift. Burton. Definition, purpose, frequency and efficiency pulley.

Transportation in Supply Chain Logistics

CODE - TRA447

CREDIT - 6 (2/0/1/3)
PREREQUISIT – **Freight transportation, transport logistics**

PURPOSE AND OBJECTIVES OF THE COURSE
The purpose of the discipline is to form a holistic and comprehensive understanding of the concepts, methods and models of inventory management, spheres and conditions of their application.
SHORT DESCRIPTION OF THE COURSE
Introduction to supply logistics. The role of transport in supply logistics. Vendor selection methods. Analysis and calculation of transport and logistics costs in the supply and identification of opportunities for their reduction while maintaining the reliability of the functioning of the logistics system and supply chains.
Optimization of costs associated with logistics supply.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
As a result of studying the discipline, the student must:
- determine the norms of reserves in the organization;
- calculate the indicators of the efficiency of inventory management in the enterprise;
- Apply mathematical models of optimization of inventory management in logistics.
own :
- modern theoretical provisions of logistics management of stocks;
- the basis of the organization methodology and optimization methods of logistics management;
- Methods of decision-making for the selection of inventory management systems for logistics;
- logistics calculation skills associated with inventory management in logistics;
- modern methods of optimizing resources in inventory management.

METHODS OF DECISION MAKING IN LOGISTICS

CODE - MNG169
CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation, transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE
The purpose of the discipline is to form a system of theoretical knowledge and practical skills for students to solve problems arising in the study of supply chain management..
SHORT DESCRIPTION OF THE COURSE
Methods and models of analysis and selection of effective solutions in uncertainty conditions for logistics systems are considered. Attention is paid to their specifics
applied to the problems of inventory management in conditions of uncertainty. Analyzed anomalous phenomena of "blockages" of the choice of alternatives for optimization of such systems. Special modifications of traditional
criteria of choice, allowing to eliminate these phenomena, so that more effectively adapt the best choice of alternative to the preferences of the person, the decision maker. The methods of analysis and optimization of such systems with taking into account the time value of money.
KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
Upon successful completion of this discipline, the master student should be able to:
1. make decisions in conditions of uncertainty and risk; to determine the significance of the constructed models when making managerial decisions in supply chains;
2. Apply the basic mathematical models of decision-making in conditions of multicriteria, uncertainty and risk; to apply a set of methods of searching and an informed choice of the best solutions;
3. Adapt risk management methods for the supply chain; make decisions, the head of the production team in accordance with the capabilities of technical means in the implementation of the main technological stages of the CPU;
4. Analyze market and specific risks for making managerial decisions in the CP; to synthesize quantitative and qualitative methods of analysis of organizational and managerial models when making managerial decisions;
5. recommend a method of morphological analysis for managing risks in the CP; choose mathematical methods and models of supply chain organization systems, analyze their adequacy, adapt models to specific tasks when making managerial decisions

BUSINESS GAMES IN LOGISTICS

CODE - TRA447

CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation, transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE
The purpose of the study of the discipline is the acquisition by students of decision-making skills in the event of a variety of situations in logistics systems and supply chains.

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SHORT DESCRIPTION OF THE COURSE
The content of the discipline includes: the role of business games in logistics; structure and rules of business games; conducting business games that consider various practical situations in logistics, transportation of goods, the functioning of logistics centers, in the warehouse, in the distribution of finished products; analysis of the results of business games.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
- knowledge of the principles of business games;
- decision making skills in various situations in processional activities

LOGISTICS OF MATERIAL AND TECHNICAL SUPPLY

CODE - MNG457

CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation, transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE
The purpose of studying the discipline is to equip students with knowledge of the theory and practice of analyzing, planning, organizing, controlling and regulating procurement activities in various organizations using the concepts of marketing and logistics.
The goal of the course is theoretical and practical study of the master positions of the undergraduates, methods of purchasing and supply management in logistics systems.

SHORT DESCRIPTION OF THE COURSE
Contents of the discipline. Logistics procurement as a functional area of integrated logistics. Interrelation of logistics of purchases with other functional areas: logistics of production and distribution.
Procurement management: functions, tasks. Strategy of logistics management of purchases. Modern methods of planning the demand for products. The task of the MOU is to "do or buy." The problem of choosing a supplier. Organization of procurement services. Organizational management structures of companies with various types of procurement and logistics communications. Indicators of the effectiveness of supply activities. Monitoring and monitoring of indicators of supply activities.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
As a result of studying the discipline, the student must:
- to plan the need for material resources;
- evaluate and implement the selection of suppliers, forms of supply;
- calculate the performance indicators of supply activities;
- set goals and formulate tasks related to the implementation of supply and supply chain management strategies in supply chains:
- logistics calculation skills related to supply;
- modern methods of optimizing resources in the functional area of logistics (procurement).

PROJECT MANAGEMENT IN LOGISTICS

CODE - TRA443

CREDIT - 6 (2/0/1/3)
PREREQUISIT – Freight transportation, transport logistics

PURPOSE AND OBJECTIVES OF THE COURSE
When studying the discipline, the goal is to form the student's knowledge, abilities and skills in the field of project management. The objectives of the discipline are to study methods and tools of project management.

SHORT DESCRIPTION OF THE COURSE
Basic concepts and definitions of project management. Modern standards in the field of project management, their characteristics and application in the field of logistics; Project management tools and techniques. Development of the charter and content of the project. Hierarchical structure of work and Gantt chart. The critical path method. Quality and risk management of projects in logistics. Basic skills in MS Project.

KNOWLEDGE, ABILITY, SKILLS TO COMPLETE THE COURSE
As a result of studying the discipline, the student should know:
- Basic concepts, subject, form of project management;
- methods and tools for project management;
−conduct information analysis in MS Project environment (project implementation stage);
- tools for creating the structure of information flows, the ability to identify "vulnerabilities" when analyzing the project;
- competence in the analysis of incoming and outgoing information flows in projects;

Content