

**MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN  
KARAGANDA UNIVERSITY NAMED AFTER ACADEMICIAN E.A.BUKETOV**



«AGREED»

Director

KSTU «Karaganda College of Technology and Service»

*J.D. Magziev*  
«18» 03 2022



«AGREED»

Director

KSTU Gymnasium named after M. Zhumabaev

*A.A. Zhalelov*  
«18» 03 2022



«APPROVED»

Chairman of the Board-Rector of

Karaganda University named after  
Academician E.A. Buketov

*N.O. Dulatbekov*  
«26» 05 2022

**EDUCATIONAL PROGRAM**

in the field of training «7M014 – Teacher training with a subject specialization of general development»

«7M01401 – Vocational training»

Level: Master's Degree

Degree: Master of Pedagogical Sciences in the educational program

«7M01401 – Vocational training»

Karaganda, 2022

**The educational program «7M01407 Vocational education» was developed on the basis of:**

Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III «On Education»;

Law of the Republic of Kazakhstan dated July 11, 1997 No. 151-I. «On languages in the Republic of Kazakhstan»;

State obligatory standard of higher education dated August 31, 2018 No. 604;

National Qualifications Framework dated March 16, 2016 by the Republican Tripartite Commission on Social Partnership and Regulation of Social and Labor Relations;

Order of the Ministry of Education and Science of the Republic of Kazakhstan «On approval of the Rules for organizing the educational process on credit technology» dated October 2, 2018 No. 152;

Classifier of areas for training personnel with higher and LOstgraduate education dated October 13, 2018. No. 569;

Professional standard «Teacher» (Appendix to the order of the Chairman of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan «Atameken» dated June 8, 2017 No. 133);

Order of the Minister of Education and Science of the Republic of Kazakhstan dated May 10, 2018 No. 199 On amendments and additions to the order of the Minister of Education and Science of the Republic of Kazakhstan dated April 3, 2013 No. 115 «On approval of standard curricula in general education subjects, elective courses and electives for educational organizations»;

Order of the Minister of Education and Science of the Republic of Kazakhstan dated September 4, 2018 No. 441 On amendments and additions to the order of the Minister of Education and Science of the Republic of Kazakhstan dated November 8, 2012 No. 500 «On approval of standard curricula for primary, basic secondary, general secondary education of the Republic of Kazakhstan».

## Content

<b>№</b>	<b>PassLOrt of the educational program Pages</b>	<b>Page</b>
<b>1</b>	<b>Code and name of the educational program</b>	<b>4</b>
<b>2</b>	<b>Code and classification of the field of education, areas of study</b>	<b>4</b>
<b>3</b>	<b>Group of educational programs</b>	<b>4</b>
<b>4</b>	<b>Volume of loans</b>	<b>4</b>
<b>5</b>	<b>Form of study</b>	<b>4</b>
<b>6</b>	<b>Language of instruction</b>	<b>4</b>
<b>7</b>	<b>Degree awarded</b>	<b>4</b>
<b>8</b>	<b>Type of OP</b>	<b>4</b>
<b>9</b>	<b>ISCED level</b>	<b>4</b>
<b>10</b>	<b>Level NQF</b>	<b>4</b>
<b>11</b>	<b>Level OQF</b>	<b>4</b>
<b>12</b>	<b>Distinctive features of OP</b>	<b>4</b>
	<b>Partner university (SOP)</b>	<b>4</b>
	<b>Partner university (DDOP)</b>	<b>4</b>
<b>13</b>	<b>Number of the application to the license for the direction of personnel training</b>	<b>4</b>
<b>14</b>	<b>Name of the accreditation body and the period of validity of accreditation OP</b>	<b>4</b>
<b>15</b>	<b>PurLOse of OP</b>	<b>4</b>
<b>16</b>	<b>Qualification characteristics of a graduate</b>	<b>4</b>
	<b>a) List of graduate LOsitions</b>	<b>4</b>
	<b>b) Sphere and objects of professional activity of the graduate</b>	<b>4</b>
	<b>c) Types of professional activity of the graduate</b>	<b>4</b>
	<b>d) Functions of the professional activity of the graduate</b>	<b>4</b>
<b>17</b>	<b>Graduate Model 19</b>	<b>18</b>

- 1. Code and name of the educational program:** «7M01407 Vocational Education»
- 2. Code and classification of the field of education, areas of training:** 6B01 Pedagogical sciences
- 3. Group of educational programs:** B07 - Training of teachers of art and drawing
- 4. Volume of credits:** 240 ECTS
- 5. Form of study:** Full-time
- 6. Teaching language:** Russian
- 7. Awarded degree:** Bachelor of Education in EP «6B01407 Vocational Education»
- 8. Type of OP:** current
- 9. ISCED level:** ISCED level - 6
- 10. NQF level:** 6
- 11. ORC level:** 6
- 12. Distinctive features of the OP:** no
- 13. Application number for the license for the direction of personnel training:** KZ83LAA00018495 (016) dated 07/28/2020
- 14. Name of the accreditation body and the period of validity of the EP accreditation:** - SA -A No. 0156/1 of NAOKO agencies, 05/27/2019 - 05/24/2024
- 15. The purpose of the EP:** Training of bachelors of education engaged in pedagogical activities in educational institutions of general secondary, technical and vocational education.
- 16. Qualification characteristics of the graduate**
  - a) List of graduate LOsitions:** List of qualifications and LOsitions: teacher of special disciplines in the TVE system, master of industrial training, teacher of artistic work, teacher of additional education, methodologist
  - b) The scope and objects of the graduate's professional activity:** colleges, higher colleges, secondary schools, training centers, institutes for advanced training and retraining of teaching staff, departments of education
  - c) Types of professional activity of the graduate:**
    - educational - organization of the process of training and education in the system of general education, technical and vocational education; design and management of the pedagogical process; diagnostics, correction, forecasting of the results of pedagogical activity;
    - organizational and technological - study, generalization, dissemination of the experience of innovative pedagogical and technological training;
    - production and management - organization and management of educational and technological processes in the system of general education, technical and vocational education;
    - research - organization and conduct of scientific research in the field of professional pedagogy.
    - cultural and educational - organization of educational work with young students in the field of early profiling for working specialties and teaching professions for the system of general education, technical and vocational education.
  - d) Functions of the professional activity of the graduate:**
    - teaching: broadcasts educational information, teaches to independently acquire knowledge, designs training sessions taking into account the linguistic needs and requests of students, uses new teaching technologies, including ICT, etc.;

- educating: introduces students to the system of social values, observes pedagogical tact, the rules of pedagogical ethics, shows respect for the personality of students, builds an educational process taking into account the national priorities of Kazakhstan, etc.;
- methodical: provides methodological support for the educational process, plans to improve their skills, determines methods and techniques, develops educational materials in accordance with the specified objectives of the classes, etc.;
- research: studies the level of mastering the content of education by students, explores the educational environment, uses the results of diagnosing the individual characteristics of students;
- social and communicative: interacts with the professional community and with all interested parties in education, initiates innovative ideas that unite education stakeholders, etc.

## **17. Graduate model.**

### Formulation of learning outcomes based on competencies

Type of competencies	Code of learning outcomes	Learning Outcome (according to Bloom's Taxonomy)
1. Behavioral skills and personal qualities: (Softskills)	LO 1	It applies knowledge about society as an integral system and a person, the role of spiritual processes in modern society, the legal interests of the parties in the field of protecting the rights of individuals and legal entities, the economic and social conditions for doing business, the impact of harmful and dangerous factors on a person and the natural environment.
	LO 2	Approves in his professional activity his own civic position on the priorities of competitiveness, pragmatism, mutual understanding, tolerance and democratic values of modern society
2. Digital competencies: (Digitalskills):	LO3	Performs design and engineering calculations for educational and industrial facilities, including using modern ICT, solves engineering problems
	LO 4	Carries out the pedagogical process in the systems of secondary general, TVET, additional professional education using modern learning technologies
3. Professional competencies: (Hardskills)	LO5	Explains the activity, student-oriented and technological approaches in the organization, planning and management of the pedagogical process in the systems of secondary general, TVE, additional professional education
	LO 6	Reads and draws up engineering drawings, diagrams and graphs, performs calculations of limit sizes and tolerances according to the drawing data, determines the readiness of the given actual parameters
	LO 7	Organizes the work of the services of motor transport enterprises in order to ensure the transportation process / Performs technological operations for nodal processing of fabric
	LO 8	Diagnoses the operation of transport units / Designs, models and manufactures garments
	LO9	Produces objects and products of arts and crafts / Organizes living space
	LO10	Demonstrates drawing and painting techniques

Definition of modules of disciplines in accordance with learning outcomes

Code of of learning outcomes	Name of module	Name of disciplines	Volume (ECTS)
LO1	Worldview bases of modernization of public consciousness	Modern History of Kazakhstan (HE)	5
		Philosophy	5
LO2		Applied Business	5
LO3	Socio-political knowledge	Fundamentals of law and anti-corruption culture	4
		Ecology and basics of life safety	4
LO3	Information and communication	Political Science, Sociology	5
		Culturology, Psychology	10
LO4		Information and Communication Technologies (in English)	10
		Kazakh language	8
LO7	Fundamentals of pedagogical training	Foreign language	4
		Physical Culture	5
		Anatomy, physiology and hygiene of schoolchildren	5
		Pedagogy	5
		Management in education	2
		Inclusive education	4
LO10	General technical	Educational	5
		Pedagogical	5
		descriptive geometry	5
		Engineering graphics	5
		Structural materials technology	5
LO5	Scientific and pedagogical	Materials Science	5
LO7		Theoretical foundations of mechanical engineering	5
LO8		Technical mechanics	5
LO10		Metrology, standardization and certification	5

LO1 LO6 LO7 LO8 LO9	Methodological and technological	Occupational Safety and Health	6
		Electrical Engineering and Fundamentals of Electronics	5
		Fundamentals of hydraulics and pneumatics	5
		Modern technologies in vocational training	6
		Pedagogical Research in Vocational Education	5
		Fundamentals of scientific research in the system of technical and vocational education	6
		Organization of additional professional education	6
		Fundamentals of Media Education	6
		Industrial aesthetics	4
LO11	Professionally oriented	Ergonomics	5
		Introduction to the profession	5
		Fundamentals of educational work in the system and vocational education	5
		Effective communication in the vocational education system	15
		Pedagogical excellence	3
LO12	Maintenance and repair of vehicles (MINOR)	Organization of industrial training	5
		Dual training in vocational education	5
		Professional Pedagogy	5
		Vocational training methodology	5
LO4	Distance learning technologies	Fundamentals of Designing Pedagogical Software in Vocational Education	4
		Information and methodological support of online platforms	4



### Achievability Matrix of Learning Outcomes

Renewability, Nature of Learning Outcomes															
№	Name of disciplines	Brief description of the discipline	Qty of credits	Generated learning outcomes (codes)											
				LO1	LO 2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12
Cycle of general education disciplines Selectable Component															
D 1	Applied business	The legal essence of entrepreneurial activity and its features. Types of business entities. State registration and liquidation of entities. Bankruptcy. Contracts in business activity. Stages of creating your own business. Search for business ideas, the main stages of business planning. Development and search for sources of financing for a business plan. Business risks and their neutralization. Evaluation of the effectiveness of your own business. Optimization of operational and business processes.	5	+	+										
	Fundamentals of law and anti-corruption culture	Theoretical and methodological foundations of the concept of «corruption», «corruption behavior». Psychological features of the nature of corrupt human behavior. Features of the formation of anti-corruption culture of youth. Legal liability for acts of corruption. Moral and ethical responsibility for acts of corruption in various fields of activity.		+		+									
	Ecology and basics of life safety	Safe human interaction with the environment, protection from negative factors in extremely dangerous situations, forecasting possible extreme situations in the domestic, social, industrial spheres, making competent decisions in the event of natural and man-made emergencies.		+		+									
Cycle of basic disciplines University component															
D 2	Anatomy, physiology and hygiene of preschoolers	Anatomical and physiological features of preschool children, the study of periods of their development. Subject, content, tasks, significance of biological sciences in the training of specialists. The impact on children of various environmental conditions, natural and artificial conditions that favor their growth and development, and health promotion.	4	+						+					
D 3	Pedagogy	Methodological foundations of pedagogy. Development, education and socialization of the individual. Education system in the Republic of Kazakhstan. The essence of the pedagogical process at school, its laws and principles. Theory of education. Patterns and principles of education. Means, forms and methods of education. The team as a means of education. General concept of didactics and its main categories. Laws, patterns and principles of learning.	5					+		+					
D 4	Management in education	Tasks and principles of organization of preschool education. Basic principles of state policy in the field of preschool education. Kindergartens and their organization. Financing the system of preschool organizations. Fundamentals of management in a preschool organization. The methodologist is the organizer of the teaching staff of the preschool organization. Methods of managing a preschool organization. Planning the work of a preschool organization.	5		+					+					

D 5	Inclusive education	Models of inclusive education. Inclusion of children with sensory, motor, intellectual disabilities, disorders of the emotional and volitional sphere in the pedagogical process of a preschool organization. Variable forms of inclusion of persons with disabilities in the general educational process. Legal basis for organizing an inclusive process in a preschool organization. Organization of psychological and pedagogical support for children with disabilities in a preschool organization.	5						+		+					
D 6	Modern technologies in vocational training	The totality of techniques is the area of pedagogical knowledge, reflecting the characteristics of the deep processes of pedagogical activity, the features of their interaction, the management of which ensures the necessary efficiency of the educational process. Organization and design of the pedagogical process in the TVET system using modern teaching technologies. The totality of forms, methods, techniques and means of transferring social experience, as well as the technical equipment of this process.	5								+		+			
D 7	Introduction to the profession	The history of the formation and development of the teaching profession for the TVET system. Characteristics of the educational program «6B01407 Vocational training». The essence and variety of types of pedagogical activity in the system of technical and vocational education. Qualification characteristics of a teacher, master of industrial training. Requirements for ensuring the quality of the educational process. The purpose of the curriculum. Individual curriculum.	6							+	+	+				
D 8	Fundamentals of educational work in the system of technical and vocational education	Educational process: its purpose and essence. The modern paradigm of education in the system of technical and professional education. Basic concepts of the system of educational work and management of the system of educational work. Features of educational activities in the system of technical and vocational education. Strategies, methods and techniques for organizing educational work in the system of technical and vocational education.	5								+		+			
D 9	Effective communication in the vocational education system	Organization of communication space. The main subjects of the educational process are students, teachers and administration. Disciplinary organization of communicative interaction developing in the space of the educational process. Formation of communication skills. The ability to determine the psychological distance and the level of trust in relations between its subjects, depending on the goals of communication. Techniques for effective communication.	5	+							+					
D 10	Pedagogical excellence	The concept of the professional competence of the teacher. The content of pedagogical skills and ways of its formation. The problem of pedagogical skill and the main directions of achieving professionalism in pedagogical activity. Pedagogical skill as a system. Pedagogical technique, its components. Culture and technique of speech. Pedagogical communication: styles, functions, methods and techniques. Pedagogical tact: essence and content. pedagogical abilities.	6	+							+	+				
Cycle of basic disciplines Selectable Component																
D 11	Geometry	Subject and methods of descriptive geometry. Designations and symbols. Solution in the drawing of positional problems for the relative position of points, lines and planes. Method of projections. Formation of projections. Theoretical foundations for constructing images, points, straight lines, planes and certain types of lines and surfaces. General concepts about the types of connections of parts and the features of their representation in the drawings.	5		+										+	

	Engineering graphics	Brief historical information about the development of graphics. Drawing formats. The main text of the drawing. Drawing lines. Information about standard fonts and the design of letters and numbers. Geometric figures. Geometric bodies. Rules for the design of drawings. Methods for solving problems of a geometric nature according to given images and applying images of spatial forms on a plane. Methods for constructing images of simple objects.			+								+		
D 12	Structural materials technology	Properties and structure of metals and alloys used in mechanical engineering. Fundamentals of metallurgical production. Crystallization of metals. Iron and its alloys. State diagram of an iron-carbon alloy. Nonferrous metals. Aluminum, magnesium and their fibers. Methods for obtaining metals. Structural steel and alloys. Cast iron, their structure and types. non-metallic materials. Fuel and waste.	5		+								+		
	Materials Science	Structure and properties of materials. Fundamentals of the theory of double alloys. Fundamentals of heat treatment of alloys. Surface hardening of parts. Alloy steels. Modern construction and tool materials. Progressive technological methods for obtaining products and machine parts. Fundamentals of the structure of materials, the formation of their properties and the purpose of the field of application.			+								+		
D 13	Theoretical foundations of mechanical engineering	Introduction to mechanical engineering. The concept of a machine. Machine performance criteria. Parts and components of machines. Connections of machine parts. Principles of motion transformation. mechanical transmissions. Theoretical foundations of the action of energy machines. Ways of heat distribution. Types of heat transfer. The main stages in the design of machines. Fundamentals of calculation of structural and strength parameters of parts and assemblies.	5		+								+		
	Technical mechanics	The subject of theoretical mechanics. The concept of a material point. Space and time in theoretical mechanics. The concept of strength. force examples. Direct and inverse problems of mechanics. Theoretical mechanics (statics, kinematics; dynamics). Strength of materials (tension and compression, torsion, bending, strength theories, complex resistance)			+								+		
D 14	Metrology, standardization and certification	Legislative and regulatory framework. Meaning. Types and categories of documents. Technical regulations, their status and application procedure. The procedure for the application of interstate, international and national standards, documents on standardization, metrology, certification. Certification of quality systems. Product quality management systems, their development and application. State control and supervision of compliance with the requirements.	5		+								+		
	Occupational Safety and Health	Identification and impact on a person of negative factors of the production environment. Protecting a person from harmful and dangerous production factors. Providing comfortable working conditions. Psychological and ergonomic foundations of labor safety. Office of labor safety. First aid to the injured.			+								+		
D 15	Electrical Engineering and Fundamentals of Electronics	Fundamentals of the theory of electrical circuits of direct, alternating and three-phase currents. Fundamentals of the theory of magnetic circuits; device and principle of operation of the transformer and electrical machines. The most important provisions of metrology and the main methods of electrical measurements, the principle of operation, device, metrological and operational characteristics of electrical measuring instruments. General rules for the operation of semiconductor devices and integrated circuits.	5		+								+		

	Fundamentals of hydraulics and pneumatics	Basic concepts of hydraulic drive. Hydraulic fluids. Hydraulic pumps and hydraulic motors: classification, device, principle of operation and basic parameters. Control mechanisms, distribution and protection of hydraulic drives, their purpose, types and principle of operation. Operation of hydraulic systems. Brief description and classification of pneumatic motors. The device of pneumatic cylinders, pipelines, connections.			+									+		
D 16	Pedagogical Research in Vocational Education	General characteristics of psychological and pedagogical research. Modern strategy of renewal and development of education. The concept of psychological and pedagogical research. Nature and functions of educational innovations. Theoretical foundations and problems of modern psychological and pedagogical research in the system of vocational education. Organization of experimental research work in educational institutions of technical and vocational education.	5			+				+						
	Fundamentals of scientific research in the system of technical and vocational education	The concept of scientific research. Types of research. Stages of research work. Method and methodology of scientific research. Methodology of research, methodological approaches in education; levels of methodological knowledge; modern directions of pedagogical research in the field of education; the structure and content of scientific research in the field of education.				+				+						
D 17	Organization of additional professional education	The Fundamentals of Additional Professional Education is aimed at a purposeful continuous increase in the professional knowledge of citizens throughout their lives, including for the purpose of timely compliance with the requirements of the labor market. Vocational training programs for organizations of additional education. Forms of additional education organizations: funds; institutions; autonomous non-profit organizations, etc.	5			+					+					
	Fundamentals of Media Education	Socio-political context of the development of media literacy in Kazakhstan. The history of media culture in the education system. Basic terminology of media culture Basic concepts and principles of media and information literacy. Combining the concepts of media and information literacy. The role of critical thinking in the evaluation and diagnostics of information: methods and technologies.					+	+								
D 18	Industrial aesthetics	Content and external form in technology. Fundamentals of composition. Proportions and proportions. types of proportions. Scale and scale. Forms of scale connections. Symmetry and asymmetry, static and dynamic. Metric and rhythmic series of repetitions. Contrast and nuance. visual illusions. Principles and methods of artistic design. Design stage.	5	+										+		
	Ergonomics	Subject, content and objectives of the course. The goal of ergonomics. Ergonomic requirements. Ergonomic properties. Ergodesign. Classification of ergonomic methods. Organizational ways of obtaining scientific data. Anthropometric characteristics of a person and requirements for the design of a workplace. The main dangerous and harmful production factors.		+										+		
D 19	Organization of industrial training	General foundations of the theory of vocational (industrial) training. The essence and specific features of the process of industrial training of students in the system of technical and vocational education. The system of organizing forms of industrial training. Methods of organizing industrial training for students in the system of technical and vocational education.	5					+		+	+					

	Dual training in vocational education	Dual system of vocational training as a form of personnel training. Conditions of real production for mastering the profession by students of different levels of professional training. Dual system: combining theoretical and practical training in the educational process, supplementing theory in an educational institution with practical training at a manufacturing enterprise, a future place of employment.							+		+	+				
D 20	Costume composition	Artistic design of clothes as a field of arts and crafts and design. Man, clothes, environment and the process of artistic design. Artistic and design analysis of clothing. Illusions of vision and their use in design. Artistic systems in costume design. Creative sources and their use in costume composition.	5											+	+	
	Architecture of residential and public buildings	General information about the architecture of residential and public buildings. The concept of the living environment and the regulatory framework for housing design Types of residential buildings. Types of residential development and principles of taking into account natural and climatic factors in the design of a dwelling Functional zoning of a dwelling and the interconnection of premises is the basis for design. Typological features of multi-storey residential buildings.											+	+		
D 21	Building materials and products	The subject and tasks of building materials science. The structure and basic properties of building materials. Natural stone materials and raw materials for the production of building materials from rocks. Materials obtained by heat treatment of mineral raw materials. inorganic binders.	5											+	+	
	Design and modeling of garments	General information about clothes. Classification of modern clothes. General information about the structure of the human body. The main functions, classification and requirements for clothing. General characteristics and classification of methods for constructing sweeps of clothing details. Initial data for designing clothes. Construction of drawings for the design of shoulder clothing. Construction of drawings for the design of waist clothing.											+	+		
D 22	Resource saving during maintenance and current repair of cars	Maintenance and repair as consumers of resources. Types of resources and their classification. Logistics and resource saving. Structure and channels of logistics. Resource saving in the system of technical operation, general principles of saving resources. Organization and technology of saving resources of technological processes.	5											+		+
	Maintenance and repair of motor vehicles	Vehicle maintenance and repair system. The quality and reliability of cars. Vehicle failures. Scheduled preventive maintenance and repair system for vehicles. Tasks and types of diagnostics. General principles and concepts of resource-saving policy. Economy of motor fuel. Rational use of lubricant resources.											+		+	
Cycle of major disciplines University component																
D 23	Professional Pedagogy	Scientific and theoretical foundations of professional pedagogy. Pedagogy differentiation. Professional Pedagogy as an Academic Subject and a Branch of Pedagogical Science The content of vocational training. Forms of vocational training. The essence and structure of the pedagogical process. Principles of vocational training. Training and retraining of vocational education teachers.	6								+	+				
D 24	Vocational training methodology	The content of vocational training. Curricula and programs of theoretical training. The main forms of organization of theoretical training. Structure and types of theoretical training classes. Planning and achieving educational goals in the classroom. The	6								+	+	+			

		specifics of theoretical teaching methods in the study of general technical disciplines. The process of industrial training and its specific features. Forms of organization of industrial training. Industrial training methods.													
D 25	Organization of distance learning in the system of technical and vocational education	The concept of distance learning in the system of school education. Technical requirements for the organization of distance learning. Pedagogical principles of organization of distance education. Ways to organize the educational process in online and offline modes. Methods of distance education. The main types of distance learning: video lectures, conferences, webinars, chats. Organization of Internet events: olympiads, festivals, competitions, network projects.	4				+		+						
D 26	Platforms and services for distance learning	Fundamentals of distance learning: Models and technologies of distance learning; Platforms for videoconferencing, video meetings, webinars; Distance Learning Systems (LMS). Development of educational content for distance learning: Services for creating educational multimedia presentations. Services for creating surveys and tests. Online services for creating interactive tasks. Interactive worksheet builders. Audio and video processing tools. Course builders.	4				+		+						
Cycle of major disciplines Selectable Component															
D 27	Fundamentals of Designing Pedagogical Software in Vocational Education	Characteristics of pedagogical software and educational and developmental software environments. Concept: electronic didactic material. Stages of designing electronic didactic material. Development of educational and methodological documentation using IT technologies: electronic methodological recommendations, electronic teaching aids, multimedia presentations, etc.	6				+	+	+						
	Information and methodological support of online platforms	Development of educational programs, tasks for the system of technical and vocational education, as well as additional general education programs using e-learning and distance learning technologies. Didactic possibilities of information and communication technologies in the educational process. Information activity and information interaction in the distance learning system.					+		+						
D 28	Manufacturing technology of garments with a workshop	Making connecting, edge seams. Making finishing seams. Production of knots and details of garments. Preparation of cuff details. Manufacture of cuffs. Production of belts, straps. Making an inlay pocket, in a seam, with a leaflet The process of making garments. Wet heat treatment in the manufacture of garments.	5										+	+	
	Technology of building and assembly production with a workshop	Basic provisions of technology and organization of building production. Organizational forms of building production. Organizational and technical preparation of construction production. Construction organization design. Types and purpose of building materials; properties of building materials and conditions for their use; technological processes for obtaining materials.											+	+	

D 29	Theory of cars and engines	Fundamentals of the theory of wheel rolling. Wheel rolling resistance. The adhesion of the wheel to the ground. Thermodynamic cycles in reciprocating engines. Actual operating cycles of internal combustion engines. Actual ICE cycles. Indicators of working cycles. Factors affecting the efficiency of internal combustion engines. Characteristics and stability of the internal combustion engine. Design and calculation of internal combustion engines.	5											+		+
	Car mechanism	AT classifications and principles of their construction; AT indexing; AT device at the level of the main subsystems; purpose and technical functions of the main AT subsystems; operating conditions and service of machines; theoretical foundations of automatic control and regulation, the device and principle of operation of the main local systems of automatic control of a car.												+		+
D 30	Car service and corporate service	History and analysis of the development of the auto maintenance system in the Republic of Kazakhstan. Purpose and content of the technological process of maintenance and repair of vehicles at service stations. Features of service maintenance of cars during the warranty period. The purpose and main characteristics of the technological equipment used in the service of the car.	5											+		+
	Vehicles	General arrangement of vehicles. The main operational properties of the car. The working process and the main parameters of motors (internal combustion engines) of vehicles. Speed properties of motor vehicles. Electrical equipment of vehicles. Vehicle power transmission systems. Brake system of vehicles. Development of the theory of operational properties of the car.												+		+
D 31	Transport psychology	Direction of transport psychology. Basic definitions. Systems "man-machine" and "driver-car". Psychophysiology of labor of a car driver. The concept of operator reliability. Suitability. Preparedness. Working capacity. Factors affecting the reliability of the driver. Anatomical and physiological foundations of the psyche. Psychophysiological features of driving. Professional selection of car drivers.	5											+		+
	Organization and traffic safety	Motorization and road traffic. The main directions and structure of activities to ensure road safety. Vehicle design features that ensure traffic safety. Influence of road parameters on vehicle traffic safety. The principles of traffic control and the technical means used for this. Principles of organization of work on the prevention of road accidents.												+		+

**Certification program (minor) «Operation and repair of vehicles»**

Name of the module	Semesters, disciplines						
	1	2	3	4	5	6	7
Operation and repair of automobiles (MINOR)			Theory of automobiles and engines / Device of automobiles		Resource saving during maintenance and current repair of vehicles/Maintenance and repair of motor vehicles	Car service and branded services/Vehicles	Transport psychology/Organization and traffic safety



### Aligning planned learning outcomes with teaching and assessment methods within the module

Learning Outcomes	Planned learning outcomes for the module	Teaching methods	Assessment methods
LO1	Applies knowledge and understanding about society as an integral ecological system and a person, the role of historical processes in modern society, using the principles of effective communication to achieve professional and pedagogical goals	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO2	Owens methods and techniques for organizing business activities and procedures for making managerial decisions based on professional diagnostics and creative abilities of students, contributing to the optimization of the pedagogical and production activities of the enterprise (according to the profile)	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO3	Approves in his professional activity his own civic position on the priorities of competitiveness, pragmatism, mutual understanding, tolerance and democratic values of society and understanding the importance of the socio-biological foundations of physical culture, academic writing and speech	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO4	Knows information and communication technologies in the field of vocational education, using online services and platforms for distance learning	Teaching methods in higher education. Strategies for the formation of critical thinking	Project, presentations, test
LO5	Uses the terminology of media culture, applying the concepts of media and information literacy	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO 6	Develops information and methodological materials based on the capabilities of information and communication technologies for the educational process in the TandPE system	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO 7	Applies knowledge and understanding of pedagogical categories at the managerial level, taking into account age, physiological and inclusive issues in the system of vocational education, using modern teaching technologies and research methods	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO 8	Carries out professional activities on the basis of pedagogical technology and its components within the framework of dual training, student-centered and team approaches, both for the system of professional and additional education	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO 9	Applies strategies, methods and techniques, modern teaching technologies both in educational and upbringing activities	Teaching methods in higher education. Strategies for the formation of critical thinking	Viseo, presentations, test
LO 10	Applies theoretical and practical knowledge when performing design and engineering calculations for educational and industrial purposes, solves engineering problems, observing the requirements of the principles of standardization, certification, organizational structure and structure of the state and international licensing and certification system.	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO 11	Demonstrates the implementation of the technological process of construction and assembly production / Demonstrates knowledge and understanding of the technological processes of manufacturing garments, including the stages of design and modeling.	Teaching methods in higher education. Strategies for the formation of critical thinking	presentations, test
LO 12	Applies theoretical and practical knowledge and understanding of vehicle maintenance and repair	Teaching methods in higher education	test

### Educational program graduate model

#### Graduate Attributes:

- Possesses competencies in the field of technical and vocational education
- Owns the methodology of professional training and strategies for the formation of critical thinking
- Able to organize and conduct scientific and pedagogical research
- Carries out organizational and managerial activities in organizations of technical and vocational education
- Emotional intelligence
- Social intelligence

Types of competencies	Description of competencies
1. Behavioral skills and personality traits (Softskills)	Demonstrates relevant knowledge of modern history and philosophy of science, applied natural sciences that contribute to the implementation of the main directions of modernization of public consciousness, using the norms of speech etiquette in the professional field of communication, and is also able to apply the main methods and models of commercialization of innovative technologies
	Owns the technologies for the creation of a lecture or a course, using modern information technologies in science and education and demonstrates competencies in the development of the digital environment in the system of technical and vocational, higher education Has a fundamental psychological and pedagogical training, using innovative approaches in teaching and learning, uses various forms and methods in the course of classes, including in English. Able to design and analyze the management of a holistic pedagogical process of educational organizations on the basis of legal documentation, solves research and practical problems, including in interdisciplinary areas
2. Digital competencies (Digitalskills)	Owns information and communication technologies in the field of vocational education, using online services and platforms for distance learning. Uses the terminology of media culture, applying the concepts of media and information literacy in the field of technical and vocational education. Applies knowledge and understanding of pedagogical categories, taking into account age, physiological and inclusive issues in the system of vocational education, using modern teaching technologies and research methods. Carries out professional activities on the basis of pedagogical technology and its components within the framework of dual training, student-centered and team approaches, both for the system of professional and additional education.
3. Professional competencies (Hardskills)	Applies theoretical and practical knowledge when performing design and engineering calculations for educational and industrial purposes, solves engineering problems, observing the requirements of the principles of standardization, certification, organizational structure and structure of the state and international licensing and certification system. Demonstrates the implementation of the technological process of construction and installation production / Demonstrates knowledge and understanding of technological processes for the manufacture of garments, including the stages of design and modeling. Applies theoretical and practical knowledge and understanding of the maintenance and repair of motor vehicles.

#### Developed by:

Members of the working group:

Head of the department, assistant professor

Ph.D., Professor

Art. lecturer, master

3rd year student of the EP «7M01407-Vocational Education»

The educational program was considered by the faculty council from 18.03.2022 Protocol No. 8

The educational program was considered at a meeting of the Academic Council dated 28.04.2022 protocol No. 3

The educational program was reviewed and approved at a meeting of the University Board dated 28.05.2022 minutes No. 12

Member of the Board - Vice-Rector for Academic Affairs

Director of the Department for Academic Affairs

Faculty Dean

A.Sh.Manabayeva  
G.S.Shramanova  
G.A. Akhmetzhanova  
Yu. Mazitova

T.Z.Zhusipbek  
G.S.Akybayeva  
M.M. Imanbekov

**Criteria for assessing the achievability of learning outcomes**

<b>Codes of LO</b>	<b>Criteria</b>
<b>LO 1</b>	<b>Knows:</b> theoretical foundations of modern history and philosophy of science, applied natural sciences
	<b>Can:</b> demonstrate current knowledge of modern history and philosophy of science, applied natural science disciplines
	<b>Owns:</b> competencies that contribute to the implementation of the main directions of modernization of public consciousness
<b>LO 2</b>	<b>Knows:</b> theoretical foundations of speech etiquette in the professional field of communication
	<b>Can:</b> use the norms of speech etiquette in the professional field of communication
	<b>Owns:</b> norms of speech etiquette in the professional field of communication
<b>LO 3</b>	<b>Knows:</b> theoretical aspects of the main methods and models of commercialization of innovative technologies
	<b>Can:</b> apply methods and models of commercialization of innovative technologies
	<b>Owns:</b> basic methods and models of commercialization of innovative technologies
<b>LO 4</b>	<b>Knows:</b> the theory of the technological process of creating electronic educational resources
	<b>Can:</b> create electronic educational resources
	<b>Owns:</b> technologies for creating electronic educational resources
<b>LO 5</b>	<b>Knows:</b> the theory of modern information technologies in science and education
	<b>Can:</b> use modern information technologies in science and education
	<b>Owns:</b> strategies of modern information technologies in science and education
<b>LO 6</b>	<b>Knows:</b> theoretical foundations for the formation of a digital environment in the system of vocational education
	<b>Can:</b> organize events for the development of the digital environment in the system of vocational education
	<b>Owns:</b> competencies for the development of the digital environment in the system of vocational education
<b>LO 7</b>	<b>Knows:</b> the basics of pedagogy and psychology
	<b>Can:</b> use the knowledge gained in pedagogy and psychology in practical activities
	<b>Owns:</b> psychological and didactic competencies
<b>LO 8</b>	<b>Knows:</b> innovative approaches in teaching and self-learning
	<b>Can:</b> applies various forms and methods in the course of classes, including in English
	<b>Owns:</b> competencies for the implementation and use of innovation in the system of vocational education
<b>LO 9</b>	<b>Knows:</b> the basics of legal documentation of the vocational education system
	<b>Can:</b> use the basics of regulatory documentation in the process of designing and analyzing the management of a holistic pedagogical process of educational organizations
	<b>Owns:</b> the skills of designing and analyzing the management of a holistic pedagogical process of educational organizations based on legal documentation
<b>LO 10</b>	<b>Knows:</b> methodological problems arising in solving research and practical problems
	<b>Can:</b> solve research and practical problems, including in interdisciplinary areas
	<b>Owns:</b> research competencies in the field of professional pedagogy

**EDUCATIONAL PROGRAM DEVELOPMENT PLAN**  
**«7M01401 – VOCATIONAL TRAINING»**

The purpose of the Plan is to contribute to improving the quality of the conditions for the implementation of the educational program, taking into account the current requirements of the labor market and the achievements of modern science.

**Target indicators**

№	Indicators	Ed. ed.	2022-2023 (in fact)	2023-2024 (plan)	2024-2025 (plan)	2025-2026 (plan)
<b>1</b>	<b>Human resources development</b>					
1.1	Increase in the number of teachers with academic degrees	Number of people	4	1	1	1
1.2	Advanced training in the teaching profile	Number of people	3	2	2	2
1.3	Involvement of practitioners in teaching	Number of people	-	1	1	1
1.4	Other	Number of people				
<b>2</b>	<b>Promotion of the OP in the ratings</b>					
2.1	NAOKO	Position	1	1	1	1
2.2	IAAR	Position	2	1	1	1
2.3	Atameken	Position	4	3	2	1
<b>3.</b>	<b>Development of educational and scientific-methodical literature, electronic resources</b>					
3.1	Textbooks	quantity				
3.2	Training manuals	quantity	1	1	1	1
3.3	Methodological recommendations/instructions	quantity	-	2	2	3
3.4	Electronic textbook	quantity	2	2	3	3
3.5	Video/audio lectures	quantity		1	1	1
3.6	Other	quantity				
<b>4.</b>	<b>Development of educational and laboratory facilities</b>					
4.1	Purchase of software products	quantity	-	1	2	2
4.2	Purchase of equipment	quantity	-	2	2	2



4.3	Other	quantity				
<b>5.</b>	<b>Updating the content of the OP</b>					
5.1	Updating the results of training and the list of disciplines taking into account the requirements of the labor market, scientific achievements, professional standards	Year	+	+	+	+
5.2	Introduction to the OP of academic disciplines in foreign languages*	Year	-	+	+	+
5.3	Introduction of new teaching methods	Year	+	+	+	+
5.4	Opening of a joint/two-degree program on the basis of the OP	Year	-	-	-	+
5.5	Other	Year				

Head of the Department of Fine Arts and Design



Manabaeva A.Sh.