

CATALOG OF ELECTIVE DISCIPLINES
For students in the direction of preparation 6B071 Engineering and engineering trades

Brief description of the elective disciplines of the educational program




EPG	EP	Form of education	The name of discipline	Code of subject	Discipline cycle	Component	Number of credits	Level of training	Faculty	Course	Academic period	Pre-requisites	Post-requisites	Brief content of the discipline	Key learning outcomes	Name of the alternative discipline
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Fundamentals of science	OED 1204	BS	Elective subjects	5.0	Bachelor	Physics and Chemistry	1	2	School Physics course	Engineering mathematics, Engineering mechanics (Statics, Dynamics), Mathematics	Fundamentals of natural sciences the basis of all modern technics and technology. The study of physics creates the foundations of theoretical training and the fundamental component of educational programs. The fundamental and basic laws of physics allow us to understand the natural phenomena taking place, to be aware of the ways and methods of their description, scientific research and rational processing of observational data	Master the basics of natural science disciplines. Apply physics as the basis of theoretical training and a fundamental component of educational programs. To study the fundamental and basic laws of physics, to understand the occurring natural phenomena, to know the ways and methods of their description, to analyze scientific research and rational processing of observation data.	Physics
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Physics	Fiz 1204	BS	Elective subjects	5.0	Bachelor	Physics and Chemistry	1	2	School Physics course	Engineering mathematics, Engineering mechanics (Statics, Dynamics), Mathematics	The discipline studies the basic physical phenomena, fundamental laws and concepts, as well as various fields of physics, introduces modern scientific equipment, forms the skills of conducting an experiment, the ability to highlight specific physical content in applied problems of a future specialty.	To study basic physical phenomena, fundamental laws and concepts, as well as methods of physical research. Apply techniques and methods for solving typical problems from various fields of physics, explain physical content in the applied tasks of the future specialty.	Fundamentals of science
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Basics of economics and law	OEP 1114	GER	Elective subjects	5.0	Bachelor	Economy	1	2	School biology course	Philosophy	The discipline promotes knowledge of the subject of economic theory and methods of research, the basis of public production and forms of public economy, the mechanism of functioning of the market system, production, costs and income of the firm, national economy. To master the basics of the theory of the state and law, the basics of constitutional, administrative, civil, labor, family, criminal law.	Analyze in a logical and quantitative way the conditions for the development of production and evaluate the competitiveness of created products on the principles of engineering, study innovative entrepreneurship and anti-corruption culture, formulate inventions	Basics of anti-corruption culture, Ecology and life safety fundamentals, Innovative entrepreneurship
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Innovative entrepreneurship	IP 1114	GER	Elective subjects	5.0	Bachelor	Economy	1	2	School biology course	Philosophy	Form students' knowledge of the fundamental concepts of innovative development, modern approaches to the implementation of entrepreneurial activity in the field of new technologies to ensure the competitiveness of an innovative enterprise on the market. Understand the economic essence of innovative entrepreneurship, business planning, venture financing and know the types of firms with venture capital.	Analyze in a logical and quantitative way the conditions for the development of production and evaluate the competitiveness of created products on the principles of engineering, study innovative entrepreneurship and anti-corruption culture, formulate inventions	Basics of anti-corruption culture, Basics of economics and law, Ecology and life safety fundamentals
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Basics of anti-corruption culture	OAK 1114	GER	Elective subjects	5.0	Bachelor	Economy	1	2	School biology course	Philosophy	The course forms a system of knowledge on combating corruption, and the development on this basis of a civil position in relation to this phenomenon. As a result of mastering the discipline, students will be able to: navigate the legislation; analyze and apply legal acts in specific situations, follow moral	Analyze in a logical and quantitative way the conditions for the development of production and evaluate the competitiveness of created products on the principles of engineering, study innovative entrepreneurship and anti-corruption culture, formulate inventions	Basics of economics and law, Ecology and life safety fundamentals, Innovative entrepreneurship
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Ecology and life safety fundamentals	EOBZh 1114	GER	Elective subjects	5.0	Bachelor	Ecology	1	2	School biology course	Labor protection and basics of life safety, Philosophy	The course forms practical skills in identifying dangerous and harmless natural conditions, in preventing the causes and conditions for the occurrence of dangerous situations, in protecting the population and the production facility from the possible consequences of dangerous situations. Features of labor protection for women and youth, supervision and control.	To be able to analyze the influence of environmental factors on the vital activity of living organisms and the environment; Possess the basics of economic and legal knowledge in the forestry sector, know and understand the goals and methods of state regulation of the economy. Evaluate and integrate the basic theories of motivation, leadership and power to solve strategic and operational management tasks, understand the importance of the principles and culture of academic integrity and anti-corruption culture.	Basics of anti-corruption culture, Basics of economics and law, Innovative entrepreneurship
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Environmental Chemistry	OOS 2211	BS	Elective subjects	5.0	Bachelor	Ecology	2	1	School biology course	Occupational safety and the basics of life safety, Philosophy	Environmental protection or nature protection, nature protection is a set of measures designed to limit the negative impact of human activity on the environment. The diversity of the impact of scientific and technological progress on the surrounding biosphere. Protection and improvement of the environment for the prosperity of our and future generations	Read types of design documentation and carry out drawings, diagrams in accordance with the requirements of ESKD standards, use computer programs for drawing up drawings. Perform work on the basis of labor laws and in accordance with the rules and regulations of labor protection, safety, industrial hygiene and fire protection.	Labor protection and basics of life safety
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Labor protection and basics of life safety	OTOBZh 2211	BS	Elective subjects	5.0	Bachelor	Mechanization of technological processes	2	1	School biology course	Occupational safety and the basics of life safety, Philosophy	The discipline contributes to the formation of students' knowledge, practical skills to create safe and harmless living conditions, to prevent the causes and prevention of dangerous situations, to protect the consequences of emergency situations. Supervision and control of the implementation of legislation and responsibility for violation of labor protection requirements.	Make calculations in heat engineering, thermodynamics and electrical engineering; choose the correct operation of electrical and thermal equipment, analyze hazardous and harmful production factors, study the environment and life safety requirements	Environmental Chemistry
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Engineering mathematics	IM 2205	BS	Elective subjects	5.0	Bachelor	Higher mathematics	2	2	Mathematics	Design and organization of technical service, Pre diploma practice	General information of mathematical description and modeling of various real phenomena and processes, combined disciplines combining elements of physics, mathematics, computer methods of calculation are focused on the application of established methods for the design and analysis of engineering solutions in the field of mechanical engineering.	The ability to plan and conduct experimental research, process experimental data and analyze the results obtained. Demonstrate readiness to conduct scientific research, calculation and technological work to substantiate the system of machines and equipment for the production of agricultural products. Possess the skills and ability to model, analyze, identify and solve technological and operational tasks by integrating knowledge, making judgments and making decisions	Discrete mathematics
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Discrete mathematics	DM 2205	BS	Elective subjects	5.0	Bachelor	Higher mathematics	2	2	Mathematics	Design and organization of technical service, Pre diploma practice	Knows all necessary sections of discrete mathematics: elements of mathematical logic, Boolean functions, sets and ways of their assignment, elements of combinatorics, Zhegalin polynomial, basics of graph theory, elements of coding theory. Applies rules of combinatorics, rules of mathematical logic, and graph theory. He is able to find power of a set, DNF, KNF, PDNF, PCNF.	Demonstrate knowledge of natural science disciplines. The ability to explain, formulate and use basic indicators for solving tasks, communication with other sciences and its practical significance. Demonstrate practical skills in building and reading drawings; solving various engineering and geometric problems, use production equipment. Demonstrate practical drawing and reading skills; solving various engineering and geometric problems, using the basic concepts and laws of mechanics, mechanisms, and production equipment.	Engineering mathematics
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Computer graphics	KG 2210	BS	Elective subjects	5.0	Bachelor		2	2	Descriptive geometry and engineering graphics, Computer science	Internship, Materials in engineering design, Technology of construction materials	Formation of knowledge of design documentation in accordance with standards, rules for constructing drawings of detachable and one-piece connections of parts and assembly units, developing the skills necessary to create and read technical drawings, perform sketches of parts, draw up design and technical documentation for production. Proficiency in working with computer drawing programs at a high level.	Demonstrate the skills of designing and calculating the structures of agrotechnological machines, substantiating the system of machines and equipment for cultivation, harvesting, storage and processing of crop and livestock products. Develop technical drawings with the requirements of the ESKD, possess the skills of modern computer-aided design, apply in practice the compliance of the developed projects and technical documentation, and other regulatory documents on the design and calculation of design development. To show the ability of logical and critical thinking, mathematical modeling of real processes and phenomena, calculations of internal combustion engines, schematics, design development, technological maps for the production of agricultural products	Draft execution automation,
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Draft execution automation,	AVCh 2210	BS	Elective subjects	5.0	Bachelor	Technical mechanics	2	2	Descriptive geometry and engineering graphics, Computer science	Internship, Materials in engineering design, Technology of construction materials	Study of the basic principles and methodologies of modern computer-aided design when creating electronic tools, methods and techniques for solving problems in the main sections of the discipline using design automation tools, creation of mathematical models of construction, automation of preparation and release of design and technological documentation: SolidWorks systems, Compass 3D, Altium Designer, T-Flex CAD.	Demonstrate the skills of designing and calculating the structures of agrotechnological machines, substantiating the system of machines and equipment for cultivation, harvesting, storage and processing of crop and livestock products. Develop technical drawings with the requirements of the ESKD, possess the skills of modern computer-aided design, apply in practice the compliance of the developed projects and technical documentation, and other regulatory documents on the design and calculation of design development.	Computer graphics
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Fluid and gas mechanics, hydro and pneumatic actuator	MZhGG P 3212	BS	Elective subjects	5.0	Bachelor	Technical service	3	2	Descriptive geometry and engineering graphics, Computer Science	Car theory, Tractors and cars	Methods of calculating the parameters of hydraulic machines, control and control elements; characteristics of hydraulic and pneumatic drives; calculate the characteristics of hydraulic machines, hydraulic drive; calculate the characteristics of the control and regulation of the hydraulic drive, read and make schemes of hydraulic and pneumatic drives; the main methods of calculation of hydraulic machines and controls and regulation of hydraulic drives	Ability to develop design, technological, engineering and design estimates for the creation and repair of transport equipment. Critical understanding and analysis of solutions and consequences forecasting, planning and implementation of transport tasks and projects Ability to prevent conflict situations in interaction with enterprises, mass media and act as a mediator in conflict resolution	Pneumatic and hydraulic drives

B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Pneumatic and hydraulic drives	PGP 3212	BS	Elective subjects	5.0	Bachelor	Mechanization of technological processes	3	2	Descriptive geometry and engineering graphics, Computer Science	Industrial practice, Automobile theory, Tractors and automobiles	Possess the skills of calculating the basic parameters of vane and volumetric pumps, hydrodynamic gears, volumetric hydraulic and pneumatic drives used in transport and transport-technological machines; application of methods and means of measuring the characteristics of fluid and air flows. Study of technological equipment using hydraulic and pneumatic drives, classification of hydropneumatic machines and drives, features of hydraulic and pneumatic systems.	Make calculations in heat engineering, thermodynamics and electrical engineering; choose the correct operation of electrical and thermal equipment, analyze hazardous and harmful production factors, study the environment and life safety requirements	Fluid and gas mechanics, hydro and pneumatic actuator
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Materials in engineering design	MIP 3213	BS	Elective subjects	5.0	Bachelor	Technological machines and equipment	3	2	Descriptive geometry and engineering graphics, physics, chemistry, fundamentals of agricultural machinery, information and communication technologies.	Car theory, Internship, Pre diploma practice, Tractors and cars	The studying of the basics of design and engineering activities in mechanical engineering, which allows students to solve a wide range of practical problems related to the design of machine structures using the most modern scientific achievements, technologies and technical solutions in the field of engineering technical developments.	Demonstrate knowledge of natural science disciplines. The ability to explain, formulate and use basic indicators for solving tasks, communication with other sciences and its practical significance. Demonstrate practical skills in constructing and reading drawings; solving various engineering and geometric problems, use basic concepts and laws of mechanics, principles for studying elements of machines, mechanisms, production equipment	Technology of construction materials
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Technology of construction materials	TKM 3213	BS	Elective subjects	5.0	Bachelor		3	2	Descriptive geometry and engineering graphics, physics, chemistry, fundamentals of agricultural machinery, information and communication technologies.	Car theory, Internship, Tractors and cars	The ability to possess knowledge of the structure of the composition and properties of various materials (metals and nonmetals) to understand the technologies and methods of obtaining materials processing, using modern machines, machines and equipment to solve design, operational, experimental, research and design problems.	Demonstrate knowledge of natural science disciplines. The ability to explain, formulate and use basic indicators for solving tasks, communication with other sciences and its practical significance. Demonstrate practical skills in building and reading drawings; solving various engineering and geometric problems, use basic concepts and laws of mechanics, principles to study the elements of machines, mechanisms, and production equipment. Demonstrate practical drawing and reading skills, solving various engineering and geometric problems, using the basic concepts and laws of mechanics, principles to study the elements of machines, mechanisms, and production equipment.	Materials in engineering design
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Electrical engineering and electronics	EE 3214	BS	Elective subjects	5.0	Bachelor	Electro- supply	3	2	Descriptive geometry and engineering graphics, physics, chemistry, fundamentals of agricultural machinery, information and communication technologies.	Organization of research work, Pre-graduate practice, Industrial practice	To study linear electric circuits of direct current, linear electrical circuits of single-phase sinusoidal current, three-phase circuits, concepts of nonlinear circuits and transients, magnetic circuits and transformers.	To study the basic concepts of the laws of engineering mechanics, mechanics of materials, robotics and safety measures. To organize the production process, operation of modern agricultural machinery with the introduction of innovative technologies and with the creation of business entities. Make calculations on thermal engineering, thermodynamics and electrical engineering; choose the correct operation of electrical and thermal equipment, analyze dangerous and harmful factors of production, study ecology and life safety requirements.	Electric machines and drives
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Electric machines and drives	EMP 3214	BS	Elective subjects	5.0	Bachelor	Exploitation electro-equipment	3	2	Descriptive geometry and engineering graphics, physics, chemistry, fundamentals of agricultural machinery, information and communication technologies.	Organization of research work, Pre-graduate practice, Industrial practice	Types of electromechanical energy converters; design features of electric drives; operating modes, methods of selecting electric motors; drive characteristics, operating modes of electric drives of basic agricultural machinery and equipment; physical fundamentals of electric drives, selection and calculation of mechanical characteristics and transients in electric drives.	Make calculations in heat engineering, thermodynamics and electrical engineering; choose the correct operation of electrical and thermal equipment, analyze hazardous and harmful production factors, study the environment and life safety requirements. To study the basic concepts of the laws of engineering mechanics, mechanics of materials, robotics and safety measures. To organize the production process, operation of MTP and maintenance of modern agricultural machinery with the introduction of innovative technologies and with the creation of business entities	Electrical engineering and electronics
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Management of educational processes	UOP 3216	BS	Elective subjects	5.0	Bachelor	Vocational education	3	2	Pedagogy, Professional pedagogy	Organization of research work, Pre-graduate practice, Industrial practice	Education and management of an educational institution are closely interrelated and are aimed at achieving the set goals. Collectively, the management functions of an educational institution are a management system that takes into account the continuity of the management and managed systems.	Analyze the main regulatory documents regulating the activities of higher education, as well as issues of educational process management. To study the basic principles and mechanisms of education management. To distinguish the features of the formation of organizational structures of education management. To analyze the state, problems and trends in the development of the existing education system, to find, summarize and systematize information related to education management; to choose the best methods and means of managing the development of the education system. To diagnose and predict the features of education management in modern socio-economic conditions. To show practical skills in the application of educational management mechanisms. To choose organizational techniques and evaluate the educational management process using innovative management technologies.	Pedagogical management
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Pedagogical management	PM 3216	BS	Elective subjects	5.0	Bachelor	Vocational education	3	2	Pedagogy, Professional pedagogy	Organization of research work, Pre-graduate practice, Industrial practice	Improving the quality of education, the transition of vocational education to a qualitatively new level, taking into account the modern requirements of modernization of education, is possible only with a new vision by a leader with methodological knowledge in the field of pedagogical management	To define modern management in the vocational education system. To study the formation of pedagogical management as a science. To analyze systemic approaches to management in vocational education institutions. To classify the principles of scientific organization of pedagogical and managerial activities in the system of vocational education. Plan strategies for the management of educational institutions. To teach the organization and management of dual education in the VET system of the Republic of Kazakhstan.	Management of educational processes
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	English for Academic purposes	AYADA C-4224	BS	Elective subjects	3.0	Bachelor	Foreign Languages	4	1	Pedagogy, Professional pedagogy	Kazan (Russian) language, a foreign language	The course is designed for development of the academic skills necessary for conducting academic professional activities and research work: the ability to write an academic text, the ability to listen and take notes of a lecture in English, the ability to write articles in English, with subsequent publication, public speaking skills in an academic presentation format.	To demonstrate developing knowledge and understanding in managing both pedagogical activity and that sector for which it trains personnel in a vocational educational institution and be fluent in a foreign language at a professional level, allowing to conduct scientific research and be able to show their leadership qualities for the development of enterprises in the industry. To apply at the professional level the functional and stylistic characteristics of the scientific presentation of the material in the foreign language being studied, the general scientific terminology and the terminological sub-language corresponding to speciality in a foreign language.	Professional Kazakh (Russian) language, Professionally-oriented Foreign Language
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Professional Kazakh (Russian) language	PKRYa 4224	BS	Elective subjects	3.0	Bachelor		4	1	Kazan (Russian) language, a foreign language	Kazan (Russian) language, a foreign language	Forms the skills of written and oral speech, observing all the norms of the Kazakh (Russian) professional literary language; knowledge of the semantic structural features of professional texts of various functional styles, communication skills and speech skills when reading professional texts in the speciality.	Use communication in oral and written forms in the state, Russian and foreign languages to solve professional problems of interpersonal and intercultural interaction.	English for Academic purposes, Professionally-oriented Foreign Language
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Professionally-oriented Foreign Language	POIYA 4224	BS	Elective subjects	3.0	Bachelor		4	1	Kazan (Russian) language, a foreign language	Kazan (Russian) language, a foreign language	Forms the professional foreign language speech of future specialists to increase the level of professional competence, proficiency in a professional foreign language for the implementation of written and oral information exchange, further development of speech activity. Rules of speech behavior in accordance with situations of professional communication, depending on the style and nature of communication in the social, household and academic spheres.	Use communication in oral and written forms in the state, Russian and foreign languages to solve professional problems of interpersonal and intercultural interaction.	English for Academic purposes, Professional Kazakh (Russian) language
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Formation of professional competence	FPK 4225	BS	Elective subjects	6.0	Bachelor	Vocational education	4	1	Professional Pedagogy, Professional Psychology	Internship, Organization of research work, Pre diploma practice	This course studies the formation of students' readiness for future professional activity. Examines the theoretical foundations and structure of professional competence, technologies for the development of professional competence, the program of psychological and pedagogical support for the development of professional competence. Defines the possibilities of an innovative educational environment as a factor in the development of professional competence	To show the essence, content and structure of professional pedagogical activity. To express the personal attitude of future teachers to the culture and value foundations of the teaching profession. To analyze, compare, and compare different approaches to understanding the professional activity of a modern teacher. To explain the peculiarities of pedagogical communication and creativity of a teacher, to study the specifics of the manifestation and development of pedagogical abilities.	Acmeology of professional development
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Acmeology of professional development	APR 4225	BS	Elective subjects	6.0	Bachelor	Vocational education	4	1	Professional Pedagogy, Professional Psychology	Internship, Organization of research work, Pre diploma practice	This course studies the acmeological concept of professional personal development and ways to achieve professionalism. Examines the structure of professional activity, the essence, types, criteria of professional competence, the program of psychological and pedagogical support for the development of professional competence. Defines the possibilities of an innovative educational environment as a factor in the development of professional competence	To analyze the purpose and role of the teaching profession in the development of modern society, to assess the great social significance of the teacher's work. To find ways to form specific skills and abilities of professional mastery and professional "acme" of a teacher. To show motivation for continuous professional self-development and self-improvement of the teacher. Apply acmeological technologies and a professional acmeogram. Determine the criteria for achieving professional development.	Formation of professional competence
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Modern technologies in education	STO 4215	BS	Elective subjects	6.0	Bachelor	Vocational education	4	1	Pedagogy, Professional pedagogy	Pre-graduate practice, Design and organization of technical service	Modern technologies allow students to become more active participants in the educational process, and teachers to create new approaches, methods, models of teaching and upbringing. The use of technological tools for the organization of educational activities makes it possible to achieve significant changes in learning outcomes. Teachers have the opportunity to implement new models of the organization of the educational process	The essence and integral characteristics of educational technologies. The technology of individualization and differentiation of learning in the professional education of students. Technologies of personality-oriented learning. Technology of educational cooperation. The technology of developmental learning. Problem-based learning. Modular learning technology. Information technology training. Distance education. Project-based learning technologies. Credit technology of education. Integrative learning technology. Modern assessment technologies. Criteria-based assessment of students' academic achievements.	Modern technologies in education
B065 - «Vehicles»	6B07111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Modern technologies in education	IOT 4215	BS	Elective subjects	6.0	Bachelor	Vocational education	4	1	Pedagogy, Professional pedagogy	Pre-graduate practice, Design and organization of technical service	Innovative educational technologies imply a purposeful, meaningful change in pedagogical activity (and management of this activity) through the development and introduction of pedagogical and managerial innovations in educational institutions: new content of training, education, management; new ways of working, new means, organizational forms	Technologies of personality-oriented learning. Technology of educational cooperation. The technology of developmental learning. Problem-based learning. Modular learning technology. Information technology training. Distance education. Project-based learning technologies. Credit technology of education. Integrative learning technology. Modern assessment technologies. Criteria-based assessment of students' academic achievements. The essence and integral characteristics of educational technologies. The technology of individualization and differentiation of learning in the professional education of students.	Modern technologies in education

B065 - «Vehicles»	6107111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Tractors and cars	TA-4223	BS	Elective subjects	5.0	Bachelor	Mechanization of technological processes	4	2	Fundamentals of the design of wheeled and tracked vehicles.	Pre-graduate practice, Design and organization of technical service	Possess the ability to compare working conditions and design features of machines, determine the properties of compliance of a tractor and a car with its functional purpose, compare brands of fuel and lubricants under different operating conditions of equipment. Formation of skills to study the basics of theory and calculation, engines, testing of tractors and cars, necessary for the effective operation of machines in agro-industrial production and their operational modes of operation, technological properties.	Possess the ability to compare working conditions and design features of machines, determine the properties of compliance of a tractor and a car with its functional purpose, compare brands of fuel and lubricants under different operating conditions of equipment. Formation of skills to study the basics of theory and calculation, engines, testing of tractors and cars, necessary for the effective operation of machines in agro-industrial production and their operational modes of operation, technological properties.	Car theory
B065 - «Vehicles»	6107111 - «Technical service of the motor vehicles (master of industrial training)»	Full-time (bachelor 4 years) semester	Car theory	TA-4223	BS	Elective subjects	5.0	Bachelor	Technical service	4	2	Fundamentals of the design of wheeled and tracked vehicles.	Pre-graduate practice, Design and organization of technical service	Methods of determining the main traction, kinematic and fuel-economic parameters of cars, factors affecting the modes and durability, methods of traction testing of cars, methods and applications of calculation of units, assemblies and systems of transport and technological means	Possess the ability to compare working conditions and design features of machines, determine the properties of compliance of a tractor and a car with its functional purpose, compare brands of fuel and lubricants under different operating conditions of equipment. Formation of skills to study the basics of theory and calculation, engines, testing of tractors and cars, necessary for the effective operation of machines in agro-industrial production and their operational modes of operation, technological properties.	Tractors and cars

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Head of the Department of Vocational Education

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