

Approved by
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CATALOG OF ELECTIVE DISCIPLINES

Brief description of the elective disciplines of the educational program
For students in the direction of preparation 6B073 Architecture and Civil engineering

State educational program	educational program	Form of study	The name of discipline	Code of subject	Discipline cycle	Component	Number of credits	Level of training	Cafedra	Courses	Academic period	Pre-requisites	Post-requisites	Brief content of the discipline	Key learning outcomes	Name of the alternative discipline
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	Architectural graphics	AG 1239	BS	Elective subjects	3.0	Bachelor	Architecture and Design	1	2	school drawing course	Computer designing, Professional computer programs	Application of general laws and methods of creating images and images in various forms. The use of practical skills of various types of architectural graphics. Architectural drawing as a means of expressing a design idea.	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Architectural modeling
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	Architectural modeling	AM 1258	BS	Elective subjects	3.0	Bachelor	Architecture and Design	1	2	school drawing course	Computer designing, Professional computer programs	The ability to use the basics of theory and methods of shaping, the laws of visual perception of images, volumes and spaces. Creating images and images in various forms using different techniques, materials and tools. The ability to use compositional means and techniques for modeling planar, three-dimensional and spatial forms.	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Architectural graphics
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	Basics of architectural designing	OAP 1240	BS	Elective subjects	3.0	Bachelor	Architecture and Design	1	2	Architectural graphics, Architectural composition, Oil painting 1	Small town redevelopment project	The study of graphic and compositional techniques for constructing an architectural form. The ability of graphic presentation, to master the technique of drawing, font, washing and other classical design techniques. Mastering knowledge on the application of various techniques and techniques in design, taking into account their features and advantages	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Introduction to architectural design
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	Introduction to architectural design	VAP 1263	BS	Elective subjects	3.0	Bachelor	Architecture and Design	1	2	Architectural graphics, Architectural composition, Oil painting 1	Regional features of architectural design	The study of methods and techniques of architectural activity. Mastering various types of graphic presentation of architectural drawings. Competent knowledge of the construction of perspective and axonometry of architectural structures, writing fonts, classical laundering.	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Basics of architectural designing
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	Computer designing	KP 2218	BS	Elective subjects	4.0	Bachelor	Architecture and Design	2	1	Architectural graphics, Information and communication technologies	Professional computer programs, Three-dimensional modeling of designed objects	Learning and owning software products CorelDRAW, Photoshop, 3d MAX. The use of these programs in the design of architectural and design objects, in the development of architectural drawings, design of projects.	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Computer graphics
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	Computer graphics	KG 2264	BS	Elective subjects	4.0	Bachelor	Architecture and Design	2	1	Architectural graphics, Information and communication technologies	Professional computer programs, Three-dimensional modeling of designed objects	Study of computer programs CorelDRAW, Photoshop. The use of these programs in architectural graphics in the design of drawings of architectural and design objects, advertising design. Acquisition of skills in processing perspective images of architectural structures, drawing entourage	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Computer designing
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	History of arts	II 2253	BS	Elective subjects	3.0	Bachelor	Architecture and Design	2	1	Introduction to architectural design	World history of architecture, History of Kazakhstan architecture	Mastering the necessary level of theoretical knowledge from the extensive material of art history in one of the areas of world art culture. Questions of the genesis of artistic creativity, artistic practice, the formation of artistic styles according to their chronological development in time. Familiarization with the works of famous masters.	The study of historical periods in the development of world architecture and urban planning, the preservation and development of the architectural environment in regional conditions.	Art history
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years)	Art history	Isk 2274	BS	Elective subjects	3.0	Bachelor	Architecture and Design	2	1	Introduction to architectural design	World history of architecture, History of Kazakhstan architecture	Mastering the main periods in the development of the history of art, the stylistic features of the art of the East and West, the work of the most famous masters Chronological framework of the development of world art. The study of the main stylistic trends in art.	The study of historical periods in the development of world architecture and urban planning, the preservation and development of the architectural environment in regional conditions.	History of arts

B073-Architecture	6B07301-Architecture	Full-time (bachelor 5 years) trimester	Ecology and life safety fundamentals	EOBZh 2119	GER	Elective subjects	5.0	Bachelor	Architecture and Design	2	2	Cultural studies and psychology	Engineering improvement of territories, Construction technology	The laws of ecology, as a theoretical basis for nature conservation and rational nature management, the relationship of organisms with environmental factors and habitat conditions, the biosphere-noosphere concept of V.I. Vernadsky, concepts and concepts of sustainable development.	Be able to analyze the impact of environmental factors on the vital activity of living organisms and the environment; Possess the basics of economic and legal knowledge in the field of forestry, know and understand the goals and methods of state regulation of the economy.	Basics of anti-corruption culture, Introduction to leadership in education, Basics of economics and law
B073-Architecture	6B07301-Architecture	Full-time (bachelor 5 years) trimester	Basics of anti-corruption culture	OAK 2120	GER	Elective subjects	5.0	Bachelor	Architecture and Design	2	2	Political science and sociology	Economics and basics of management in construction, Entrepreneurship	The discipline examines the theoretical and methodological foundations of the concept of "corruption" and examines the improvement of socio-economic relations of the Kazakh society as a condition for combating corruption, psychological features of the nature of corrupt behavior, formation of anti-corruption culture, features of formation of anti-corruption culture of youth, ethnic features of formation of anti-corruption culture, moral and ethical responsibility for corruption in various spheres. Discipline allows you to learn about legal responsibility for corruption offenses	Analyze the conditions of production development in logical and quantitative accounting and evaluate the competitiveness of the products created on the principles of engineering, study innovative entrepreneurship and anti-corruption culture, formulate inventions	Ecology and life safety fundamentals, Introduction to leadership in education, Basics of economics and law
B073-Architecture	6B07301-Architecture	Full-time (bachelor 5 years) trimester	Introduction to leadership in education	VLO 2121	GER	Elective subjects	5.0	Bachelor	Architecture and Design	2	2	Introduction to architectural design	Energy-saving architecture, Energy efficient design	The discipline analyzes and studies the model of effective communication of the leader, methods of management in critical situations, methods of work in the management team and the principle of distribution of roles in the team, methods of effective control and motivation of training. It provides an opportunity to study the theory of leadership qualities and at the same time the concept of leadership behavior (three leadership styles (K. Levin), research at the University of Ohio, research at the University of Michigan, management system (K. Likert), management grid (Blake and Mouton), concept of reward and punishment, substitute leadership (S. Kerr and J. Gernier).	To organize highly efficient operation of machines, apparatuses, machinery and technological equipment in production, to show leadership qualities	Basics of anti-corruption culture, Ecology and life safety fundamentals, Basics of economics and law
B073-Architecture	6B07301-Architecture	Full-time (bachelor 5 years) trimester	Basics of economics and law	OEP 2126	GER	Elective subjects	5.0	Bachelor	Architecture and Design	2	2	Political science and sociology	Economy in design and construction, Entrepreneurship	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. Give an assessment of economic growth and instability of the market economy, inflation and unemployment as manifestations of economic instability. Demonstrate knowledge and skills in the financial and monetary credit system in the national economy and economic security. To master the basics of the theory of the state and law, the basics of constitutional, administrative, civil, labor, family, criminal law.	Analyze the conditions of production development in logical and quantitative accounting and evaluate the competitiveness of the products created on the principles of engineering, study innovative entrepreneurship and anti-corruption culture, formulate inventions	Basics of anti-corruption culture, Introduction to leadership in education, Ecology and life safety fundamentals
B073-Architecture	6B07301-Architecture	Full-time (bachelor 5 years) trimester	Professionally-oriented Foreign Language	POIYa 2255	BS	Elective subjects	3.0	Bachelor	Architecture and Design	2	3	Foreign language	Basics of the scientific researches	To form 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 (reading, writing, listening and speaking - monologue and dialogic speech). 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 oral and written communication in the state, Russian and foreign languages to solve professional problems of interpersonal and intercultural interaction.	Foreign language (additional)
B073-Architecture	6B07301-Architecture	Full-time (bachelor 5 years) trimester	Foreign language (additional)	IYaD 2257	BS	Elective subjects	3.0	Bachelor	Architecture and Design	2	3	Foreign language	Scientific research in the architectural engineering	Course is designed for understanding the basics of building different types of texts in the field of professional communication, taking into account their lexical, stylistic and grammatical features. Mastering the basic skills of reading, listening, speaking and writing in a foreign language in the professional field. Development of skills of planning and organization of communication process in oral (dialogue/monologue) and written forms of speech.	Use oral and written communication in the state, Russian and foreign languages to solve professional problems of interpersonal and intercultural interaction.	Professionally-oriented Foreign Language
B073-Architecture	6B07301-Architecture	Full-time (bachelor 5 years) trimester	Oil painting II	ZhI 2283	BS	Elective subjects	3.0	Bachelor	Architecture and Design	2	3	Architectural graphics, Oil painting I, History of arts, Basics of architectural designing	Interior of residential and public buildings, Organization of the residential building environment	Mastering the technique of depicting complex shapes, landscapes, etc. The ability to convey perspective in the image of objects, to draw various objects and architectural objects in color with shadows and reflexes, as well as to depict a person.	Combine artistic means and patterns of drawing, while transferring sketches and fragments of architectural forms, interiors, methods of architectural composition and painting.	Chromatics

B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Chromatics	Cve 1256	BS	Elective subjects	3.0	Bachelor	Architecture and Design	2	3	Architectural graphics, Oil painting I, History of arts, Basics of architectural designing	Interior of residential and public buildings, Organization of the residential building environment	Mastering the basics of color theory. Characteristics and interaction of color, psychological and emotional impact of color, volume and color. The use of color graphics to perform architectural sketches. Acquisition of skills to work with various types of color graphics.	Oil painting II
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Materials in architecture	AM 3224	BS	Elective subjects	4.0	Bachelor	Architecture and Design	3	1	Engineering graphics I	Preliminary degree designing	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient	Building materials
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Design of a residential building of a medium height	PZHDE 3307	AS	Elective subjects	6.0	Bachelor	Architecture and Design	3	1	Engineering graphics I, Design of a free-standing residential building	Preliminary degree designing	Formation of typological skills for the development of a draft design of an apartment building of medium height, basic requirements for the design of buildings for this purpose, norms and rules of design. Mastering the skills of competent design of the developed project.	Design of a blocked residential building
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Three-dimensional modeling of designed objects	TMPO 3248	BS	Elective subjects	5.0	Bachelor	Architecture and Design	3	1	Engineering graphics I, Information and communication technologies, Computer designing	Preliminary degree designing	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Software in designing
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Building materials	SM 3260	BS	Elective subjects	4.0	Bachelor	Architecture and Design	3	1	Engineering graphics I	Preliminary degree designing	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design	Materials in architecture
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Software in designing	POP 3266	BS	Elective subjects	5.0	Bachelor	Architecture and Design	3	1	Engineering graphics I, Information and communication technologies, Computer designing	Preliminary degree designing	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Three-dimensional modeling of designed objects
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Design of a blocked residential building	PBZHD 3329	AS	Elective subjects	6.0	Bachelor	Architecture and Design	3	1	Engineering graphics I, Design of a free-standing residential building	Preliminary degree designing	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of a residential building of a medium height
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Construction technology	TSP 3223	BS	Elective subjects	4.0	Bachelor	Architecture and Design	3	2	Architecture, Materials in architecture, Engineering graphics I, Engineering systems of buildings and structures	Preliminary degree designing	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Construction operations technology
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Construction operations technology	TSR 3270	BS	Elective subjects	4.0	Bachelor	Architecture and Design	3	2	Architecture, Materials in architecture, Engineering graphics I, Engineering systems of buildings and structures	Preliminary degree designing	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Construction technology
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Design of a multifunctional public building	PMOZ 3304	AS	Elective subjects	5.0	Bachelor	Architecture and Design	3	2	Engineering graphics I, Construction technology, Three-dimensional modeling of designed objects	Preliminary degree designing	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Service center design

B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Interior of residential and public buildings	IZHOZ 3250	BS	Elective subjects	5.0	Bachelor	Architecture and Design	3	2	Architectural graphics, Architectural composition, World history of architecture, Engineering graphics II, History of arts	Preliminary degree designing	Mastering the skills of design design of the internal architectural environment of residential facilities. The ability to functionally and ergonomically organize technological processes of human activity in the architectural environment of the interior. Formation of skills for the correct application of styles, color design of the interior space of an architectural object, taking into account the connection of internal and external space.	Combine artistic means and patterns of drawing, while transferring sketches and fragments of architectural forms, interiors, methods of architectural composition and painting.	Organization of the residential building environment
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Organization of the residential building environment	OSZHD 3273	BS	Elective subjects	5.0	Bachelor	Architecture and Design	3	2	Architectural graphics, Architectural composition, World history of architecture, Engineering graphics II, History of arts	Preliminary degree designing	Mastering the skills of designing residential interiors. Development of functional zoning of interiors, application of research on ergonomics, organization of technological processes in public buildings and human life processes in the architectural environment of the residential interior.	Combine artistic means and patterns of drawing, while transferring sketches and fragments of architectural forms, interiors, methods of architectural composition and painting.	Interior of residential and public buildings
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Service center design	PCO 3328	AS	Elective subjects	5.0	Bachelor	Architecture and Design	3	2	Architecture, Materials in architecture, Engineering systems	Preliminary degree designing	Mastering the specifics of designing a public center building with a multi-stage service system that meets modern requirements for meeting the cultural and household needs of the population, including commercial, administrative, sports, communal, and other purposes	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, and resource-saving solutions in the design.	Design of a multifunctional public building
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Designs in architecture	AK 3223	BS	Elective subjects	5.0	Bachelor	Architecture and Design	3	3	Architecture, Engineering graphics I, Engineering systems of buildings and structures	Preliminary degree designing	Mastering the constructive techniques of building an architectural form. The ability to correctly express the idea of an architectural project in structures and materials. Mastering knowledge about various types of structures, on the application of constructive techniques in design, taking into account their features and advantages.	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design.	Modern designs in architecture
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Design of an educational structure	PUNS 3306	AS	Elective subjects	5.0	Bachelor	Architecture and Design	3	3	Architecture, Materials in architecture, Engineering systems of buildings and structures	Preliminary degree designing	Designing a school building. Development of a school site with elements of landscaping and equipment. Detailed development of classrooms and classrooms. Development of an architectural and planning solution that meets the general conceptual orientation of the projected building.	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements	Design of school complexes
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Energy efficient design	EP 3317	AS	Elective subjects	3.0	Bachelor	Architecture and Design	3	3	Materials in architecture, Construction technology	Preliminary degree designing	Mastering the techniques of space-planning solutions in buildings with efficient use of energy, the main directions of the implementation of energy saving reserves. Practical skills in calculating the types of energy-efficient buildings for various purposes.	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Energy-saving architecture
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Modern designs in architecture	CKA 3267	BS	Elective subjects	5.0	Bachelor	Architecture and Design	3	3	Architecture, Engineering graphics I, Engineering systems of buildings and structures	Preliminary degree designing	The study of constructive techniques for the construction of architectural objects for various purposes. Think over a constructive solution and use building materials in the design of buildings and structures. Mastering knowledge about various types of building structures and their application areas.	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Designs in architecture
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Design of school complexes	PSHK 3331	AS	Elective subjects	5.0	Bachelor	Architecture and Design	3	3	Architecture, Materials in architecture, Engineering systems of buildings and structures	Preliminary degree designing	Development and design of a school building with elements of landscaping and equipment. Detailed development of classrooms and classrooms. Elaboration of all necessary functional areas. Drawing plans and facades of buildings in scale.	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of an educational structure
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor 5 years) trimester	Energy-saving architecture	EA 3338	AS	Elective subjects	3.0	Bachelor	Architecture and Design	3	3	Materials in architecture, Construction technology	Preliminary degree designing	Acquisition of the necessary level of knowledge of fundamental concepts about the formation of energy-saving technologies in the microclimate system in urban spaces and building interiors. Theoretical foundations of the organization of power supply.	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Energy efficient design

B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Design of a multifunctional residential complex	PMZHK 4305	AS	Elective subjects	5.0	Bachelor	Architecture and Design	4	1	Architecture, Materials in architecture, Engineering systems of buildings and structures,	Preliminary degree designing	Formation of typological skills in the development of a draft design of a multifunctional public building, basic requirements for the design of public buildings, norms and rules of design. Mastering the skills of competent design of the developed project.	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of a residential complex of an elite type
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Regional features of architectural design	ROAP 4225	BS	Elective subjects	4.0	Bachelor	Architecture and Design	4	1	Architectural composition, World history of architecture, History of Kazakhstan architecture	Detail planning project	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Design in regional conditions	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Typology of the architectural environment	TAS 4227	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	1	Architectural graphics, Architectural composition, Engineering graphics I	Landscape design	The study of historical periods in the development of world architecture and urban planning, the preservation and development of the architectural environment in regional conditions.	Organization of the architectural environment	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Organization of the architectural environment	OAS 4261	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	1	Architectural graphics, Architectural composition, Engineering graphics I	Landscape design	The study of historical periods in the development of world architecture and urban planning, the preservation and development of the architectural environment in regional conditions.	Typology of the architectural environment	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Design in regional conditions	PRU 4271	BS	Elective subjects	4.0	Bachelor	Architecture and Design	4	1	Architectural composition, World history of architecture, History of Kazakhstan architecture	Detail planning project	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Regional features of architectural design	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Design of a residential complex of an elite type	PZHKET 4330	AS	Elective subjects	5.0	Bachelor	Architecture and Design	4	1	Architecture, Materials in architecture, Engineering systems of buildings and structures,	Preliminary degree designing	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of a multifunctional residential complex	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Rural area planning project	PPSNM 4336	AS	Elective subjects	6.0	Bachelor	Architecture and Design	4	1	Town planning bases	Preliminary degree designing	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Architecture of rural settlements	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Architecture of rural settlements	ASP 4337	AS	Elective subjects	6.0	Bachelor	Architecture and Design	4	1	Town planning bases	Preliminary degree designing	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Rural area planning project	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Engineering improvement of territories	IBT 4227	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	2	Architecture, Materials in architecture, Engineering graphics I, Engineering systems of buildings and structures, Building construction I	Preliminary degree designing	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Engineering preparation of the territory	
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) 1st trimester	Economy in design and construction	EPS 4246	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	2	Basics of economics and law	Preliminary degree designing	Apply theoretical knowledge in economics and law, entrepreneurship, in the field of ecology, life support and implement them in the field of architecture.	Economics and basics of management in construction	

B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Landscape design	LP 4319	AS	Elective subjects	4.0	Bachelor	Architecture and Design	4	2	Architectural composition Town planning bases	Preliminary degree designing	Formation of urban architecture in regional conditions, its planning organization, protection of natural resources in the design. The study of the urban landscape as an object of the urban environment, the elimination of negative factors, such as pollution of the urban environment.	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Landscape organization of territories
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Landscape organization of territories	LOT 4321	AS	Elective subjects	4.0	Bachelor	Architecture and Design	4	2	Architectural composition Town planning bases	Preliminary degree designing	Study of the landscape organization of the urban environment. The formation of landscape architecture, its planning organization, greening of the urban environment, protection of natural resources in the design, regional features of the landscape organization of the territory.	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Landscape design
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Engineering preparation of the territory	IPT 4269	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	2	Architecture, Materials in architecture, Engineering graphics I, Engineering systems of buildings and structures, Building construction I	Preliminary degree designing	Solving engineering and transport problems that arise during the improvement of the territory of cities, populated areas and individual buildings. Practical skills in solving engineering issues of the organization of relief and its improvement.	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Engineering improvement of territories
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Development of small settlements in the conditions of reconstruction	RMNMR 4324	AS	Elective subjects	5.0	Bachelor	Architecture and Design	4	2	Town planning bases, Regional features of architectural design, Typology of the architectural	Preliminary degree designing	The study of the direction in the development of small settlements in the conditions of reconstruction, taking into account regional characteristics and factors. Training in practical skills of urban planning design in the conditions of reconstruction of small settlements based on specific regional factors.	Apply theoretical knowledge in economics and law, entrepreneurship, in the field of ecology, life support and implement them in the field of architecture.	Design in regional conditions
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Economics and management in construction	EOUS 4272	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	2	Basics of economics and law	Preliminary degree designing	The study of economic development issues, specific methods of studying economic processes, as well as features of economics and management in construction. The basic laws of market formation, organizational management structures and their characteristics, organizational and legal forms of organization management and the role of communications in management.	Apply theoretical knowledge in economics and law, entrepreneurship, in the field of ecology, life support and implement them in the field of architecture.	Economy and management in building industry
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Design of commercial and entertainment facilities	PTRS 4333	AS	Elective subjects	6.0	Bachelor	Architecture and Design	4	2	Designs in architecture, Engineering graphics I, Building construction I	Preliminary degree designing	Mastering the specifics of designing a shopping and entertainment center building with a multi-stage service system that meets modern requirements for meeting the cultural and household needs of the population, including commercial, administrative, sports, communal, etc. purposes	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Leisure center design
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Leisure center design	PDC 4334	AS	Elective subjects	6.0	Bachelor	Architecture and Design	4	2	Designs in architecture, Engineering graphics I, Building construction I	Preliminary degree designing	Development of the draft design of the public center of the leisure center. Taking into account the requirements, norms and rules of design for buildings of this purpose. Mastering the skills of developing all components of the draft project and protecting the developed project	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of commercial and entertainment facilities
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Small town redevelopment project	PRMG 4339	AS	Elective subjects	5.0	Bachelor	Architecture and Design	4	2	Town planning bases, Regional features of architectural design, Typology of the architectural environment	Preliminary degree designing	Study of the main directions of reconstruction of settlements, buildings and structures, taking into account regional peculiarities. Mastering the theory of reconstruction of the architectural environment of a small city. Training in practical decision-making skills in designing based on specific situations, solving technological and ergonomic problems.	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Development of small settlements in the conditions of reconstruction
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Design of a structure for agriculture and industry	POAN 4309	AS	Elective subjects	5.0	Bachelor	Architecture and Design	4	3	Landscape design, Town planning bases, Regional features of architectural design,	Preliminary degree designing	Design of an agro-industrial building. Development of an architectural and planning solution that meets the general conceptual orientation of the projected building	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of agricultural buildings
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Modern architecture	SA 4234	BS	Elective subjects	4.0	Bachelor	Architecture and Design	4	3	World history of architecture, History of Kazakhstan architecture	Preliminary degree designing	Studying the methodology of styles in architecture. Analyze the main means and techniques of compositional modeling in different styles of architecture. To study trends in the development of modern architecture, and modern design techniques used in architecture.	The study of historical periods in the development of world architecture and urban planning, the preservation and development of the architectural	Fundamentals of Modern Architecture

B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Architectural physics	AF 4316	AS	Elective subjects	3.0	Bachelor	Architecture and Design	4	3	Regional features of architectural design, Construction technology, Energy efficient design	Preliminary degree designing	Teaching the basics of architectural physics, replenishment of the theoretical base of training in the specialty, obtaining systematic knowledge about methods of lighting and acoustic calculation of buildings for various purposes, rational processing of measurement data.	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Architectural and building physics
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Entrepreneurship	Pre-4244	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	3	Economy in design and construction	Preliminary degree designing	Features of a systematic, holistic view of the organization of entrepreneurial activity, the development of theoretical and practical knowledge necessary for the organization of business in the modern economy and the acquisition of practical skills in the use of this knowledge.	Evaluate the interconnection and interdependence of business processes in the context of the digital economy. To organize entrepreneurial activity, demonstrate knowledge in the field of modern business and interpret the results of the activities of enterprises by industry. To model business development strategy.	Economy and management in building industry
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Economy and management in building industry	EMS 4262	BS	Elective subjects	3.0	Bachelor	Architecture and Design	4	3	Economy in design and construction	Preliminary degree designing	Features of economics and management in construction, basic concepts, categories and laws of economic development, specific methods for studying economic processes. The role and significance of commodity-money relations and the market in economic development. Basic laws of market formation. Information support of management in construction.	Apply theoretical knowledge in economics and law, entrepreneurship, in the field of ecology, life support and implement them in the field of architecture.	Entrepreneurship
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Architectural and building physics	ASF 4320	AS	Elective subjects	3.0	Bachelor	Architecture and Design	4	3	Regional features of architectural design, Construction technology, Energy efficient design	Preliminary degree designing	The study of the theoretical foundations and practical methods of architecture formation under the influence of sunlight and artificial light, heat, air movement and sound, as well as the nature of their perception by a person with an assessment of sociological, hygienic and economic factors.	The study of construction, engineering life support systems, construction technology, building materials, take into account the data of building climatology, acoustics, lighting engineering, apply energy-efficient and resource-saving solutions in the design of residential and public buildings.	Architectural physics
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Fundamentals of Modern Architecture	OSA 4268	BS	Elective subjects	4.0	Bachelor	Architecture and Design	4	3	World history of architecture, History of Kazakhstan architecture	Preliminary degree designing	The study of trends in the development of modern architecture, the origins of architecture Questions of the genesis of architectural creativity, architectural practice, the formation of architectural styles, their chronological development over time. Acquaintance with the works of famous modern architects.	The study of historical periods in the development of world architecture and urban planning, the preservation and development of the architectural environment in regional conditions.	Modern Architecture
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Design of agricultural buildings	PSZ 4332	AS	Elective subjects	5.0	Bachelor	Architecture and Design	4	3	Landscape design, Town planning bases, Regional features of architectural design	Preliminary degree designing	Designing an industrial building taking into account the necessary variety of architectural and planning solutions that meet the general conceptual orientation of the projected building	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of a structure for agriculture and industry
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years)	Professional computer programs	PKP 5220	BS	Elective subjects	6.0	Bachelor	Architecture and Design	5	1	Engineering graphics I, Information and communication technologies	Preliminary degree designing	Introduction to the Revit program interface. Basics of working with the Revit graphics editor. Image formation. Editing dimensional styles. Completing the task of constructing the "Conjugation" pattern curves. 3D construction in Revit. Textures and textures of finishing materials. Render.	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Computer programs in architecture
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Design of a long-span structure	PBS 5310	AS	Elective subjects	5.0	Bachelor	Architecture and Design	5	1	Designs in architecture, Engineering graphics I, Three-dimensional modeling of designed objects	Preliminary degree designing	Formation of skills in designing unique large-span buildings. Search for an image of a building (business center, theater, concert hall, stadium, train station, airport). Development and approval of building plans for the first floor, standard floor, building facades, architectural section, master plan	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of unique buildings
B073-Architecture	6B0730-1-Architecture	Full-time (bachelor for 5 years) trimester	Detail planning project	PDP 5313	AS	Elective subjects	5.0	Bachelor	Architecture and Design	5	1	Landscape design, Town planning bases, Small town redevelopment project	Preliminary degree designing	Analysis and study of the main directions in the development of the territory planning of architectural objects at the present stage. Regional peculiarities of the Republic of Kazakhstan and their influence on the formation of the architectural and planning structure, as well as on the architecture of both individual objects and entire complexes.	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Detailed organization of territories

B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years)	Scientific research in the architectural engineering	NIAP 5221	BS	Elective subjects	5.0	Bachelor	Architecture and Design	5	1	Town planning bases, Building construction I	Preliminary degree designing, Preproject Analysis	The study of scientific research methods used in architectural design. To teach how to collect and analyze information for the development of architectural projects. Apply scientific methods to analyze the data obtained during a full-scale survey of the proposed construction site of the facility.	Analyze the principles of scientific research, experimental design of architectural objects, describe scientific and technical solutions.	Basics of the scientific researches
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years)	Computer programs in architecture	KPA 5265	BS	Elective subjects	6.0	Bachelor	Architecture and Design	5	1	Engineering graphics I, Information and communication technologies	Preliminary degree designing	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	The study of knowledge of innovative technologies in architectural design graphic computer programs 3D max, Revit.	Professional computer programs
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years)	Detailed organization of territories	DOT 5325	AS	Elective subjects	5.0	Bachelor	Architecture and Design	5	1	Landscape design, Town planning bases, Small town redevelopment project	Preliminary degree designing	The study of the main directions of the planning organization of the territory of architectural objects at the present stage. Sketching: details of the site on which the architectural object is located, entrances, pedestrian paths, parking lots, recreation areas, landscaping are being developed.	Create objects, elements of urban infrastructure, landscape architecture, taking into account regional characteristics.	Detail planning project
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years) trimester	Design of unique buildings	PUZ 5335	AS	Elective subjects	5.0	Bachelor	Architecture and Design	5	1	Designs in architecture, Three-dimensional modeling of designed objects	Preliminary degree designing	Designing a unique residential or public building. The use of modern materials and the latest technologies in the design. The choice of a unique functional purpose of the building or a unique design scheme.	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Design of a long-span structure
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years) trimester	Basics of the scientific researches	ONI 5275	BS	Elective subjects	5.0	Bachelor	Architecture and Design	5	1	Architecture, Energy efficient design, Energy-saving architecture	Preliminary degree designing, Preproject Analysis	The concept of science. The content of science. Methodology, methods and research process. General information about science. Methodological foundations of scientific knowledge. Empirical and theoretical levels of scientific knowledge. Organization of research. General information about NIRS. Organization of research work of students. Experimental studies in economics. Processing of experimental data.	Analyze the principles of scientific research, experimental design of architectural objects, describe scientific and technical solutions.	Scientific research in the architectural engineering
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years) trimester	Preliminary degree designing	PP-5311	AS	Elective subjects	6.0	Bachelor	Architecture and Design	5	2	Town planning bases, Building construction I	Preproject Analysis	Development of a project on the chosen topic. Study of the necessary regulatory documentation, all functional and technological processes. Analysis of the site of possible placement of the object. Development of the general plan of the building, taking into account the functional purpose, as well as all the required norms and rules.	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Experiment in architectural design
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years) trimester	Preproject Analysis	PA 5318	AS	Elective subjects	6.0	Bachelor	Architecture and Design	5	2	Basics of the scientific researches	Preliminary degree designing	Mastering the basic principles of selection and analysis of information for design. A system of multidimensional data analysis. Data analysis system based on field research methods. A data analysis system based on urban planning and compositional solutions.	Analyze the principles of scientific research, experimental design of architectural objects, describe scientific and technical solutions.	Analysis in architectural design
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years) trimester	Analysis in architectural design	AAP 5326	AS	Elective subjects	6.0	Bachelor	Architecture and Design	5	2	Town planning bases, Building construction I	Preproject Analysis	Acquisition of knowledge and skills in the preparation of pre-project material and its analysis in architectural design. Conducting the selection and analysis of information data for the development of an architectural project. The study of scientific methods of data processing and analysis.	Analyze the principles of scientific research, experimental design of architectural objects, describe scientific and technical solutions.	Preproject Analysis
B073-Architecture	6B0730-1-Architecture	Full-time (bache lor 5 years) trimester	Experiment in architectural design	EAP 5327	AS	Elective subjects	6.0	Bachelor	Architecture and Design	5	2	Basics of the scientific researches	Preproject Analysis	Acquisition of knowledge on the basic theoretical information of the design business at various stages of architectural design, formation of a system of knowledge about the process of collecting information on the projected object. Knowledge of the complex of pre-project and project documentation, stages of the design process.	Development of architectural projects using the regulatory framework in residential and public buildings in accordance with functional, aesthetic, structural, technical, economic requirements.	Preliminary degree designing

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