

MINISTRY OF SCIENCES AND HIGHER EDUCATION OF THE REPUBLIC OF
KAZAKHSTAN

M.O. AUEZOV SOUTH KAZAKHSTAN UNIVERSITY

«APPROVED»

Chairman of the board - Rector,
Doctor of historical sciences, Academician Kozhamzharova D.P.



2022 y.







Educational program

7M07260-Technology and design of textile materials

Registration Number	7M07200110
Code and Classification of Education	7M07-Engineering, preprocessing and construction industries
Code and Classification of Areas of Training	7M072-Manufacturing and processing
Group of educational programs (EP)	M114 Textile: clothes, footwear and leather products
Type of EP	Acting EP
ISCE level	7
NQF level	7
IQF level	7
Language learning	Russian, Kazakh
The complexity of EP	120 credits
Distinctive features of EP	-
Partner University (JEP) -	-
University partner (DDEP) -	-

Shymkent, 2022

Developers:

Full Name	Position	Signature
Eshzhanov A.A.	a.d.Head of the chair	
Togataev T.U.	Associate Professor, candidate of technical sciences	
Abdikerimov S.Zh.	Senior lecturer, candidate of technical sciences	
Kaldykulov M.S.	Senior lecturer	
Oguz D.	director of "Bal decor" LLP»	
Iskhakhov T. Zh.	director of Bal Textile LLP	
Dyisenbaev M.T	director of HBPTalpty	

The EP was considered in the direction of training «Manufacturing and processing» at a meeting of the academic committee, Minutes # 1 «27» 08 2022 y.

Chairman of the Committee  Khanzharov N.S.

The EP was considered and recommended for approval at Educational-methodical meeting of M. Auezov SKU
Minutes # 1 «27» 08 2022 y.

The EP was approved by the decision of the Academic Council of the University
Minutes # 1 «27» 08 2022 y.

CONTENT

1.	Concept of the educational program	4
2.	Passport of the educational program	6
3.	Competences of the EP graduate	8
3.1	The matrix of correlation of learning outcomes in the EP as a whole with the formed competencies of the modules	10
4.	Matrix of the influence of disciplines on formation of learning outcomes and information on labor intensity	12
5	A summary table showing the volume of discovered loans by educational program modules	27
6.	Strategies and methods of training, monitoring and evaluation	28
7	Educational and resource support of the EP	29
	Agreement sheet	
	Annex 1. Review from the employer	
	Annex 2. Review from the employer	
	Annex 3. Review from the employer	
	Annex 4. Expert opinion	

1. CONCEPT OF THE PROGRAM

University Mission	Generation of new competencies, training of a leader who translates research and entrepreneurial thinking and culture
University Values	<ul style="list-style-type: none"> • Openness – open to change, innovation and cooperation. • Creativity – generates ideas, develops them and turns them into values. • Academic freedom – free to choose, develop and act. • Partnership – creates trust and support in a relationship where everyone wins. • Social responsibility – ready to fulfill obligations, make decisions and be responsible for their results.
Graduate Model	<ul style="list-style-type: none"> • Deep subject knowledge, their application and continuous expansion in professional activity. • Information and digital literacy and mobility in rapidly changing conditions. • Research skills, creativity and emotional intelligence. • Entrepreneurship, independence and responsibility for their activities and well-being. • Global and national citizenship, tolerance to cultures and languages.
The uniqueness of the educational program	<ul style="list-style-type: none"> • a high level of theoretical training in the field of technical and professional disciplines, taking into account the trends of modern social development, the inclusion in the educational process of leading domestic and foreign specialists in the field of training highly qualified personnel; • training of professional managers, teachers and specialists for the textile industry, ensures that graduates acquire the competencies of a master of technical sciences, the ability to think outside the box and bold original solutions. • EP of scientific and pedagogical magistracy 7M07260- "Technology and design of textile materials" was accredited by the Independent International Agency ASIIN (Germany) in 2014.
Academic Integrity and Ethics Policy	<p>The University has taken measures to maintain academic integrity and academic freedom, protection from any kind of intolerance and discrimination:</p> <ul style="list-style-type: none"> • Rules of academic integrity (Minutes of the Academic Council No. 3 dated 30.10.2018); • Anti-Corruption Standard (Order No. 373 n/k dated 27.12.2019). • Code of Ethics (Protocol of the Academic Council No. 8 dated 31.01.2020).
Regulatory and legal framework for the development of EP	<ol style="list-style-type: none"> 1. Law of the Republic of Kazakhstan "On Education" (as amended and supplemented as of 04.07.2018); 2. Standard rules of activity of educational organizations implementing educational programs of higher and (or) postgraduate education, approved by Order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 with amendments and additions dated December 29, 2021 No. 614 3. State obligatory standards of higher and postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 604; 4. Rules for organizing the educational process on credit technology of

	education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 No. 152 with amendments and additions dated October 12, 2018 No. 563
Organization of the educational process	<ul style="list-style-type: none"> • Implementation of the principles of the Bologna Process • Student-centered learning • Availability • Inclusivity
Quality assurance of the Educational program	<ul style="list-style-type: none"> • Internal quality assurance system • Involvement of stakeholders in the development of the Educational Program and its evaluation • Systematic monitoring • Actualization of the content (updating)
Requirements for applicants	It is established according to the Model Rules for admission to training in educational organizations, implementing educational programs of higher and postgraduate education, Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 600 dated 31.10.2018

2. PASSPORT OF THE EDUCATIONAL PROGRAM

Purpose of the EP	The purpose of the educational program 7M07260 "Technology and design of textile materials" is consistent with the mission of the university and is aimed at training highly qualified specialists with advanced knowledge in the field of textile materials, demonstrating the skills of conceptual, analytical and logical thinking, creative approach in professional activities.
Tasks of the EP	<ul style="list-style-type: none"> - providing conditions for acquiring a high intellectual level of development, mastering logical and critical thinking and the skills of scientific organization of labor in scientific and pedagogical activities; -development of the ability to use the acquired knowledge in professional activities to solve scientific, managerial, technological problems, prompt decision-making in problem situations; -development of skills of self-study of continuous professional development throughout their professional activities, which will allow masters to successfully adapt to changing conditions; - the formation of the competitiveness of graduates in the field of textile engineering to ensure the possibility of quick employment in their specialty or continuing their studies in doctoral studies.
Harmonization of EP	<ul style="list-style-type: none"> •7 th level of the National Qualifications Framework of the Republic of Kazakhstan; • Dublin descriptors of the 7th level of qualification; • 2 cycle of a Framework for Qualification of the European Higher Education Area); • 7th Level of European Qualification Framework for Life long Learning).
Connection of the EP with the professional sphere	<p>Sectoral qualification framework in the field of "Light industry" (Approved by the minutes of the meeting of sectoral commissions on social partnership and regulation of social and labor relations for the mining and metallurgical, chemical, construction and woodworking, light industry and mechanical engineering industries dated August 16, 2016 No. 1)</p> <p>Sectoral Qualifications Framework for Innovation Activities (Approved by the decision of the Sectoral Commission on Social Partnership and Regulation of Social and Labor Relations of the Innovation Industry. Minutes No. 102-XT dated July 29, 2019)..</p> <p>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" No. 133 dated June 8, 2017).</p> <p>Professional standard "Specialist in the field of design of textiles and clothing" Approved by order of the Ministry of Labor and Social Protection of the Russian Federation (prepared by the Ministry of Labor of Russia on 08.11.2019)</p>
Name of the degree awarded	After the successful completion of this EP, the graduate is awarded the degree of Master of engineering "7M07260-Technology and design of textile materials"
List of qualifications	7M07260- "Technology and design of textile materials" can occupy the

and positions	positions of the head of the corresponding specialization of the division at the enterprise; development director, textile production engineer, head of the department of state bodies in the field of the textile industry, leading designer, production engineer of design and research institutes, teacher in higher educational institutions without presenting requirements for work experience in accordance with the qualification requirements of the "Qualification reference book of positions of managers, specialists and other employees ", approved by order of the Minister of Labor and Social Protection of the Population of the Republic of Kazakhstan dated May 21, 2012 No. 201-ø-mi with Appendix 2 to the Industry Qualifications Framework" Light Industry ", approved on August 16, 2016. (Minutes No. 1.)
Field of professional activity	<ul style="list-style-type: none"> - designing products for the textile industry, organizing the effective operation of the enterprise in the market, taking into account the requirements of the consumer, its internal capabilities; -processing and processing of raw materials, materials, receiving semi-finished products and products of the textile industry. -in the field of science; - in the field of education.
Objects of professional activity	<ul style="list-style-type: none"> -technological processes for the production of textile products; -experimental work in production laboratories; test methods in laboratories for standardization and certification of textile products. -design documentation; - management of primary labor collectives; - educational and methodological documentation, technical teaching aids; - research work - teaching activities.
Subjects of professional activity	<ul style="list-style-type: none"> - fibers, threads, yarn from natural and chemical fibers, knitted fabrics and products, fabrics, natural and artificial leather, fur, non-woven and shoe materials; -technological production of textiles; -design documentation for the production of textiles; - computer-aided design system for textile and nonwoven materials in the textile industry, computer technology. - pedagogical process.
Types of professional activity	<ul style="list-style-type: none"> - design and engineering activities of textile production; - production and technological work with textile materials; - experimental research work with textile materials; - organizational and managerial; - operation of products of the textile industry. - design property quality assessment
Learning outcomes	<p>LO 1. Demonstrate knowledge of a foreign language in interpersonal communication, professional activities, writing scientific articles.</p> <p>LO 2. Analyze the main ideological and methodological problems, including interdisciplinary nature, arising in science at the present stage of its development, to evaluate various facts and phenomena, based on the provisions and categories of the philosophy of science.</p> <p>LO 3. Evaluate the development and effective use of personnel in the organization, own socio-psychological technologies to manage mass behavior.</p>

	<p>LO 4. Apply knowledge of research methodology, effective teaching methods in the field of the textile industry, critically evaluate the scientific organization of the work of a higher education teacher.</p> <p>LO 5. Demonstrate the ability to work in a team, to be creative and logical thinking when making operational management and technical decisions in non-standard situations in professional activities.</p> <p>LO 6. To implement the production process for the manufacture of textiles, to justify the optimal mode of production; to control product quality.</p> <p>LO 7. To develop and test new methods of manufacturing textiles, to assess the current problems of the scientific and technological development of the raw material base, modern technologies for recycling textile waste, scientific and technical policies in the field of technology and the design of textiles;</p> <p>LO 8. To conduct analytical work with the involvement of information resources; summarize the results in scientific articles and master's thesis.</p> <p>LO 9. Independently carry out experimental studies, substantiate the results of research when discussing with specialists and a wider audience.</p> <p>LO 10. To develop technological calculations of modern materials of weaving and knitwear production, to choose the test method and the necessary laboratory materials; to develop the main innovative technologies that provide high quality textile materials and products.</p>
--	--

3. COMPETENCES OF EP GRADUATE

GENERAL COMPETENCES (SOFTSKILLS). Behavioral Skills and Personal Qualities	
GC 1. Competence in managing one's own literacy	<p>GC 1.1. Strive for professional and personal growth throughout life.</p> <p>GC 1.2. Constantly update their knowledge within the chosen trajectory and in an interdisciplinary environment, carry out further learning with a high degree of independence and self-regulation.</p> <p>GC 1.3. To be capable of reflection, an objective assessment of one's achievements, an awareness of the need to form new competencies and continue education in doctoral studies.</p>
GC 2. Language competence	<p>GC2.1. The ability to possess a sufficient level of communication in the professional field in the state, Russian and foreign languages for negotiating and business correspondence.</p> <p>GC 2.2. Ability to master the skills of mediation and intercultural understanding.</p>
GC 3. Mathematical and scientific competence	<p>GC 3.1. The ability to interpret the methods of mathematical analysis and modeling for solving applied problems in the field of study.</p> <p>GC 3.2. The ability to plan the setting of scientific experiments, integrate and implement the results of scientific research in the professional field.</p> <p>GC 3.3. The ability to analyze and comprehend modern methods of pedagogical and psychological science and apply them in pedagogical activity.</p>
GC 4. Digital competence, technological literacy	<p>GC 4.1. The ability to confidently use modern information and digital technologies, artificial intelligence systems for work, leisure and communications.</p> <p>GC 4.2. Proficiency in the use, recovery, evaluation, storage, production, presentation and exchange of information in a wide range of digital devices.</p> <p>GC 4.3. Ability to confidently use global information resources and apply technological literacy in research and computational and analytical activities.</p>
GC 5. Personal, social and academic competencies	<p>GC 5.1. Possession of the norms of business ethics, social and ethical values and focus on them in professional activities.</p> <p>GC 5.2. Formation of a personality capable of mobility in the modern world, critical thinking and physical self-improvement.</p> <p>GC 5.3. Ability to work in a team, correctly, clearly and reasonably defend one's position during discussions and make decisions of a professional nature.</p> <p>GC 5.4. Ability to adequately navigate in various social</p>

	spheres of activity and in conditions of uncertainty. GC 5.5. Ability to find compromises, correlate your opinion with the opinion of the team.
GC 6. Entrepreneurial competence	GC 6.1. The manifestation of leadership qualities and the ability to have a positive impact on others, to lead a team. GC 6.2. The ability to create conditions for the development of creative and entrepreneurial skills of the team. GC 6.3. The ability to work in a mode of uncertainty and rapidly changing task conditions, make decisions, respond to changing working conditions, allocate resources and manage your time. GC 6.4. Ability to work with consumer needs
GC 7: Cultural Awareness and Expressiveness	7.1. Ability to show worldview, civil and moral positions. 7.2. The ability to be tolerant of the traditions and culture of the peoples of the world, to have high spiritual qualities.
PROFESSIONAL COMPETENCES (HARDSKILLS).	
Theoretical knowledge and practical skills and abilities specific to this direction	(PC1) general professional. - have an idea of the textile industry, its branches, used raw materials, technological processes and equipment, know the structure and principles of operation of modern textile equipment, promising directions for the development of textiles;
	(PC2) production and technological activities in the textile industry. -the ability, on a scientific basis, to solve professional production problems - to control the technological process, develop production rates, develop technological standards for the consumption of materials, blanks, raw materials and electricity, to choose equipment and technological equipment;
	(PC3) technological processes for the production of textile products -analyze and improve technological processes - the development of measures for the integrated use of raw materials, for replacing scarce materials and finding ways to utilize production waste, and developing proposals for its prevention and elimination;
	(PC4) research activities -the ability to conduct a detailed analysis of scientific and technical information in the field of the textile industry for the purpose of scientific, patent and marketing support for ongoing scientific research; the ability to generalize the results of research work in the form of scientific publications, defend one's position during the discussion and make professional decisions in conditions of uncertainty and risk;

	<p>(PC5) design and engineering documentation for the production of textiles</p> <p>-develop methodological and regulatory documents, technical documentation, as well as proposals and measures for the implementation of the developed projects and programs; find optimal solutions when creating products, taking into account the requirements of quality, reliability and cost, as well as terms of execution, life safety and environmental friendliness</p>
--	---

3.1 Matrix of correlation of EP learning outcomes in general with modules formed by competencies

	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8	LO 9	LO 10
GC1	+									
GC 2			+		+					
GC 3		+	+		+					
GC 4				+				+		
GC 5	+	+		+					+	
GC 6	+		+					+		
GC 7		+					+	+		
PC1						+	+			
PC 2			+			+				+
PC 3							+		+	
PC 4				+				+	+	
PC 5						+		+		+

4. MATRIX OF THE INFLUENCE OF DISCIPLINES ON FORMATION OF LEARNING OUTCOMES AND INFORMATION ON LABOR INTENSITY

№	Module name	Cycle	Component	Component Name	Brief course description	Number of credits	Formed learning outcomes (codes)												
							LO1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8	LO 9	LO 10			
1	Scientific and pedagogical training module	BD	VC	History and Philosophy of Science	Prospects for the development of an independent Kazakhstan, its historical stages are studied, the development of historical heritage from philosophical-theoretical (philosophy of history) and philosophical-methodological positions, futuristic calculations in connection with modern political processes in the world (globalization).	4		v											
		BD	VC	Foreign Language (Professional)	Mastering the main types of reading foreign-language original sources with varying degrees of content coverage. Development of skills for preparing written reports on scientific topics in the specialty: scientific report on the topic of scientific research, reviewing of original sources, annotation of a scientific text. Development of oral communication skills in the specialty: presentation with a scientific report, presentation of scientific research, scientific discussion, scientific debates.	4	v												

		BD	VC	Psychology of Management	The main approaches and principles of modern psychological science, necessary in the professional activities of highly qualified specialists. Formation of a scientific and theoretical outlook on fundamental psychological concepts, development of ideas about psychological science, revealing the content of the discipline. Formation of skills and abilities of psychological research of personality, acquaintance with the basic methods of experimental psychological research and the main directions of psychocorrectional work.	4			v		v						
	Methodological foundations of teaching Modern scientific technologies of textile production	BD	VC	Higher education pedagogy	Modern paradigms of higher education. The system of higher professional education in Kazakhstan. Methodology of pedagogical science. Professional competence of a higher education teacher. Organization of the educational process based on the credit system of education in higher education. Methods and forms of training in the training of future specialists. New educational technologies in higher education.	4				v							
		PD	VC	Teaching Methods of Special	The implementation of the competence approach in education. Technology of individual learning, integrated, block	5											v

				Disciplines	and paracentric learning. Multimedia technology training. Teaching specialized disciplines by parsing and solving problem situations and cases. Organization, planning of the educational process in higher education. Methodical features of the study of specialized disciplines specialty "Technology and design of textile materials." Development and updating of educational documentation.												
		BD	VC	Teaching practice	The development of a professional research culture in the field of the textile industry, as a condition of pedagogical skill and pedagogical creativity, the formation of professional and pedagogical skills, a culture of scientific and pedagogical thinking. Attending lectures by leading teachers. Preparation and conduct of practical and laboratory classes in special disciplines. Development of new active forms of conducting classes with students and their application in practical classes.	4			v	v	v						
		BD	EC	Innovative textile technology	Basic principles of innovative industrial design of textile materials. Application of a systematic approach in the design and production	5					v	v					

					of textile materials. Development of new means and methods for shaping products, taking into account the capabilities of technology and technology. Mathematical description of technological processes. Improvement of technological processes in order to improve the quality and competitiveness of products.													
		BD	EC	Resource-saving technologies in textile production	Development of a resource-saving strategy at a manufacturing enterprise, the organization of low-waste production and non-waste technologies. the ability to understand modern problems of scientific and technological development of the raw material base, modern technologies for the disposal of waste from the textile industry, scientific and technical policy in the field of technology and design of textile products; systematize and summarize information on the formation of enterprise resources.							v	v					
		BD	EC	New materials for weaving and knitting production	New materials for weaving and knitting production method of testing the breaking load of textile materials made of natural and synthetic fibers. - to conduct discussions about the technological possibilities of using new materials for weaving and knitting production; independently carry out	5						v	v					

					technological calculations of modern materials for weaving and knitting production; critically analyze the influence of the properties of raw materials on the properties of the finished canvas;												
		BD	EC	Methodology of scientific creativity	Methods of scientific creativity; fundamentals of a systematic approach, methods of logical analysis, their essence and features, modern trends in the development of technical progress; intuitive-associative methods of scientific creativity. to use modern achievements of science and advanced technology in research work;									v	v		
				Research practice	Practical study of the latest theoretical, methodological and technological achievements of domestic and foreign science: modern methodology of scientific research; analysis of the state of development of the textile industry and science in the world and in Kazakhstan; the role of science and innovation in improving and modernizing technology; modern trends in the development of industries. Performing theoretical and experimental research on the topic of the dissertation	7							v	v	v		
	Design	PD	EC	Design of	Innovative textile materials using	6							v	v			

	and control of material properties Management and computerization of textile production			textile materials and products with specified properties	nano-modified polyester fibers with special properties.Prospects for the use of the magnetron sputtering method for the manufacture of textile materials with special surface properties.Production of competitive innovative multifunctional composite materials on a woven fabric or fiber base using modified chemical fibers with special properties.Nanotechnology for the formation of modifying coatings on fibers for oil-repellent finishing of fabrics. Low-flammability polyester fibers and yarns are potential raw materials for technical textile materials. Design of woven fabrics with increased strength characteristics for military uniforms. Design of special purpose woven fabrics by using nanotechnology.												
		PD	EC	Design of special-purpose products	Technology for designing clothes with insulation.Principles for developing material packages for noise-protective clothing for special purposes.Features of designing special protective clothing against heat fluxes in a wide temperature range for the oil and gas industry.On the features of the design						v	v					

				process of clothing for workers in agriculture. Research and design of protective suits against water and high humidity. Features of designing adaptive clothing for people with disabilities. Designing footwear for special purposes.													
		PD	EC	Managing nonwoven properties	Designing the properties of knitted warp weaves. Investigation of the effect of various reagents on the properties of textile fibers used in the technology of nonwoven materials. Design of methods for obtaining non-woven materials by pressing to give heat resistance. Designing the water resistance properties of non-woven glued materials. Determination of relaxation properties of nonwoven adhesive materials. Investigation of the properties of consumer household waste for use as raw materials for the manufacture of nonwovens. The use of an aerodynamic comb converter for the formation of a fibrous canvas in the manufacture of nonwovens. Investigation of the looping process on a basic knitting machine with tongue needles Investigation of the manufacturing process of nonwovens on a knitting-sewing machine Malipol.	4							v				

				Computer research for calculating the length of the thread in the loop of the fabric of the sewing material (on the Malipol machine) Investigation of the dependence of vapor permeability													
		PD	EC	New spinning methods	New spinning methods Friction spinning, or two-condenser method, is intended for spinning cotton, wool, bast fibers and their mixtures with chemical fibers General chemical technology for the production of chemical yarns. Alginat fiber technology, their properties and production of yarns based on them. Chemical technology of highly functional fibers, their characteristics and application in textiles.Uses of hydrocolloid fibers and yarns, their characteristics and applications.Problems of obtaining protein synthetic fibers for medical purposes Production of protein fibers and yarns, their use in textile production.						v	v					
		PD	EC	Quality management of textile products	The essence and significance of quality in modern conditions. Quality management methodology and terminology. Domestic and foreign experience in quality management. Total quality management concept.	6					v	v					

				QMS. The main directions of improving the quality system. assess the criterial nature of the quality of products and services in the activities of the enterprise; use the basic methodological techniques of quality management.													
		PD	EC	Latest quality management tools	The latest quality management tools: quality function deployment (QFD analysis), benchmarking, risk and failure impact analysis (FMEA analysis), JIT system, functional cost analysis.-Use the simplest, new and latest product quality management tools to solve problems related to non-conformity of products.						v	v					
		BD	EC	Computer aided design of fabrics, knitwear and textiles	Computer-aided design method for drawings. Art Nouveau ornament and textile printed design art design. Variable methods of computer-aided design of knitted fabric loop structures. Automated modeling of technological processes, their analytical display. Development of automated multi-cycle methods for obtaining structural elements of knitwear. use computer databases of regulatory documents in the development of projects for textile production for various purposes.	5					v	v					

		BD	EC	Experiment planning and optimization of textile production processes	Experiment design: matrix compilation, planning and randomization of repeated experiments; choice of values of factor levels; intervals of varying the number of levels. Analytical optimization method. Multicriteria optimization problems. Combine modern methods of organizing and conducting scientific research in the field of production of textile materials; to carry out a critical analysis and evaluation of the results obtained.							v	v			
	Technology and equipment for the production of textile materials	PD	EC	Functional groups of knitting machines	Classification and layout of knitted machines. Leaving and threading on cross knitting and warp knitting machines. Mechanisms for the removal of knitted machines. Knitting machine drives and observers. Programmed control of the knitting machines. Describe the design and principle of operation of knitting machines for knitting production, main and auxiliary mechanisms.	4							v			
		PD	EC	Functional groups of textile machines	Classification and layout of textile machines. Program control of the work of textile machines. Study of the mechanisms that provide the filing, pulling and rolling of the web. Automatic observers and stops.											

					Calculation of the parameters of the release and feed mechanisms on textile machines. The choice of textile equipment and the calculation of filling parameters, to recommend conditions that improve the efficiency of textile machines and production in general.													
		PD	EC	Melange yarn production technology	Promising directions for expanding the range of multicomponent textile yarns. Analysis of new technological processes for producing multicomponent yarn. Technological processes for the production of melange yarn. The use of new methods of forming multicomponent yarns. New production methods and an assortment of non-uniform secondary yarns. Assessment of the quality of non-uniform textile yarns. Analysis of the properties of the initial components affecting the properties of non-uniform filaments. Assess the quality of non-uniform textile yarns.	5							v					
		PD	EC	Enzymatic finishing technology for textile materials	Intensification of traditional methods of finishing textile materials; Theoretical foundations of enzymatic activation of the dyeing process for textile materials based on natural fibers. New types of thickeners and	5						v	v					

					thickening systems used in printing with reactive dyes and pigments. The current state of the final finishing of textile materials.													
		PD	EC	Applied problems of nonlinear mechanics of flexible threads	Fundamentals of the mechanics of textile threads and cloths, the equation of equilibrium of textile threads and cloths. Causes of defects and methods of their elimination, theoretical foundations of technological processes of textile production. Deformation characteristics of textile threads and cloths. Methods for the experimental study of the deformation characteristics of textile threads and cloths in scientific and practical work. Equilibrium of textile threads and cloths or rational forms of differential equations of motion, conditions of theoretical statics and dynamics of textile threads and cloths in technological processes of textile production.	5						v	v					
		PD	EC	Applied mechanics of textile yarns and fabrics	Subject and methods of thread mechanics. Equilibrium equations, calculation of an inextensible thread. Theoretical foundations for determining the bending stiffness of the thread. The theory of thread deformation. Non-linearity at small deformations. Thread strength and							v	v					

					prediction of its destruction. the use of theoretical static and thread conditions in the technological processes of textile products, taking into account the choice of rational forms of differential equations or differential equations.													
Modern methods of dyeing and finishing of textile materials	PD	EC	Innovative technologies in coloring and finishing of textile materials	The current state and ways of improving the technology of coloring textile materials. Theoretical foundations for fixing dyes with textile fibers. New types of thickeners and thickening systems used in printing with reactive dyes and pigments. Modern and advanced printing technologies. The use of sublimation dyes for thermal printing. the use of information technology in printing processes.	7						v	v						
	PD	EC	Resource-saving technologies in finishing production	Development of a resource-saving strategy at a manufacturing enterprise, the organization of low-waste production and non-waste technologies. the ability to understand modern problems of scientific and technological development of the raw material base, modern technologies for the disposal of waste from the textile industry, scientific and technical policy in the field of technology and design of textile products; systematize and							v	v						

				summarize information on the formation of enterprise resources.												
Final certification module			Registration and defense of a master's thesis	The final qualification work of the graduate of the master's program, confirming the competencies acquired in the learning process in accordance with the chosen training specialization. Defense of a master's thesis at an open meeting of the State Attestation Commission with the participation of the chairman of the commission and at least half of its members. The order and regulations for the defense of a master's thesis are established by the chairman.		v				v	v	v	v	v	v	
			Research work of a master student	Carrying out experimental research work according to the plan of the academic period using the instrumental base of the department laboratory. The use of information technology and computer programs in the performance of the final qualifying work. Selection and justification of the technological scheme of production in accordance with the topic of the master's thesis. Determination of the economic efficiency of the developed technology. Formation of conclusions, modeling, processing and interpretation of the	24					v	v		v	v		

					results obtained												
--	--	--	--	--	------------------	--	--	--	--	--	--	--	--	--	--	--	--

**4. SUMMARY TABLE REFLECTING THE VOLUME ASSIMILATED CREDITS
OF EDUCATION PROGRAM MODULES**

Course of Study	Semester	The number of mastered modules	The number of studied disciplines		Number of KZ credits					Total hours	Total KZ credits	The number of	
			VC	EC	Theoretical training	Pedagogical practice	Research practice	SRWM	Final examination			exam	диф. зачет
1	1	5	5	2	29			1		900	30	5	3
	2	5		4	23	4		3		900	30	4	2
2	3	4		4	21		7	2		900	30	4	2
	4	2						18	12	900	30		2
total			5	10	73	4	7	24	12	3600	120	13	8

5. STRATEGIES AND METHODS OF TRAINING, MONITORING AND EVALUATION

Learning Strategies	<p>Student-centered learning: the learner is the center of teaching/learning and an active participant in the learning and decision-making process.</p> <p>Practice-oriented learning: focus on the development of practical skills.</p>
Teaching methods	<p>Conducting lectures, seminars, various types of practices:</p> <ul style="list-style-type: none"> • application of innovative technologies; • problem learning; • case study; • work in a group and creative groups; • discussions and dialogues, intellectual games, competitions, quizzes; • methods of reflection, projects, benchmarking; • Bloom's taxonomy; • presentations; • rational and creative use of information sources: • multimedia educational programs; • electronic textbooks; • digital resources. <p>Organization of independent work of students, individual consultations.</p>
Monitoring and assessing the achievability of learning outcomes	<p>Current control on each topic of the discipline, control of knowledge in classroom and extracurricular activities (according to the syllabus). Assessment Forms:</p> <ul style="list-style-type: none"> • survey in the classroom; • testing on the topics of the academic discipline; • test papers; • protection of independent creative works; • discussions; • trainings; • colloquia; • essays, etc. <p>Midterm control at least two times during one academic period within the same academic discipline.</p> <p>Intermediate certification is carried out in accordance with the working curriculum, academic calendar.</p> <p>Conduct forms:</p> <ul style="list-style-type: none"> • exam in the form of testing; • oral exam; • a written exam; • combined exam; • protection of projects; • protection of practice reports. <p>Final state certification.</p>

EDUCATIONAL AND RESOURCE SUPPORT OF THE EP

<p>Information Resource Center</p>	<p>Information and educational portal "PROFESSOR" www.portal.ukgu.kz provides information about the educational process at SKU. Thanks to an efficient search system, it is possible to obtain information related both personally to the undergraduate, such as lists of classes, exam schedules by semesters, academic performance, teaching materials for the current semester, and in general for the university (data about faculties, teachers, etc.).</p> <p>The library website http://lib.ukgu.kz is an indicator of the level of information service. The site has a wide range of reference and bibliographic apparatus of the library, bulletins of new acquisitions, new publishers, virtual exhibitions, news feed and other services. At the request of students and teachers, thematic collections of Internet resources are formed. For teachers, undergraduates and applicants there is a section "Information for scientists", which presents the requirements for educational, scientific and reference publications in accordance with GOSTs; rules for the design of lists of references; list of periodicals and scientific and technical publications of the Republic of Kazakhstan, recommendations for determining the citation index.</p> <p>Users are provided with a modern reference and bibliographic apparatus: Electronic catalogue, Electronic card index of articles, Electronic card index of abstracts of dissertations. Work with catalogs is carried out in two forms: electronic and traditional (card). The total volume of the electronic catalog is 151513 bibliographic records. The electronic catalog of the JIC is presented on the website http://lib.ukgu.kz.</p> <p>For university users, the Educational and Information Center (library) has created up-to-date full-text databases of its own generation: "Proceedings of the teaching staff of SKSU named after. M. Auezov", "Electronic Archive", "AlmaMater" and others, which since 2017 have been combined into a single search system for ease of search. Opened on-line access to databases: "SpringerLink", "Scopus", "Polpred", "Thomson Reuters ISI Web of Science", "ScienceDirect", "EBSCO", to Kazakhstani databases: "KazPatent", "Epigraph", "Zan", "RMEB".</p>
<p>Material and technical base</p>	<p>Master's educational program 7M07260 - Technology and design of textile materials, equipped in accordance with the requirements with the necessary classroom fund, educational laboratories, computer classes, instruments and equipment for performing laboratory scientific experiments</p> <p>Laboratories are equipped with a large number of equipment and devices: Haisen china HS 808 M and Haisen china HS 808 P automatic hosiery knitting machines, Haisen china HS 305 automatic glove knitting machine, 1603 Textima combing machine , tape machine "LMSh-220-1T", wrapping machine "Merrylock", sewing machine "Bernette", knitting machine "Silver" SK-280, tearing machine RM 3-1, laboratory electronic scales Adventurer, microscope XSZ-137B, drying ShS-80 cabinet, VUS MT 250</p>

	<p>centrifuge, VUS MT 250 moisture meter, ShS-80 drying cabinet, MV-4M aspiration psychrometer, WT torso scales, analytical scales, thermostats, refrigerator, water baths. Laboratories are equipped with personal protective equipment, first aid kits, means of extinguishing a fire (fire extinguisher), equipped with fume hoods.</p> <p>Undergraduates also have the opportunity to conduct research in accredited laboratories of the university: Laboratory of Physical and Chemical Research Methods named after Academician S.T. Suleimenov "SAPA" and Testing regional laboratory of engineering profile (IRLIP) "Structural and biochemical materials". Laboratories are equipped with modern equipment and instruments that are annually verified, which ensures the accuracy and reliability of research results.</p>
--	---