Ministry of Education and Science of Ukraine

Nationally Technical University

Kharkiv Polytechnic Institute"

APPROVED

Rector of NTU "KPI"

_____ Ye. Sokol

«___» _____ 2019.

Educational and professional programs

"MOTOR TRANSPORT"

Second level higher degree of education

number 274 - Motor transport

industry knowledge number 27 Transport

Qualifications: Master of Motor transport

the Scientific

COUNCIL NTU "KPI"

Chairman of the Academic Council

_____ / L. Tovazhnyansky /

(Protocol number from __ "__" _____ 2019)

Kharkiv 2019

LIST OF CERTIFICATION

of an educational-professional program

Level of higher education	The second (Master)
Knowledge	27 Transport
Specialty	274 "Motor transport"
Specialization	274-01 " Transport and transport infrastructure"
Qualification	Master of motor transport

APPROVED

Scientific-methodical commission on the specialty " Motor transport "

Head of Commission

_____ V. Samorodov

«___» _____ 2019

RECOMMENDED

Methodical Council of NTU "KhPI"

Deputy Chairman of the methodical council

_____ R. Mygushchenko

«___» _____ 2019

APPROVED

Head of the Department of Car and Tractor Industry

_____ V. Samorodov

«___» _____ 2019

APPROVED

Director of the Educational-scientific institute of mechanical engineering and transport

_____ V. Iepifanov

«___» _____2019 p.

APPROVED AND PROVIDED

By order of the rector of the National Technical University "Kharkiv Polytechnic Institute" from "___" _____ 2019. No. _____

CONTENT

PREFACE

Designed by the project team of the Department of Car and Tractor Industry of the Institute of Education and Science in Mechanical Engineering and Transport of the National Technical University "Kharkiv Polytechnic Institute" consisting of:

1. Doctor of Technical Sciences, Professor V. Samodorodov – Head of the Department of Car and Tractor Industry, Head of the Project Group (guarantor of the educational program);

2. Doctor of Technical Sciences, Associate Professor A. Bondarenko – Professor of the Department of Automobile and Tractor Engineering;

3. Candidate of technical sciences, associate professor M. Mittsel – Associate Professor of the Department of Car and Tractor Industry.

Reviewers

1. Honored Worker of Science and Technology of Ukraine, Doctor of Technical Sciences, Professor A. Lebedev A – Head of the Department of Tractors and Cars of the Kharkiv National Technical University of Agriculture named after. P. Vasilenko, Kharkiv.

2. Doctor of technical sciences, professor A. Bazhinov – Head of the Department of Automobile Electronics of Kharkiv National Automobile and Road University.

Reviews and comments of external stakeholders:

1. Autocentre private joint-stock company "FRUNZE ENTERPRISE".

2. Subsidiary enterprise "AVTOTREYDING - KHARKIV".

3. Private joint-stock company "KHARKIV - AUTO".

1. Profile of the educational-professional program in the specialty Motor transport

Specialization 274– 01 Transport and transport infrastructure

Full name of higher educational institution and structural unit	National Technical University "Kharkiv Polytechnic Institute, Institute of Education and Science in Mechanical Engineering and Transport, Department of Car and Tractor Industry
Higher education and the name of the qualification in the language	Level of higher education: Master Qualification: Master of motor transport
The official name of the educational pro-	**Motor transport**
Type of diploma and volume of educational program	Bachelor's degree, unitary, 90 ECTS credits, term of training 1,4 years
Availability of accreditation	Certificate of accreditation from 06/09/2017 ND №2192188 valid until 01/07/2022.
Cycle / Level	National qualifications framework of Ukraine –8 level, FQ-EHEA– second cycle, EQF LLL – 7 level
Prerequisites	Educational Bachelor's degree in related (or other specialties) in accordance with the conditions and rules of admission.
Teaching language	Ukrainian, Russian, English
The duration of the educational program	The validity of the certificate of accreditation before July 1, 2022.
Internet address of the permanent placement of the description осві-	http://blogs.kpi.kharkov.ua/v2/nv/

2 - The purpose of the educational program	
Combination of a high level of professional training with the formation of a student's scientific outlook and providing a broad outlook in the social, humanitarian, fundamental and professional fields. The achievement of the stated goal is based on the principles of continuity and individualization of learning, the fundamental and integrity of knowledge, practical orientation and awareness of the place of the received competencies, symbiosis of scientific and system approaches, etc.	
3 - Characteristics of the educational program	
Subject area (branch of knowledge, specialty, specialization))	Branch of knowledge: 27 Transport Specialty: 274 Motor transport Specialization: 274-01 Transport and transport infrastructure
Orientation of the educational program	Preparation of masters with the formation of the broadest scientific and technical outlook of the future professional. The program is balanced in terms of humanities and socio-economic, natural sciences and vocational and practical training and contains a sufficient sample component in the specialization.
The main focus of the educational program and specialization	Training of specialists capable of developing and using modern technologies for the creation, operation and repair of motor transport objects.
Features of the program	Research of the theory of processes of production, operation and repair of objects of motor transport; mastering methods of collecting, processing, interpreting research results and modeling processes in the field of motor transport and methods and technologies of scientific, production, project, organizational and management activities.
4 - Eligibility of graduates for employment and further training	
Suitability for employment	Graduates can work in professions according to the National Occupational Classifier DK 003:2010:

	1222.2 Master of Automobile Gas Refueling Station. 1222.2 Master of production service. 1222.2 Head of the workshop. 1222.2 Master of the production site. 1222.2 Master of operation and repair of machines and mechanisms. 1222.2 Master of Transport Repair. 1222.2 Master of the main production site. 1222.2 Master of the shop. 1222.2 Chief of Automobile Gas Refueling Station. 1222.2 Chief of the brigade. 1222.2 Chief of production. 1222.2 Chief of Production Department. 1222.2 Head of department. 1222.2 Head of Technical Control Department. 1222.2 Head of the district. 1222.2 Chief of the repair shop. 1223.1 Chief engineer. 1226.1 Chief engineer (in transport). 1226.1 Director of Transport. 1226.2 Head of the garage. 1226.2 Head of the column (automotive, mechanized). 1226.2 Chief of the workshop. 1226.2 Chief of change (transport). 1226.2 Chief of service (transport). 1222.2 Master of Transport Repair. 1222.2 Master control (section, shop). 2145.2 Engineer for diagnosing the technical condition of the machine-tractor park. 2145.2 Engineer of the operation of a machine-tractor park. 2145.2 Mechanical engineers. 2149.1 Junior Research Fellow (Transport). 2149.2 Metrology engineer. 2149.2 Maintenance and repair engineer. 2149.2 Equipment Engineer. 2149.2 Engineer-technologist (mechanics). 2149.2 Engineer for designing mechanized develop-ments. 2149.2 Repair Engineer. 2149.2 Transport engineer. 2149.2 Quality engineer

	2149.2 Engineer for the introduction of new technology and technology. 2149.2 Labor safety engineer
Further education	The Master has the opportunity to study at a ninth degree (PhD) in an educational science program in accordance with the National Framework of Qualifications in the field of knowledge "Transport" or related fields of knowledge.
5 - Teaching and evaluation	
Teaching and learning	The teaching process involves the use of such learning technologies as: problem-oriented lectures, laboratory classes, small groups, discussion seminars, brain attacks, presentations that develop communicative and leadership skills, independent work with literary / informational sources, generalization skills; writing of scientific articles, planning and implementation of research works and works of practical direction.
Evaluation	Assessment Students' knowledge and skills control is carried out in the form of current and final control. Assessment of students' knowledge is carried out according to the modular rating system. Current control involves controlling knowledge, skills and abilities of students at lectures, laboratory, practical and seminar sessions, and during individual training tasks and modular control works. The final control is carried out in the form of examinations, credits and final certification. The final control of knowledge in the form of an exam is made in writing. A student of higher education is considered to be admitted to the final examination (examination) from the disciplines of the educational program, if he has completed all types of work envisaged by the curriculum in this discipline.

	The final control in the form of a differentiated offset is based on the results of the current control (the sum of the points obtained by the results of the current control) without the submission of additional forms of control. The assessment of applicants for higher education is based on the results of examinations and differentiated credits for each semester. The attestation is carried out in the form of public defense (demonstration) of qualification work. The qualification work must include elements of research and practice. The institution of higher education should carry out a mandatory check on the plagiarism of all qualification papers of masters. The uniqueness of the text for the work of the educational-professional training program should be at least 70%.
6 - Program competencies	
Integral competence	Ability to solve complex problems and problems in road transport in the course of carrying out professional activity or in the process of study, which involves research and / or innovation, and is characterized by complexity and uncertainty of the conditions.
General Competence	GC 1 Ability to implement in order to prevent the emergence of emergency (emergency) situations in the automotive industry and to ensure the sustainable functioning of the enterprises concerned, as well as to prognosticate and assess the socio-economic consequences of emergencies (emergencies) cts GC 2 Ability to use the method of determination of risks and accepted and dangerous levels, to identify the factors of influence on the prevention of accidents, occupational diseases and accidents at the objects of automotive industry GC 3 Ability to identify objects and subjects of intellectual property, to have knowledge of the peculiarities of legal protection, ways of commercialization and protection of the right to intellectual property, to assess the nature of the violation of intellectual property rights, to have the basics of contractual relations in the field of intellectual property.

	GC 4 Ability and readiness to understand and analyze economic problems and social processes, to be an active subject of economic activity, to have a process of personnel management and its motivation GC 5 Ability to apply mathematical and computer modeling methods for studying and designing processes and systems in the automotive industry.
Professional competence of a specialty (PC)	PC 1 Ability to analyze car designs, operational qualities, working processes of car systems and calculate its mechanisms and systems. PC 2 The ability to evaluate theoretically basic indicators of operational properties, operation and maintenance of cars in different climatic conditions; basic methods of automotive examination; to orient in the world energy problems, to have skills in matters of fuel and lubricants, to be familiar with the technical exploitation of cars and trucks, to understand the issues of ecology and environmental protection. PC 3 Ability to work with research equipment, process and investigate the results. To make calculations of reliability of cars, tractors and their units and systems. PC 4 Ability to develop the structure and key elements of quality management at a motor transport enterprise. PC 5 Ability to freely use computing equipment, possess ergonomic power and environmental standards of self-propelled ma-bus. PC 6 Ability to satisfy current trends in the development of production and technical base of motor transport enterprises and the place of technological design in it. PC 7 Ability to choose varieties of routes and methods of their development, methods of planning the work of cars, principles and order of coordination of vehicles, the principles for customs clearance and components of this process, the order of filling and the list of accompanying transport documents, know the situation, regard-

	ing the organization of traffic safety in Transportation of all types of cargo. PC 8 Ability to analyze the socio-economic essence of branded car service, organize maintenance and repair work and technological calculation of the designed STR. PC 9 Ability to organize maintenance and repair of cars with the use of diagnostics. PC 10 The ability to formulate an understanding of the specific features of logistics technology, such as the management of customer service lines through efficient operation, distribution and collaboration with intermediaries.
7 - Program learning outcomes	
Program results of training in general preparation	RE_G 1 To be able to analyze and substantiate organizational and technical measures on technogenic safety at enterprises, organizations, establishments and non-secure territories, to assess the consequences of the impact of the impressive factors of the accident on objects; to develop engineering and technical measures on the level of risk of accidents and emergency situations. RE_G 2 To be able to analyze and predict hazards in the design and operation of road transport vehicles, to ensure the effectiveness of the operation of a safety management system, to draw up hazard cards and risk assessment in the workplace. RE_G 3 Know the basic concepts in the field of legal protection of intellectual property in Ukraine, be able to work with normative legal acts of Ukraine and international agreements regulating relations in the field of intellectual property, to know the conditions of granting legal protection to objects of intellectual property rights of Ukraine, to be able to apply acquired knowledge in professional activity. RE_G 4 Know the essence of the main economic categories, scientific foundations and ways to increase production, resource savings. RE_G 5 To be able to build and use mathematical and

	computer models in the automotive industry.
Program results of training for professional preparation	PRE 1 Know the design of cars, performance, working processes of the car systems and calculate its mechanisms and systems. PRE 2 To know the basic parameters of operational properties, operation and maintenance of cars in different climatic conditions; basic techniques of automotive expertise; to orient in the world energy problems, to have skills in matters of fuel and lubricants, to be familiar with the technical operation of cars and trucks, to understand the issues of ecology and environmental protection. PRE 3 Know how to work with research equipment, process and investigate the results. Carry out calculations of reliability of cars, tractors and their units and systems. PRE 4 Know how to develop the structure and key elements of quality management at a motor transport company. PRE 5 Know how to use computer technology, possess ergonomic properties and environmental standards of self-propelled machines. PRE 6 Know the current trends in the development of the production and technical base of motor transport enterprises and the place of technological design in it. PRE 7 Know how to choose different types of routes and methods of their development, methods of planning the work of cars, principles and procedure for coordinating the work of cars and the principles for customs clearance and components of this process, the order of filling and the list of accompanying transport documents, know the situation, on the organization of traffic safety in transportation all types of cargo. PRE 8 Know the socio-economic essence of the branded car service, organize maintenance and repair work and technological calculation of the designed STR. PRE 9 Know how to organize maintenance and repair of cars with the use of diagnostics. PRE 10 Know the basic understanding of the peculiarities of logistics technology, such as managing the customer service chain through effective activity, distribution and collaboration with intermediaries.

8 - Resource support for the implementation of the program	
Personnel support	It meets the personnel requirements for ensuring the implementation of educational activities in the field of higher education in accordance with the current legislation of Ukraine (Resolution of the Cabinet of Ministers of Ukraine "On approval of Licensing conditions for conducting educational activities of educational institutions" dated December 30, 2015, No. 1187 as amended in accordance with the CM Decree No. 347 dated May 10, 2018)
Material and technical support	Complies with the technological requirements for material and technical provision of educational activities in the field of higher education in accordance with the current legislation of Ukraine (Resolution of the Cabinet of Ministers of Ukraine "On Approval of Licensing Conditions for Conducting Educational Activities of Educational Institutions" dated December 30, 2015, No. 1187 as amended in accordance with Decree of the Cabinet of Ministers No. 347 dated May 10, 2018)
Informational and educational - methodical software	Corresponds to the technological requirements for educational, methodological and informational provision of educational activity in the field of higher education in accordance with the current legislation of Ukraine (Resolution of the Cabinet of Ministers of Ukraine "On approval of Licensing conditions for the educational activities of educational institutions" dated December 30, 2015, No. 1187 as amended. in accordance with the CM Decree No. 347 dated May 10, 2018)
9 - Academic mobility	
National credit mobility	On the basis of bilateral agreements between the National Technical University "Kharkiv Polytechnic Institute" and higher educational institutions of Ukraine.
International credit mobility	On the basis of bilateral agreements between the National Technical University "Kharkiv Polytechnic Institute" and the leading European higher education institutions of the relevant direction
Education of foreign applicants for education	Training is possible in Ukrainian, English and Russian

2. List of components of the educational and professional program

2.1 List of components of the EP

Code	Components of the educational program (educational disciplines, course projects (work), practice, qualification work)	Quantity of credits	Form of final control
1	2	3	4
Compulsory components of EP			
CC 1	Organization of production and marketing	3,0	Credit
CC 2	Safety of work and professional activity	3,0	Credit
CC 3	Intellectual Property	3,0	Credit
CC 4	Automation and modeling of car processes	3,0	Credit
CC 5	Analysis of working processes of car systems	6,0	Exam
CC 6	Technical exploitation of cars, automotive expertise and resource conservation	6,0	Exam
CC 7	Methods of scientific research and patenting	4,0	Credit
CC 8	Basics of quality management	4,0	Credit
CC 9	Organization of road transport and traffic safety	4,0	Exam
CC 10	Technical maintenance and automotive servicing	5,0	Exam
CC 11	Modern methods of diagnostics of automobiles	5,0	Exam
CC 12	Logistics on motor transport	4,0	Exam
CC 13	Reliability of cars	3,0	Credit
CC 14	Technological planning of motor transport enterprises	3,0	Credit
CC 15	Practice	15	
CC 16	Attestation	15	

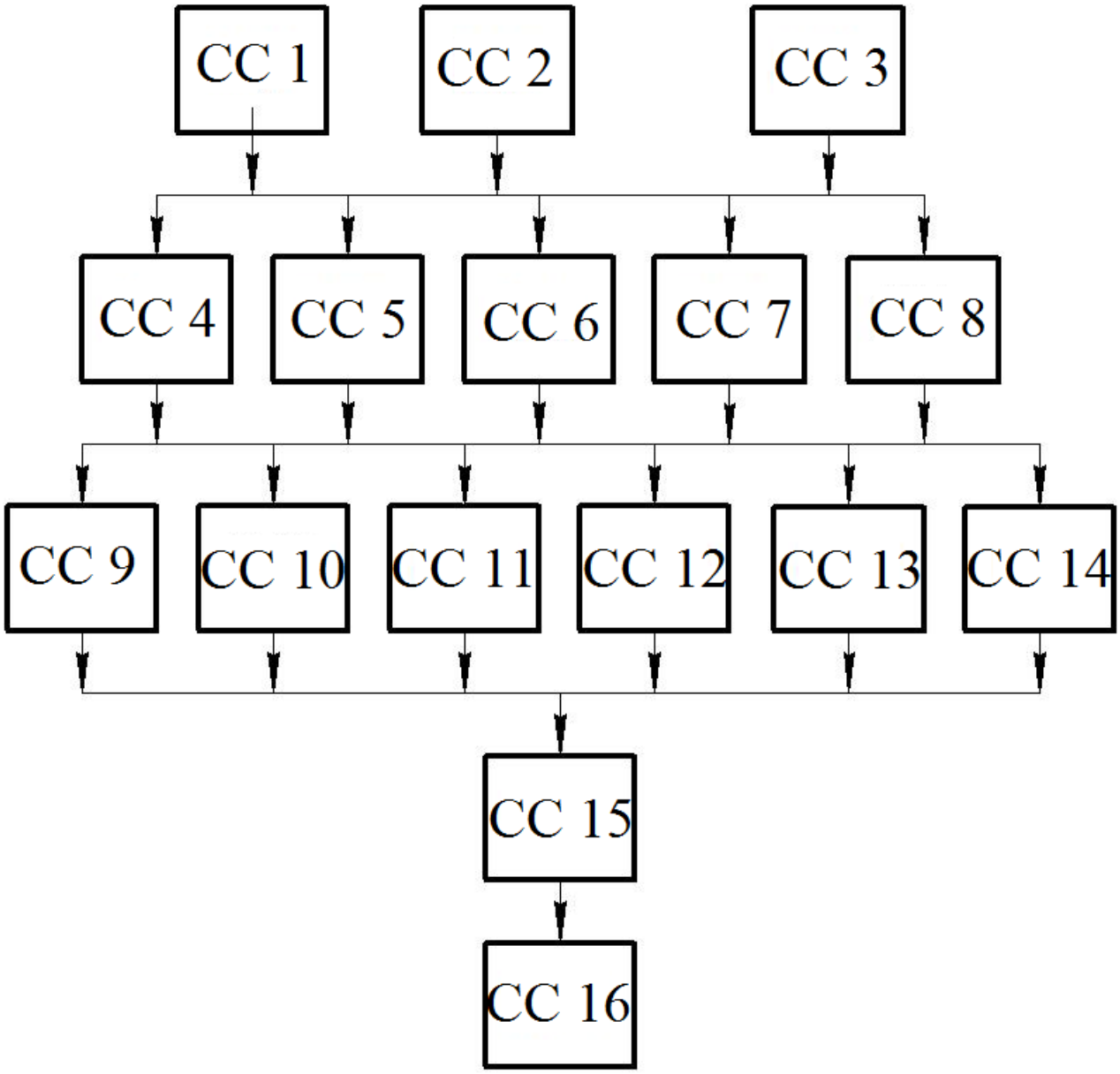
	GENERAL SUMMARY OF THE EDUCATIONAL PROGRAM	90

2.2 Distribution of the content of the educational program by groups of components and training cycles

№	Training cycle	Educational load of the applicant of higher education (credits /%)		
		Compulsory components of the educational program	Elective components of the educational program	Total for the whole period of study
1	General training cycle	8/89	–	8/89
2	A cycle of professional and practical training	82/91,11	-	82/91,11
3	Total for the duration of training	90/100	-	90/100

3 STRUCTURAL-LOGICAL SCHEME OF EDUCATIONAL-PROFESSIONAL PROGRAMS "MOTOR TRANSPORT"

Semester	Contents of the EP
9	CC 1, CC 4, CC 5, CC 6, CC 9, CC 11, CC 14,
10	CC 2, CC 3, CC 7, CC 8, CC10, CC 12, CC 13,
11	CC 15, CC 16



4. FORM OF EXPRESSION ATTESTATION OF HIGHER EDUCATION BUILDERS

Certification of graduates in the higher educational program of the specialty № 274 – Motor transport is carried out in the form of defense of the qualification master's work and ends with the issuance of the document of the established sample on awarding him a master's degree with the qualification: Master of Automobile Transport. The certification is carried out openly and publicly.

5. MATRIX OF COMPATIBILITY OF SOFTWARE COMPETENCIES TO COMPONENTS OF EDUCATIONAL-PROFESSIONAL PROGRAM

	GC1	GC2	GC3	GC4	GC5	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
CC 1				+							+				
CC 2	+	+													
CC 3			+												
CC 4					+										
CC 5					+	+									
CC 6	+						+					+		+	
CC 7					+					+					
CC 8									+						
CC 9												+			
CC10							+			+			+	+	
CC11								+						+	
CC12															+
CC13								+							
CC14											+				
CC15	+	+				+		+			+	+		+	
CC16	+	+		+	+	+	+	+				+		+	

6. MATRIX SUPPLY SOFTWARE RESULTS TRAINING WITH RELEVANT COMPONENTS EDUCATIONAL-PROFESSIONAL PROGRAM

	RE_G 1	RE_G 2	RE_G 3	RE_G 4	RE_G 5	PRE 1	PRE 2	PRE 3	PRE 4	PRE 5	PRE 6	PRE 7	PRE 8	PRE 9	PRE 10
CC 1				+							+				
CC 2	+	+													
CC 3			+												
CC4					+					+					
CC 5						+									
CC 6				+			+					+		+	
CC 7					+					+					

CC 8									+						
CC 9												+			
CC10							+			+			+	+	
CC11								+						+	
CC12												+			+
CC13								+							
CC14											+		+		
CC15	+	+					+	+			+	+		+	+
CC16	+	+	+		+	+		+		+			+	+	

Head of the Department of Car and
Tractor Industry _____ V. Samorodov

Head of the Project Group
(guarantor of the educational program)_____ V. Samorodov