МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

ЗАТВЕРДЖУЮ
Ректор НТУ «ХПІ»
__________ Євген СОКОЛ
«30» 04 2024 р.

ОСВІТНЬО-ПРОФЕСІЙНА ПРОГРАМА
«АВТОМОБІЛІ ТА АВТОМОБІЛЬНЕ ГОСПОДАРСТВО»

Другого (магістерського) рівня вищої освіти

за спеціальністю 274 – Автомобільний транспорт

галузі знань 27 – Транспорт

кваліфікація магістр з автомобільного транспорту

ЗАТВЕРДЖЕНО
ВЧЕНОЮ РАДОЮ НТУ «ХПІ»

Голова Вченої ради
__________ Леонід ТОВАЖНЯНСЬКИЙ

Протокол № 4

від «26» 04 2024 р.

Харків 2024 р.

ЛИСТ ПОГОДЖЕННЯ

Освітньо-професійної програми Автомобілі та автомобільне господарство

Рівень вищої освіти	Другий (магістерський)
Галузь знань	27 Транспорт
Спеціальність	274 Автомобільний транспорт
Кваліфікація	Магістр з автомобільного транспорту

СХВАЛЕНО
Робочою групою ОП із спеціальності «Автомобільний транспорт»
Гарант освітньої програми «Автомобілі та автомобільне господарство»

_____________ Микола МІТЦЕЛЬ

«29» 04 2024 р.

РЕКОМЕНДОВАНО
Методичною радою НТУ «ХПІ»
Заступник голови методичної ради

_____________ Руслан МИГУЩЕНКО

«30» 04 2024 р.

ПОГОДЖЕНО
Завідувач кафедри «Автомобіле- і тракторобудування»

_____________ Олексій РЕБРОВ

«29» 04 2024 р.

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Студент (член робочої групи ОП)
МІТ-М723

_____________ Артем ШЕВЕЛЬ

«29» 04 2024 р.

REVIEWERS:

Productive comments and feedback on the educational-professional program (EPP) project were received from:

1. Vitaliy Mykolayovych Novichenko, Head of the Service and Spare Parts Department at LLC 'Solli Plus'

2. Yevhen Yuriyovych Chyrva, Head of the Sales Department at PJSC 'Frunze Plant'.

3. Mykhailo Leonidovych Shulyak, Doctor of Engineeering Sciences, Professor, Head of the Department of Agroengineering at Sumy National Agrarian University, Sumy.

РЕЦЕНЗІЯ

на освітньо-професійну програму «Автомобілі та автомобільне господарство» другого (магістерського) рівня вищої освіти за спеціальністю 274 Автомобільний транспорт з галузі знань 27 Транспорт

На рецензію подана освітньо-професійна програма (ОПП) «Автомобілі та автомобільне господарство» другого (магістерського) рівня вищої освіти, яка оновлена у 2024 році. Метою ОПП є підготовка фахівців здатних до розв'язання комплексних проблем в галузі автомобільного транспорту та інноваційно-підприємницької діяльності, що володіють методологією наукової діяльності та спроможні до керівництва трудовими колективами. Поєднання високого рівня професійної підготовки з формуванням у студента наукового світогляду та надання широкого кругозору в професійній, соціальній, гуманітарній та фундаментальній сфері. Досягнення означеної мети ґрунтується на принципах наступності та індивідуалізації навчання, фундаментальності та цілісності надання знань, практичної спрямованості та усвідомлення місця отриманих компетентностей, симбіозу наукового та системного підходів у сфері автомобільного транспорту.

Структура програми побудована на поєднанні загальних компетенцій зі спеціальними компетенціями, які описані в розділах 6 та 7. Підсумком навчання студента має стати освоєння їм програмних результатів, які характеризують його якісну підготовку.

Як побажання до вдосконалення даної програми, хочеться сказати про необхідність більш глибокої підготовки фахівців автомобільного транспорту в питаннях психології спілкування менеджера-консультанта з можливим покупцем автомобіля, враховуючи нові технології продажів.

В цілому ОПП "Автомобілі та автомобільне господарство" складена на високому професійному рівні, з урахуванням потреб підприємств галузі і може бути використана при навчанні магістрів. Варто відзначити, що беручі до уваги високий рівень оснащення кафедри сучасним діагностичним обладнанням електронних систем автомобіля доцільно виділена окремо навчальна дисципліна – "Діагностика електронних систем автомобіля".

Керівник відділу сервісу і запасних частин
ТОВ «Соллі плюс» Віталій НОВІЧЕНКО

УКРАЇНА
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «СОЛЛІ ПЛЮС»
ДЛЯ ДОКУМЕНТІВ
№35244815
МІСТО ХАРКІВ

РЕЦЕНЗІЯ

на освітньо-професійну програму «Автомобілі та автомобільне господарство» другого (магістерського) рівня вищої освіти за спеціальністю 274 «Автомобільний транспорт», галузі знань 27 «Транспорт»

Підготовка здобувачів другого (магістерського) рівня вищої освіти за спеціальністю 274 «Автомобільний транспорт» в Національному технічному університеті «Харківський політехнічний інститут» є достатньо актуальною та доцільною, оскільки тільки у Харківському регіоні нараховується близько 40 автосалонів з продажу нових автомобілів, 950 авторизованих та неавторизованих станцій технічного обслуговування, і це не враховуючи підприємств, пов'язаних з автомобільним транспортом, яким потрібні висококваліфіковані кадри за спеціальністю 274 «Автомобільний транспорт».

Представлена освітньо-професійна програма враховує наступні якості, якими повинен володіти фахівець, а саме: готовність розв'язувати складні задачі та проблеми у автомобільному транспорті при здійсненні професійної діяльності або у процесі навчання, що передбачає проведення досліджень та/або здійснення інновацій та характеризується симбіозом наукового та системного підходу в сфері автомобільного транспорту. З точки зору нашого підприємства, а ми представляємо на українському ринку такі бренди, як Ford, Nissan, Kia, Hyundai та інші, особливий інтерес викликає підготовка фахівців за освітніми компонентами «Менеджмент в автосервісі», «Логістика на автотранспорті» та «Організація автомобільних перевезень».

Рецензована освітньо-професійна програма за спеціальністю 274 «Автомобільний транспорт» на кафедрі «Автомобіле- і тракторобудування» в Національному технічному університеті «Харківський політехнічний інститут» постійно оновлювалася безпосередньо за нашою участю через проведення зустрічей, семінарів, створення робочих груп і участі в засіданнях кафедри. Слід відзначити міцний зворотній зв'язок з робочою групою спеціалістів кафедри, які оновлювали представлену освітньо-професійну програму, і плідну співпрацю з нашим підприємством.

Керівник відділу продажу
ПрАТ «Завод Фрунзе» Євген ЧИРВА

РЕЦЕНЗІЯ

на освітньо-професійну програму «Автомобілі та автомобільне господарство» другого (магістерського) рівня вищої освіти за спеціальністю 274 «Автомобільний транспорт», галузі знань 27 «Транспорт» в Національному технічному університеті «Харківський політехнічний інститут»

Освітньо-професійна програма (ОПП) «Автомобілі та автомобільне господарство» за спеціальністю 274 «Автомобільний транспорт», що оновлена робочою групою кафедри автомобіле- і тракторобудування НТУ «ХПІ», відповідає 7 рівню Національної рамки кваліфікацій та другому циклу вищої освіти Рамки кваліфікацій Європейського простору вищої освіти.

За структурою та змістом ОПП відповідає загальним вимогам, тобто містить: загальну інформацію, мету, характеристику, придатність випускників до працевлаштування або подальшого навчання, принципи викладання та оцінювання, а також програмні компетентності та результати навчання. Програма спрямована на підготовку фахівців здатних до розв'язання комплексних проблем в галузі автомобільного транспорту, інноваційно-підприємницької та управлінської діяльності, які володіють методологією вирішення практичних завдань і наукових досліджень та спроможні до керівництва трудовими колективами на основі здобутих теоретичних знань, умінь, практичних навичок та інших компетентностей, достатніх для успішного здійснення трудової діяльності.

Позитивною стороною рецензованої ОПП є формуванням максимально широкого науково-технічного світогляду майбутнього професіонала. Також слід відмітити баланс щодо гуманітарної та соціально-економічної, природничо-наукової і професійно-практичної підготовки та містить достатню вибіркову компоненту.

Завдяки вказаним особливостям, ОПП «Автомобілі та автомобільне господарство» вбачається для здобувачів відмінною можливістю розвиватися у професійній сфері та приносити користь галузі транспорту. Ця програма рекомендується для всіх, хто має інтерес до автомобілебудування та хоче сприяти його майбутньому розвитку.

Завідувач кафедри агроінжинірингу
Сумського національного аграрного університету
д.т.н., проф. Михайло ШУЛЯК

ПІДПИС Шуляка М.
ЗАСВІДЧУЮ
ПРОВІДНИЙ ФАХІВЕЦЬ
А. Ю. Шевченко

СУМСЬКИЙ НАЦІОНАЛЬНИЙ АГРАРНИЙ УНІВЕРСИТЕТ МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ВІДДІЛ КАДРОВОГО ТА ПРАВОВОГО ЗАБЕЗПЕЧЕННЯ

PREFACE

Developed by the working group of the educational program 'Automobiles and Automotive Management' of the Educational and Scientific Institute of Mechanical Engineering and Transport of the National Technical University 'Kharkiv Polytechnic Institute' consisting of:

Educational program guarantor

Mittsel Mykola Oleksandrovych – Candidate of Engineering Sciences, Associate Professor, Associate Professor of the Department of Automobile and Tractor Engineering.

Members of the OP working group:

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2. Ostroverkh Oleksandr Olehhovych – Candidate of Engineering Sciences, Associate Professor, Associate Professor of the Department of Automobile and Tractor Engineering.

3. Shevtsov Vadym Mykhailovych – Candidate of Engineering Sciences, Associate Professor, Associate Professor of the Department of Automobile and Tractor Engineering.

4. Shevel Artem Vitaliyovych – a student of the academic group MIT-M723.

PROFILE OF THE EDUCATIONAL-PROFESSIONAL PROGRAM BY SPECIALTY 274 Automotive Transport

1 – GENERAL INFORMATION	
HIGHER EDUCATIONAL INSTITUTION AND STRUCTURAL SUBDIVISION	National Technical University 'Kharkiv Polytechnic Institute', Educational and Scientific Institute of Mechanical Engineering and Transport Department of Automobile and Tractor Engineering
DEGREE OF HIGHER EDUCATION AND NAME OF QUALIFICATION IN THE ORIGINAL LANGUAGE	Master's degree Master's degree in automotive transport
OFFICIAL NAME OF THE EDUCATIONAL-PROFESSIONAL PROGRAM	Educational-professional program 'Automobiles and Automotive Management'
TYPE OF DIPLOMA AND SCOPE OF THE EDUCATIONAL-PROFESSIONAL PROGRAM	Master's degree, single, 90 ECTS credits, duration of study 1 year 4 months
AVAILABILITY OF ACCREDITATION	National Agency for Higher Education Quality Assurance. Ukraine. Certificate – No. 2789. Valid until – 01.07.2027
CYCLE/LEVEL	second (master's) level of higher education, Ukrainian NQF – level 7; FQEHEA – second cycle; QF-LLL – level 7
PREREQUISITES	Bachelor's degree in a related (or other specialties) in accordance with the terms and conditions of admission.
LANGUAGE OF INSTRUCTION	Ukrainian language
VALIDITY PERIOD OF THE EDUCATIONAL PROGRAM	Reviewed annually
LINK TO THE PERMANENT PLACEMENT OF THE DESCRIPTION OF THE EDUCATIONAL PROGRAM	https://blogs.kpi.kharkov.ua/v2/qual1ty/wp-content/uploads/sites/44/2024/02/274-Avtomobili-ta-avtomobilne-M-2024.pdf
2 – PURPOSE OF THE EDUCATIONAL-PROFESSIONAL PROGRAM	
Training specialists capable of solving complex problems in the field of automotive transport, innovative-entrepreneurial and managerial activities, who possess the methodology for solving practical tasks and scientific research and are capable of leading work teams based on acquired theoretical knowledge, skills, practical abilities, and other competencies sufficient for successful employment.	
3 – CHARACTERISTICS OF THE EDUCATIONAL-PROFESSIONAL PROGRAM	
SUBJECT AREA (FIELD OF KNOWLEDGE, SPECIALTY)	<u>Field of knowledge: 27 Transport</u> <u>Specialty: 274 Automotive transport</u> <u>Object of study: processes related to all stages of the life cycle of automotive vehicles and automotive transport infrastructure.</u> <u>Learning objectives: training specialists capable of solving specialized complex tasks and practical problems in automotive transport.</u> <u>Theoretical content of the subject area: design, characteristics, operation, and disposal of automotive vehicles, relevant means, infrastructure, and technologies. Methods, methodologies, and technologies: analytical, numerical, and experimental research;</u> - methods and methodologies for calculating the elements of structures and systems of automotive vehicles, their operational

	characteristics, and reliability indicators; - technologies for the operation, diagnostics, modernization, restoration, and disposal of automotive vehicles and their components; - technologies for the construction and use of automotive transport infrastructure facilities; - methods of technical and economic calculations of performance indicators (efficiency) of automotive transport, information, and information-communication technologies. Tools and equipment: - devices and instruments for measuring physical quantities and parameters; - full-scale samples or models of automotive vehicles and automotive transport infrastructure facilities; - specialized software; - information and analytical systems for supporting managerial, technical, and technological decision-making.
PROGRAM ORIENTATION	Applied. Training of master's students with the formation of the widest possible scientific and technical worldview of the future professional. The program is balanced in terms of humanitarian and socio-economic, natural-scientific, and professional-practical training and contains a sufficient elective component.
MAIN FOCUS OF THE PROGRAM	Special education in the field of automotive transport with a broad scientific and technical worldview. Keywords: automobile, transport, transportation, diagnostics, repair, maintenance
PROGRAM FEATURES	The uniqueness of the educational program lies in its alignment with the issues faced by leading Kharkiv enterprises in the field of automotive transport. The training of higher education applicants is conducted with the involvement of instructors in professional training disciplines such as 'Automation and Modeling of Vehicle Processes,' 'Technical Operation of Automobiles, Auto-Technical Expertise, and Resource Conservation,' 'Management in Auto Service,' and others. These instructors possess certified skills in the relevant areas of activity.
4 – EMPLOYABILITY AND FURTHER EDUCATION OF GRADUATES	
EMPLOYABILITY	Graduates can work in professions according to the National Classification of Professions DK 003:2010: 1222.2 Master of Automotive Gas Filling Station. 1222.2 Master of Production Service. 1222.2 Workshop Manager. 1222.2 Master of Production Site. 1222.2 Master of Operation and Repair of Machines and Mechanisms. 1222.2 Transport Repair Master. 1222.2 Master of the Main Production Site. 1222.2 Workshop Master. 1222.2 Head of the Automotive Gas Filling Station. 1222.2 Brigade Leader. 1222.2 Head of Production. 1222.2 Head of the Production Department. 1222.2 Head of the Branch.

	1222.2 Head of Technical Control Department. 1222.2 Head of Section. 1222.2 Head of Repair Shop. 1223.1 Chief Engineer. 1226.1 Chief Engineer (in Transport). 1226.1 Director of Transport. 1226.2 Head of Garage. 1226.2 Head of Column (Automobile, Mechanized). 1226.2 Head of Workshop. 1226.2 Shift Supervisor (Transport). 1226.2 Head of Service (Transport). 1222.2 Transport Repair Master. 1222.2 Master controller (section, workshop). 2145.2 Engineer for diagnosing the technical condition of the machine and tractor fleet. 2145.2 Engineer for the operation of the machine and tractor fleet. 2145.2 Mechanical engineers. 2149.1 Junior research associate (transport). 2149.2 Engineer for operation and repair. 2149.2 Engineer for equipment assembly. 2149.2 Process Engineer (Mechanics). 2149.2 Engineer in Mechanized Development Design. 2149.2 Repair Engineer. 2149.2 Transport Engineer. 2149.2 Engineer in the Implementation of New Equipment and Technology.
FURTHER EDUCATION	A master's degree holder has the opportunity to study under an educational and scientific program at the 8th level of the National Qualifications Framework and the third cycle of higher education within the Qualifications Framework of the European Higher Education Area in the field of knowledge 'Transport' or related fields of knowledge.
5 – TEACHING AND ASSESSMENT	
TEACHING AND LEARNING	Student-centered teaching, distance learning in the Microsoft 365 system, problem-oriented with the use of such educational technologies as: problem-based lectures, laboratory classes, work in small groups, seminar discussions, brainstorming sessions, presentations that develop communication and leadership skills, independent work with literary/informational sources, the ability to generalize scientific and technical information; writing scientific articles, planning and conducting research work.
ASSESSMENT	The assessment of students' knowledge and skills is carried out in the form of ongoing and final control. The assessment of students' knowledge level is conducted using a rating evaluation system. Ongoing control includes the assessment of students' knowledge, skills, and abilities during lectures, laboratory, practical, and seminar classes, as well as during the completion of individual educational tasks and modular control works. The final assessment is conducted in the form of exams, credits, and graduation certification. A higher education applicant is considered admitted to the final assessment (exam) in the disciplines of the educational program if they have completed all types of work stipulated by the

	curriculum for this discipline. The final assessment in the form of a differentiated credit is conducted based on the results of ongoing assessment (the sum of points obtained from the results of ongoing assessment) without the submission of additional forms of control. The assessment of higher education applicants is conducted based on the results of exams and differentiated credits for each semester. Certification is carried out in the form of a public defense (demonstration) of the qualification work. The qualification work must include elements of scientific research and practical nature. The higher education institution must conduct a mandatory plagiarism check of all master's qualification works. The uniqueness of the text for the educational-professional training program should be at least 70%.
6 – PROGRAM COMPETENCIES	
INTEGRAL COMPETENCE (INT)	The ability to solve complex tasks and problems in automotive transport during professional activities or in the learning process, which involves conducting research and/or implementing innovations and is characterized by a symbiosis of scientific and systematic approaches in the field of automotive transport.
GENERAL COMPETENCIES (GC)	GC 1 Ability to work with intellectual property objects, as well as to prepare and process copyright registration documents in Ukraine and abroad. GC 2 Ability to possess a foreign language at a level sufficient for working with technical literature, instructions, reference books, and scientific publications in the specialty. ZK 3 Ability for creative thinking, exploring promising directions for conducting entrepreneurial activities, possessing the basics of office work, and knowing the requirements of current legislation in the field of taxation.
SPECIAL (PROFESSIONAL) COMPETENCIES OF THE SPECIALTY (PC)	PC1 Ability to justify, design, and model automatic control systems for the working processes of automobiles based on modern electronic components. PC 2 Ability to analyze automobile designs, operational qualities, working processes of vehicle systems, and calculate its mechanisms and systems. PC 3 Ability to theoretically evaluate the main indicators of operational properties, operation, and maintenance of automobiles in various climatic conditions; the main methods of automotive technical expertise; navigate global energy issues, have skills in fuel and lubricants, be familiar with the technical operation of passenger and cargo vehicles, and understand issues of ecology and environmental protection. PC 4 Ability to work with research equipment, process, and investigate the obtained results. Perform reliability calculations for automobiles, tractors, and their components and systems. Ability to conduct patent searches and identify directions for the modernization of technical systems and their management processes. PC 5 Ability to develop the structure and main elements of quality management at a motor transport enterprise. PC 6 Ability to freely navigate domestic and foreign standards that define ergonomic requirements for the driver's workplace of a car

	(tractor). Ability to use research equipment to determine the compliance of internal combustion engines of self-propelled machines with environmental standards for harmful emissions. PC 7 Ability to manage labor collectives and implement modern technologies in the production and technical bases of automotive transport enterprises. PC 8 Ability to apply methods of mathematical and computer modeling to study the processes of changing the technical condition of vehicle systems. PC 9 Ability to apply modern methods of diagnosing electronic vehicle systems and possess practical skills in working with diagnostic equipment. PC 10 Ability to select various routes and possess methodologies for their development, principles, and procedures for coordinating the operation of vehicles and infrastructure facilities, and knowledge of regulations regarding traffic safety organization during the transportation of all types of cargo. PC 11 Ability to solve transport tasks related to the delivery of all types of cargo, possessing the basics of warehouse logistics and inventory management. Ability to organize technical service and repair of specialized rolling stock for cargo vehicle transportation. PC 12 Ability to justify, calculate, and design infrastructure objects of automotive transport, manage production processes, and organize branded service maintenance of automobiles, including specialized rolling stock.
7 – PROGRAM LEARNING OUTCOMES	
LEARNING OUTCOMES FOR GENERAL TRAINING (LOG)	LOg 1 Know the main provisions of Ukrainian legislation regarding the protection of copyright and related rights on intellectual property objects, know the types of protective documents and the procedure for filing an application for obtaining a patent for a utility model, invention, and other creative achievements. Possess skills in drafting an invention formula and other typical documents. RNz 2 Be able to translate technical and popular science texts in a foreign language according to the specialty, be able to write scientific articles and abstracts for presentations at international scientific-practical conferences in a foreign language. RNz 3 Be able to identify promising directions for startup projects, possess practical skills in writing event projects. Possess the basics of office work in conducting entrepreneurial activities, know the forms of taxation and the requirements of Ukrainian legislation.
LEARNING OUTCOMES FOR PROFESSIONAL TRAINING (LO)	LO 1 Know the structure of automobile automatic control systems based on modern electronic components, and be able to develop mathematical models of working processes and control laws. LO 2 Know the design of automobile units and mechanisms, their impact on operational qualities and working processes in automobile systems. Be able to perform design and verification calculations of units and assemblies PRN 3 Know the main indicators of operational properties, operation, and maintenance of automobiles in various climatic conditions; be able to apply the main methods of automotive technical expertise; be aware of global energy issues, have skills in the selection and quality assessment of fuel and lubricants, be

	familiar with the technical operation of passenger and cargo vehicles; know and be able to apply methods and techniques to reduce the harmful impact of automobiles on the environment. PRN 4 Be able to use research equipment (laboratory stands, measuring digital and analog equipment, various types of sensors) for conducting laboratory tests of automobile units and assemblies, be able to process and interpret the obtained results. Be able to conduct patent searches and think innovatively to identify directions for the modernization of technical systems and their management processes. PRN 5 To know the structure and main elements of quality management at a motor transport enterprise, service stations, and branded auto services. To know and apply modern quality control methods in practice. PRN 6 To be able to use domestic and foreign standards that define ergonomic requirements for the driver's workplace in a car (tractor). To know the environmental standards and emission norms of harmful substances from internal combustion engines for self-propelled machines and be able to use research equipment to determine them. PRN 7 To know the theoretical foundations of managing labor collectives of automotive transport enterprises and service stations of various organizational forms. To know the stages of implementing modern technologies in the production and technical bases of automotive transport enterprises. PRN 8 Know and be able to apply methods of mathematical and computer modeling to study the processes of changing the technical condition of vehicle systems as a whole, as well as individual units and assemblies. PRN 9 Know and be able to use modern methods of diagnosing electronic vehicle systems and possess practical skills in working with diagnostic equipment. PRN 10 Know the types of routes and possess the methodologies for their development, the principles, and the order of coordination of vehicle operations and the facilities of the automotive transport infrastructure. Know the regulatory provisions regarding the organization of traffic safety during the transportation of all types of cargo within the country and on international routes. PRN 11 Be able to solve transport tasks related to the delivery of all types of cargo, possess the basics of warehouse logistics and inventory management. Know the basics of technical service and repair of specialized rolling stock for cargo vehicle transportation. PRN 12 Be able to justify, calculate, and design automotive transport infrastructure objects. Know the theoretical foundations of production process management, organization of branded service maintenance of automobiles, including specialized rolling stock.
8 – RESOURCE SUPPORT FOR PROGRAM IMPLEMENTATION	
PERSONNEL SUPPORT	Meets the staffing requirements for ensuring the conduct 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 (with amendments introduced according to Resolution CM No. 365 dated 24.03.2021).
MATERIAL AND TECHNICAL SUPPORT	Meets the requirements for material and technical support 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 Educational Activities of Educational Institutions' dated December 30, 2015, No. 1187 (as amended by Resolution of the CM No. 365 dated 24.03.2021).
INFORMATION AND EDUCATIONAL-METHODOLOGICAL SUPPORT	It meets the requirements for educational-methodological and informational support 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 Educational Activities of Educational Institutions' dated December 30, 2015, No. 1187 (with amendments made in accordance with the Resolution of the Cabinet of Ministers No. 365 dated 24.03.2021). The educational process is supported by textbooks, educational manuals, reference literature, and methodological publications by instructors. Access to the Internet allows the use of databases of periodical scientific publications of the relevant profile. Information support is also based on the library of NTU 'KhPI'.
9 – ACADEMIC MOBILITY	
NATIONAL CREDIT MOBILITY	Based on bilateral agreements concluded between the National Technical University 'Kharkiv Polytechnic Institute' and higher educational institutions of Ukraine
INTERNATIONAL CREDIT MOBILITY	Based on bilateral agreements between the National Technical University 'Kharkiv Polytechnic Institute' and leading European higher education institutions educational institutions of the relevant field.
TRAINING OF FOREIGN EDUCATION SEEKERS	According to the license, the training of foreigners and stateless persons is envisaged.

LIST OF COMPONENTS OF THE EDUCATIONAL-PROFESSIONAL PROGRAM AND THEIR LOGICAL SEQUENCE
List of components of the EPP

Code n/a	Components of the educational-professional program (disciplines, projects / works, practice, qualification work)	Number of credits	Form of final assessment
1	2	3	4
Mandatory educational components of the educational and professional program			
General preparation			
GP 1	Intellectual property	3,0	Credit
GP 2	Foreign language for professional purposes	3,0	Credit
GP 3	Innovative enterprise and startup project management	3,0	Credit
Total volume of general preparation		**9**	
Special (professional) training			
SP 1	Automation and modeling of vehicle processes	3,0	Credit
SP 2	Technological planning of automotive transport enterprises	4,0	Exam
SP 3	Technical operation of automobiles and automotive technical expertise	4,0	Exam
SP 4	Diagnostics of vehicle electronic systems	4,0	Exam
SP 5	Fundamentals of quality management	4,0	Credit
SP 6	Ergonomic properties and ecology of vehicles	4,0	Exam
SP 7	Modern Directions of Automotive Transport Infrastructure Development	4,0	Credit
PP 1	Pre-Diploma Practice	11,0	Credit
	Certification	11,0	Defense of Qualification Work
Total Volume of Specialized (Professional) Training		**49**	
Total Volume of Mandatory Components		**58**	
Elective Educational Components of the OPP			
Disciplines of Free Choice for Profile Training (VDP) According to the List			
OKVP1	Management in Auto Service	4,0	Credit
OKVP2	Analysis of Vehicle System Work Processes	4,0	Exam
OKVP3	Modern Technologies in Automobile Production and Repair	4,0	Exam
OKVP4	Reliability in Automotive Transport	4,0	Exam
OKVP5	Logistics in Motor Transport	4,0	Exam
OKVP6	Transport Technologies in Agricultural Production	4,0	Exam
OKVP7	Organization of Automobile Transportation	4,0	Exam
OKVP8	Methods of Scientific Research and Patent Studies	4,0	Credit
ОКВП9	Design of Technical Objects and Equipment	4,0	Exam
ОКВП10	Controllability and Stability of Automobile Motion	4,0	Exam
ОКВП11	Functional Cost Analysis in Automotive Transport	4,0	Exam

Code n/a	Components of the educational-professional program (disciplines, projects / works, practice, qualification work)	Number of credits	Form of final assessment
1	2	3	4
ОКВП12	Testing Methods and Basics of Certification	4,0	Exam
ОКВП13	Theory of Technical Systems	4,0	Exam
ОКВП14	Basics of Resource Conservation in Automotive Transport	4,0	Exam
OKVP15	Fundamentals of Administrative Activities and Office Management Organization	4,0	Credit
OKVP16	Fundamentals of Scientific Research	4,0	Exam
OKVP17	CAD of Mechatronic Systems of Vehicles	4,0	Exam
OKVP18	Special Issues of Vehicle Design and Calculation	4,0	Exam
Total Volume of Elective Educational Components of Specialized Training		**24**	
Free Choice Disciplines of General Training (OKVZ) According to the List			
The total volume of elective educational components of general training		**8**	
The total volume of elective educational components		**32**	
THE TOTAL VOLUME OF THE EDUCATIONAL-PROFESSIONAL PROGRAM		**90**	

DISTRIBUTION OF THE CONTENT OF THE EDUCATIONAL-PROFESSIONAL PROGRAM BY COMPONENT GROUPS AND TRAINING CYCLES

№ p/p	Training	The volume of academic workload of a higher education applicant (ECTS credits / %)		
		Mandatory components of the educational-professional program	Elective components of the educational-professional program	Total for the entire period of study
1	General training	9 / 10,0	-	**9 / 10,0**
2	Special (professional) training	27 / 30,0	-	**27 / 30,0**
3	Practical training	11 / 12,2	-	**11 / 12,2**
4	Certification	11 / 12,2	-	**11 / 12,2**
5	Free choice disciplines	-	32 / 35,6	**32 / 35,6**
Total for the entire period of study		**58 / 64,4**	**32 / 35,6**	**90 / 100**

FORM OF CERTIFICATION FOR HIGHER EDUCATION APPLICANTS

The certification of higher education applicants in the educational program 'Automobiles and Automotive Management' is conducted in the form of a defense of a master's qualification thesis and concludes with the issuance of a state-standard document awarding them the educational degree of Master with the qualification: Master of Automotive Transport.

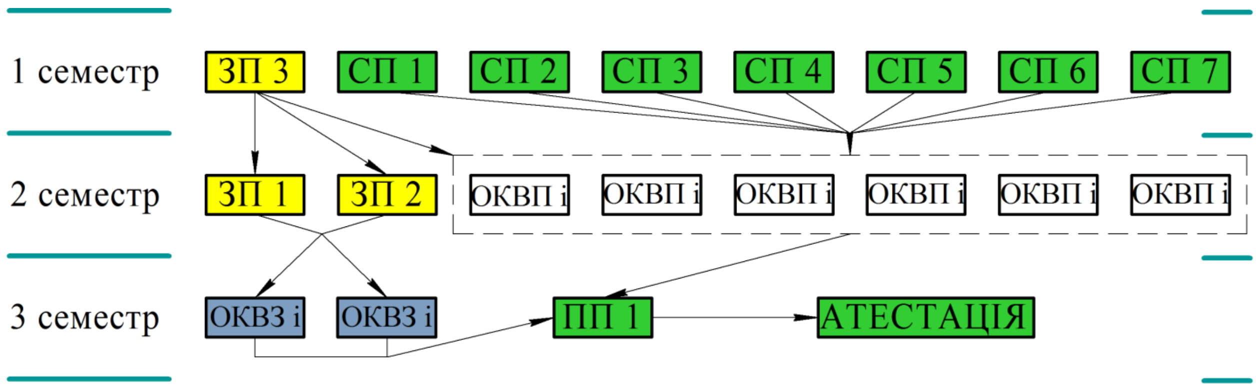
The qualification work is checked for academic plagiarism using software and technical tools. Publication of the qualification work in the NTU 'KhPI' repository.

Certification is conducted openly and publicly.

STRUCTURAL-LOGICAL SCHEME OF THE EDUCATIONAL-PROFESSIONAL PROGRAM

Semester	Educational Content
1	SP 3, SP 1, SP 2, SP 3, SP 4, SP 5, SP 6, SP 7
2	SP 1, SP 2, OKVP and, OKVP and, OKVP and, OKVP and, OKVP and, OKVP and
3	OKVZ and, OKVZ and, PP 1, Certification

* and – depending on the chosen discipline of free choice of general training according to the list.



* and – depending on the chosen discipline of free choice according to the list.

MATRIX OF CORRESPONDENCE OF PROGRAM COMPETENCIES TO COMPONENTS EDUCATIONAL-PROFESSIONAL PROGRAM

	INT	GC1	GC2	GC3	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC 10	PC 11	PC 12
GP1		+														
GP 2			+													
GP 3				+												
SP1					+							+				
SP 2											+					
SP 3	+					+	+								+	
SP 4													+			
SP 5								+	+							
SP 6										+						
SP 7														+		+
PP 1				+		+	+	+	+		+		+			+

MATRIX OF ENSURING LEARNING OUTCOMES WITH THE CORRESPONDING COMPONENTS OF THE EDUCATIONAL-PROFESSIONAL PROGRAM

	LO 1	LO 2	LO 3	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12
GP 1	+														
GP 2		+													
GP 3			+												
SP1				+							+				
SP 2										+					
SP 3					+	+								+	
SP 4												+			
SP 5							+	+							
SP 6									+						
SP 7													+		+
PP 1			+		+	+	+	+		+		+			+