

STUDY PROGRAMME TITLE	MOTOR TRANSPORT ELECTRONICS
National code	653E21009
Type of study programme	Higher education college studies
Study cycle	First
Study area	Technological sciences
Study field	Electronics Engineering and Transport Engineering
Minimum access requirements	Secondary education
Mode of studies (duration in years)	Full-time studies (3 years) Part-time studies (4 years)
Scope in credits	180 credits
DEGREE AND (OR) PROFESSIONAL QUALIFICATION AWARDED	PROFESSIONAL BACHELOR OF ENGINEERING
GRADUATION DOCUMENTS	PROFESSIONAL BACHELOR DIPLOMA AND DIPLOMA SUPPLEMENT
Study programme aim	<p>To provide the prospective specialists of motor transport engineering with the appropriate education so that they:</p> <ul style="list-style-type: none"> • Possess knowledge and skills required for the engineering activities of motor transport engineering in the global markets of the use of high-level technologies; • Develop the need to maintain interest in the engineering sciences, be able to apply their knowledge under any circumstances, be able to interline the ability of knowledge application with the fundamentals of business and management and the knowledge of humanities, realize the impact of their engineering solutions and their importance for the development of the society; • Be denoted by broad erudition and the capacity of creative and critical reasoning; • Be able to maintain their professional competencies in the course of lifelong learning.
Reasons to choose the study programme	<p>In the course of these studies, students shall master independent research, diagnosis and repair, improvement and development of various electrical and electronic systems employed in the motor transport, such as the motor fuel systems, transmission, suspension, chassis, security and comfort.</p> <p>This study programme is interdisciplinary as it develops competencies of electronics and land transport engineering.</p> <ul style="list-style-type: none"> • The program is focused on practical activity; its content is based on the real needs of the professional qualification of an engineer; • The studies are organized in a concise and intensive way, the skills are formed in modern laboratories; • The teachers are experts in their fields; every subject is taught by teachers possessing specific knowledge in the given area of studies; • The possibility to gain international experience by participating in the Erasmus+ program is provided.

SUBJECTS					
SEMESTERS					
I	II	III	IV	V	VI
GENERAL SUBJECTS OF COLLEGE STUDIES					
Foreign language 1	Foreign language 2	Philosophy / Sociology		Law	Professional communication and language for special purposes/Business ethics
CORE AND COMPULSORY SUBJECTS					
Mathematics 1, Physics, Electrical engineering, Automobile construction (en), Environment and human safety, Cognitive practice	Mathematics 2, Information technologies (en), Mechanics (en), Engineering graphics and Computer-aided drawing (en), Electronics (en), Engineering and exploitation materials (en)	Circuits, signals and electrical measurements (en), Microprocessors and embedded systems (en), Automobile electrical equipment and wiring, Automobile control units and communications (en), Semester work (en)	Automobile diagnostics (en), Automobile safety and comfort systems (en), Structure of electric and hybrid automobiles, Professional practice	Technological practice, Professional bachelor graduation thesis 1	Business Economy and Management (en), Project Management (en), Final practice, Professional bachelor graduation thesis 2

SPECIALIZATION SUBJECTS					
Specialization I: CAR DIAGNOSTIC					
			Structure and electronics of car brake system (en)	Structure and electronics of car transmission (en), Car engine power systems (en), Car trailers (en)	Structure and electronics of car suspension and chassis (en)
Specialization II: CARGO VEHICLE TECHNICAL MAINTENANCE					
			Vehicle brake system structure and electronics	Structure and electronics of truck transmission, Truck engine power systems, Truck auxiliary systems, trailers, semi-trailers, additional structures	Structure and electronics of truck suspension and chassis
OPTIONAL SUBJECTS					
STUDENT SELECTS OPTIONAL SUBJECTS FROM THE LIST, WHICH IS APPROVED EVERY ACADEMIC YEAR					

Practices	Cognitive Professional Technological Final
Learning outcomes	<p>Knowledge and abilities</p> <ul style="list-style-type: none"> • Be well-versed in the general physical and chemical processes of the natural sciences which make the foundation of the events taking place in the natural and technological environments; they shall know the mathematical patterns and laws required for the understanding of the understanding of automobile transport engineering; • Know the key concepts of automobile transport engineering and understand their content; • Possess the fundamental knowledge of automobile transport electrical and electronic systems, the construction of electric vehicles, the principles of their operation and exploitation, the construction and exploitation materials of importance in practical work; • Be acquainted with the context of the issues and solutions of such contiguous fields of studies as electronics engineering, electrical engineering and mechanical engineering. <p>Skills of Engineering Analysis</p> <ul style="list-style-type: none"> • Be able to apply their subject matter knowledge and understanding for the solution of the engineering problems of automobile transport electrical and electronics engineering by applying the mastered methods; • Be able to apply their knowledge and understanding when dealing with tasks of automobile transport electrical and electronics engineering as well as to select the appropriate methods, the testing, laboratory and manufacturing equipment for the solution of the arising problems; • Be able to apply analytical and modelling methods when dealing with the qualitative and quantitative engineering problems in the field of automobile transport electrical and electronics. <p>Knowledge and skills for design work</p> <ul style="list-style-type: none"> • Be able to apply their engineering knowledge and understanding when implementing, organizing and supervising the technological processes of automobile transport electric vehicles, control electronics and other systems within the framework of the outlined requirements. • Understand the methodology of design, be able to apply it in the course of outlining the technological processes of automobile transport electrical and electronic systems. <p>Abilities of Applied Research</p> <ul style="list-style-type: none"> • Be able to find the required professional information by using information technologies, databases, software and other academic and engineering information sources; • Be able to conduct tests required for solving engineering tasks of automobile transport electronics, performing practical and laboratory work, processing their results and presenting the practical conclusions of the obtained results; • Possess skills of operating the technological equipment used in automobile transport engineering. <p>Practical Knowledge and Skills for Solving Engineering Tasks</p> <ul style="list-style-type: none"> • Be able to select the appropriate engineering solutions, strategies and technological equipment required for designing, organizing, implementing and supervising the technological process of the diagnostics and maintenance of automobile transport electrical and electronics systems and the electronics of the control equipment; • Be able to combine their theoretical and applied knowledge when dealing with the engineering issues of the safe operation of automobile transport; • Understand the ethical, environmental, economic and commercial aspects of the engineering activity; • Understand the principles of organizing engineering activity and be familiar with the fundamental requirements of work and fire safety. <p>Personal and social abilities</p> <ul style="list-style-type: none"> • Be able to deal with the engineering issues in the field of automobile transport electrical and electronic systems independently and in a multi-profile group (team); • Be able to communicate in correct Lithuanian and be fluent in at least one foreign language so that to communicate with the engineering community and the entire society; • Realize the impact of engineering solutions for the society and the environment, adhere to professional ethics and the regulations of engineering activity, understand their responsibility for the outcomes of their engineering activity; • Be familiar with the key aspects of project implementation and management at the level of engineering activity manifested as organizational skills, ability to plan and apply productive and efficient methods of work; • Understand the importance of lifelong individual professional development and be ready for constant improvement.
International mobility possibilities	Students have a possibility to study in the framework of the Erasmus+ student mobility program at higher institutions of Austria, the Czech Republic, Denmark, Estonia, Latvia, Poland, Germany, Hungary, Malta, Portugal and Turkey, as well as to perform Erasmus+ practices at foreign companies.
Career possibilities	After the completion of this study program, the graduates will have the possibility to be employed at enterprises providing services of automobile electronic and mechatronic diagnostics, to analyze the causes and patterns of the development of technical conditions, will be capable to successfully work in the national and regional enterprises involved in other activities dealing with the design and implementation, operation and maintenance of electronic systems.
Access to further studies	The graduates may continue studies at university and acquire the Master's degree.
Final assessment	Graduation thesis