

Vilnius College of Technologies and Design
Erasmus+ course catalogue

2023-2024 academic year

Code	Subject	The Faculty at which the subject is taught	ECTS credits	Course Description	2023 Autumn	2024 Spring
INTERDEPARTMENTAL						
01IN	Introduction to Lithuania	Interdepartmental	3	The course is intended for international students who wish to gain comprehensive understanding of Lithuanian society and culture. The course is aimed to familiarise the students with the cultural background of Lithuania as well as its historical development in order to help them to make their exchange period more integral by an increased understanding of Lithuanian customs, culture and contemporary issues. During the course students will learn some basic phrases in Lithuanian, will gain basic knowledge of Lithuania's societal and cultural background from thematically various perspectives. The studies of this subject is completed by an individual work performed by a student.	yes	yes
02IN	Business English	Interdepartmental	3	The course is aimed at familiarising the students with the use of English in business communication. The course deals with various areas of business activities: communication in business English in various real situations, writing and filling in business documents, business communication and presentations, business meetings and trips also formation, systemizing and deepening of business terminology and grammar. The course is taught during the fifth semester of studies. The studies of this course are completed by an individual work performed by a student.	yes	yes
03IN	Information Technologies	Interdepartmental	3	The course is aimed at strengthen knowledge of information technologies, of basic PC hardware and software, to develop ability to apply computer methods to solve engineering methods, to design, create and manage databases, to use information systems and networks for data mining, processing and management. Course is taught during the first semester. The studies of this course are completed by an individual work of a student.	yes	yes

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04IN	Applied Research	Interdepartmental	3	The course is aimed at familiarising the students with fundamental methodologies of applied research. Skills necessary to complete term papers, independent work, and the Final project and/or publications will be developed throughout the lectures. The subject is about the application of research methods, planning the applied research process, organization, and completion specifics. Throughout the course literature is studied, topics formulated, problems, relevance, objective, and tasks are described, data collected, analysed, and conclusion completed. The studies of this course are completed by an individual work performed by a student.	yes	yes
05IN	Project Management	Interdepartmental	6	This subject will equip the students with traditional and advanced techniques necessary to manage projects in organisation and business context. It will introduce students to the key management processes. Topics covered included construction project planning, analysis and monitoring, project delivery methods, strategic project management, project risk management, role of the project manager regarding human aspects of project management, including team skills and leadership, stakeholder analysis, project value management, project risk and uncertainty management.	yes	yes
06IN	Fundamentals of Business	Interdepartmental	6	The subject is designed for introducing students to business and entrepreneurship system, business development, globalization factors, which effect business. The subject content is based on the analysis of conventional and unconventional business organization forms, analysis of business development possibilities, ability to find out the main principles and functions of enterprise performance and use them in practice. The course is completed with a student's self-study work (project).	yes	yes
07IN	Sustainable Environment and Human Safety	Interdepartmental	3	The course is designed for the students to understand the structure of civil and labor safety system, its elements, control and the influence of human factor. During the studies of the course the students review the fundamentals of civil protection and rescue systems, ways for protection of humans, their property and means in the case of extreme situations, get introduced to the principles of employees safety and healthy work , the main ergonomic requirements, the impact of hazardous factors and the ways of their elimination or reduction.	yes	yes

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08IN	Sustainable Development	Interdepartmental	3	The course is designed to understand the concept of sustainable development, sustainable development policy, and its implementation. While studying the subject, students review the principles and significance of sustainable development, national responsibility, implementation of the principles of sustainable development and obstacles. The economic, ecological / environmental, social / cultural environments are analysed, and the transport sector is singled out in the context of sustainable development. The study of the subject is completed with an exam.	yes	yes
DESIGN FACULTY						
01DF	Typography	Design Faculty	3	The subject is designed to teach students formatting, fonts, coordination between the different rules, video and text matching; to provide students with knowledge on illustrations and text composition, logic of images in print layout; principles of typography which could be creatively implemented in students' works.	yes	no
02DF	Pre-press Process Practice 1	Design Faculty	3	The aim of practice is to consolidate the skills of pre-press process technology, to learn the technological particularities of advertisement object creation and realization processes (incl. silk printing and digital prints). Students study and analyze analogues and design advertisement products which are created for a particular production type and are done in the college printing center or printing houses.	yes	no
03DF	Visual Advertising	Design Faculty	3	The subject examines the history of advertising and its understanding, consumer exposure and development aspects. Students are taught how to select the optimal means of delivery of the message, create promotional strategies and visualize them, make practical promotional projects.	yes	no
04DF	Poster	Design Faculty	4	The course purpose is to teach students to make creative posters by adjusting fonts, colors, images, graphics elements, prepare graphics for print work, identifying and evaluating posters as visual communication elements, design principles.	yes	no
05DF	Fundamentals of Photography	Design Faculty	3	The course of photography seeks to present techniques and current technologies in photography, so that students would be able to technically correctly take photographs of the chosen objects, to choose proper lighting, composition and assess the peculiarities of the photographed object. Students learn to frame the photos, to store pictures in different media, professionally use photographs in graphic design works and other creative projects.	yes	no

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06DF	Press Types	Design Faculty	4	The subject aims to provide students with knowledge of the language of visual expression and a variety of instruments. Students learn about the evolution of the font shapes, understand the logical and the emotional connection between the various forms of writing and performance techniques, master calligraphy writing fundamentals.	yes	no
07DF	Visual Communication	Design Faculty	5	The subject is intended to represent the fundamentals of visual communication principles, graphic signs and symbols creation regularities. Students learn graphic means (tools) to convey information, to form graphics systems and to put them into practice through various communication design objects.	yes	no
08DF	Drawing and Painting	Design Faculty	6	The course purpose is to introduce students with different drawing and painting tools for opportunities of usage, be able to understand kinds of prospects and its construction methods. To teach to convey the proportions of things, materiality, draw and stylizing human body, to be able to incorporate in architectural space. To paint the interior and exterior as well as details of their fragments.	yes	no
09DF	Graphic Editing 1	Design Faculty	5	The subject aims at introducing students with the digital video editing capabilities using Adobe Lightroom programme: they analyze how to use tools which help to edit the image's brightness and colours, colouring, framing composition, straighten horizons, enhance image brightness, retouch and adjust the individual parts of the picture.	yes	no
10DF	Pre-press Process Practice 2	Design Faculty	3	The aim of practice is to consolidate the skills of pre-press process technology, to learn the technological particularities of advertisement object creation and realization processes (incl. tape cutting, thermo printing on textile and offset printing) Students study and analyze analogues and design advertisement products which are created for a particular production type and are done in the college printing center or printing houses.	no	yes
11DF	Basics of User Interface Design	Design Faculty	3	The subject aims to study methods and technologies used in web design. Fundamentals of web design course encourages students to analyze and evaluate the present analogues and develop ability to design structural content and graphic appearance of the websites, preparing them for further programming and uploading to Internet.	no	yes

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12DF	Fundamentals of Packaging	Design Faculty	3	The subject aims to study packaging purpose, types and production technology. Fundamentals of packaging course encourages students to analyze and evaluate the packaging analogues and develop ability to design different purpose packaging, prepare projects for the production.	no	yes
13DF	Fundamentals of Design	Design Faculty	6	The course is devoted to present basic knowledge about designing, variety of possible visualizations of designs, to indicate means and ways to work with graphic design, to project graphic objects on the basis of such applied sciences as bionics, ergonomics, anthropometrics, combinatorics, to make use of plane transformation methods, of graphic design and of variety of fonts.	no	yes
14DF	Graphic Techniques	Design Faculty	3	The aim of the course is to introduce students to the main graphic techniques their origin and development, to teach students to use various materials used in graphic art, enable them to apply technical graphic features as means to obtain aesthetic moments, be able to interpret line, plane, form and facture graphically.	no	yes
15DF	Drawing and Painting	Design Faculty	3	The course purpose is to familiarize students with drawing and painting techniques, use drawing and painting composing patterns, be able to use perspective and proportions rules and sketching techniques for their creative work.	no	yes
16DF	Graphic Editing 2	Design Faculty	7	The course purpose is to introduce students to the possibilities of digital image editing program AdobePhotoshop. It analyzes how to use the main menu commands, palettes, auxiliary tables and tools that can help to edit the colours and colouring, to frame the composition, to enhance image sharpness, to transform and deform objects, etc.; to mark (separate) the editable picture precisely and accurately and to save the contour of separation for the future.	no	yes
17DF	Fundamentals of Animation	Design Faculty	5	The subject covers the fundamentals of design of the classic, experimental and contemporary commercial animation, introduces to their evolution and various artistic solutions and different technical means, introduces to the innovative experiments of the animated cinema, with design solutions of modern computer games. During the lectures students watch and analyze the most significant films created in the world history. Students carry out sketches of different designs and frame compositions (movie scenes, games) filmed by various techniques. The subject is taught in the fourth semester. Subject studies are completed by the individual work of the student.	yes	no

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18DF	Landscape, Architecture and Interior Photography	Design Faculty	8	The course aims at forming the skills of architectural, interior and landscape photography. The course consists of three parts: architectural, interior and landscape photography. Having acquired the specifics of photography in natural light, students get the specifics of photography in a mixed and later in an artificial lighting. The course analyzes the main rules, conditions and types of photography in open and closed spaces.	yes	no
19DF	Creative Practice 2	Design Faculty	6	The goal of the practice– to develop students’ ability to apply knowledge and practical skills acquired in specializations, as well as to develop their creative potential in implementing a complex multimedia creative project. This practice does not have a strictly defined format and each year its content depends on relevant life issues and place of execution. This may be creation of multimedia works for art festivals, e.g. the in Vilnius Culture Night, specific festivals of student cinema, competitions, events prepared by the college, e.g. Design Days, Culture Day, etc. The practice may take place both, at the college and creative trips– the college’s creative facility in Nida or other places in Lithuania.	no	yes
20DF	Audio-Visual-Post Production	Design Faculty	10	The subject is designed to provide students with the theoretical and practical basics of primary and secondary color correction, subtitle and subtitle production, editing preparation for audio compilation and television release. Students are also introduced to the production of a digital film package. The subject teaches the features of primary and secondary color correction, the use of integrated colors, the composition of monolingual and bilingual subtitles, the integration of logos, subtitles, dialog lists, stereo and surround sound integration, sound libraries, synchronous noise (folie) and digital film package production. The problem of color rendering in different devices is discussed. All practical tasks will be interrelated to familiarize, analyze, integrate, and improve practical skills in color correction, subtitle composition, alternative editing versions, and digital film package production. The module is taught in the 4th semester. The final course result - audio-visual piece where post-production links are realized independently. The studies of the module are completed by reviewing the package of practical work performed by the student, checking the student's theoretical knowledge and practical skills acquired during the studies of the module.	no	yes

Code	Subject	The Faculty at which the subject is taught	ECTS credits	Course Description	2023 Autumn	2024 Spring
21DF	Audio-Visual Project 2	Design Faculty	12	The subject is designed to develop the previously acquired theoretical and practical foundations of the implementation of an audiovisual project. During the studies, the problems of the theoretical stage of preparation, production, final works and dissemination of the audiovisual project are deepened. The practical production and post-production skills of an audiovisual project are also developed by creating an audiovisual work individually or in collaboration with other members of the college community. The module is taught in the 4th semester. The studies of the module are completed by a review of the student's audiovisual project work package.	no	yes
22DF	Audio Editing	Design Faculty	4	The goal of this course—to provide students with basic knowledge on the functions of audio montage and editing software and principles of use; to develop an ability to choose the most optimal software for developing a specific project and to develop skills for work with this software. Students will become familiar and will practically try different external sound processing devices; will compare them with analog devices. Students will find out how to use the possibilities offered by MIDI software and instruments incueing in soundtrack; how to use sound effects creatively; how to restore and clean sound material and to prepare it properly and in quality manner for montage. The course is taught in the 3rd semester. The course studies are finished by a review-audition of works individually performed by the student.	no	yes
23DF	Creative Practice 1	Design Faculty	6	The goal of the practice – to develop students’ ability to apply knowledge and practical skills acquired in their specializations, as well as to develop their creative potential by implementing a complex creative project. Students will become familiar with the specifics of television; educational trips to traditional televisions will be organised. Students will find out the principles of operation of internet television, control technologies, methods of creating and forming a trademark, how the user affects, creates and changes an individual scenario of television usage. Divided into teams students will perform individually assigned functions according to their specialization, and prepare an operating Internet project and will implement it. The results of practice of the whole student group – Internet audio-visual identity of students’ television.	yes	no

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24DF	3D Animation	Design Faculty	22	The module consists of subjects: 3D animation technologies (10 ECTS), 3D animation concept (4ECTS), 3D animation production and post-production (8 ECTS). Students complete the 3D project individually or in groups by taking teaching tests and assignments, which becomes an important part of the student's animation portfolio. Course subjects and topics are related to the theory and practice of pre-production, production and post-production principles, imaging techniques and technologies of 3D animation. Students develop an original project concept that models environments and characters, creates surfaces for objects and characters, controls, animates characters and visual effects, and creates lighting and realistic rendering systems. In the post-production phase, the final version of the video sequences is made and the project presentation is prepared. The module is taught in the 4th semester. The studies of the module are completed with a review of the student's independent work.	no	yes
CIVIL ENGINEERING FACULTY						
01SF	Building Engineering Systems	Civil Engineering Faculty	6	The course analyses the heating, cooling and air conditioning, cold and hot water supply and waste water systems in buildings: the principal schemes, used equipment, its functioning. The module teaches on how to design simple heating, water supply and waste water systems. The course studies are completed with the student's independent work.	yes	yes
02SF	Engineering and Computer Graphics	Civil Engineering Faculty	6	The course is aimed at familiarising the students with the basics of construction drawing, detail and product design rules, and their application in blueprints; students are taught to analyse construction blueprints, apply valid standards in construction blueprints, and draft construction blueprints based on design rules; and knowledge is imparted about the main drawing, design, and editing commands and the application of the AutoCAD system in the preparation of graphic documents (blueprints). During practical tasks, spatial and logical thinking is cultivated, the ability to draft and read various blueprints is developed, and using drawing tools and means is taught. The studies of this course are completed by an individual work performed by a student.	yes	yes

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03SF	Applied Mechanics	Civil Engineering Faculty	6	The course is aimed at familiarising the students with the basics of applied mechanics, main concepts of statics, and axioms, and links. Throughout the activities an understanding of flat systems of intersecting forces is developed, and the equilibrium condition and equations are analysed. A reduction of a flat system of forces and force system equilibrium are analysed. Basic concepts of material strength and the stress operating in cut sections are introduced. Tension and compression rod deformations along the axis are examined, and material tension and compression trial results are analysed. The concepts of warping, stretching, cutting, and splitting deformations are made clear. The condition for central compressed rod stability is analysed. Critical force and critical stress are defined. Types of building constructions, connections, and supports are examined. Structure calculation schemes are analysed. Composite beam types are examined, characteristic points of stress arising in beams are analysed, and detailed diagrams are completed. Flat statically resolvable girders, rods stress calculation methods, statically solvable structure influences, and their features are analysed. The course studies are completed by an individual work of a student.	yes	yes
04SF	Building Information modelling	Civil Engineering Faculty	6	The course is aimed at familiarising the students with the possibilities of application of computer-aided design software "Revit" in preparing the construction schemes. The course establishes the skills of the design of buildings, their sections, facades, units, forms the specific knowledge on the formation of the measurement modular system. The studies of this course are completed by an individual work of a student.	yes	yes
05SF	Materials of Buildings	Civil Engineering Faculty	3,6	The course is aimed at providing knowledge on the raw-materials of building materials and their use for the production of building materials. During the course the students are familiarised with the production technologies of the main building materials and properties of the obtained materials according to the European Union (EU) technical requirements applicable to building materials. The studies of this course are completed by an individual work performed by a student.	yes	yes

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06SF	Structures of Buildings I	Civil Engineering Faculty	6	The subject is aimed at familiarising the students with the classification of buildings, applicable requirements, normative construction technical documents; The subject programme analyses the structural systems of low-rise and multi-storey buildings; the partition structures are analysed in terms of thermal technique; structural solutions of walls, overlays, floor, partitions, roofs, windows and doors as well as stairs; discusses the types and constructions of wooden buildings; describes the design stage and composite project parts; teaches on the preparation of constructional part of building designs. The studies of this subject is completed by an individual work performed by a student.	yes	no
07SF	Structures of Buildings II	Civil Engineering Faculty	6	The subject is aimed at familiarising the students with the analysis the structural systems and elements of large-span buildings; constructional schemes of carcass buildings, types and elements of carcasses and their connection units; structural solutions of monolithic buildings; constructional systems of industrial buildings; structural solutions and spatial stiffness. Studies of this subject is completed by an individual work performed by student.	no	yes
08SF	Marketing and Sales Management	Civil Engineering Faculty	6	The subject is designed to introduce students to marketing components, teach to analyse situations which effect company performance, having studied marketing mix elements and having done market research, be able to write a marketing plan. The course is completed with examination.	yes	yes
09SF	Financial Accounting and Audit	Civil Engineering Faculty	3	The subject is designed for introducing students to financial accounting and audit, teaching to account company production activities and financial indicators of company performance and present them to internal and external users. The course is completed with examination.	yes	yes
10SF	Quality Management in Transport	Civil Engineering Faculty	6	The subject is designed for providing systematic and practical information about advanced management principles used in the world as well as in Lithuanian companies, highlighting the role and objectives of quality management when aiming at competitive performance in globalization process; providing theoretical knowledge and practical skills to solve quality problems via projects, quality management system implementation, planning and realising quality improvement actions. The course is completed by an individual work performed by a student.	yes	yes

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11SF	Building Design Practice	Civil Engineering Faculty	6	Workshop	no	yes
12SF	Topography	Civil Engineering Faculty	6	The course is aimed at providing knowledge on the coordinate systems, geodetic measurements, used instruments, coordinate and altitude establishment methods, methods of composition of topographic photographs, educating the skills of the calculation of coordinates and altitudes of points, formation and drawing of the plans of complex situation and relief. During the first semester, the studies are completed with the individual work performed by a student, during the second semester – with an examination, and during the third semester - with the student’s individually performed work.	yes	yes
13SF	Geographic Information Systems	Civil Engineering Faculty	3	The course is aimed at providing students with knowledge on the geographical information system, acquire practical skills of using the data sources of geo-information systems, create them, design and structure with ArcGIS software. The course is delivered during the fourth semester of studies. The course studies are completed by an individual work of a student	yes	yes
14SF	Engineering and Computer Graphics	Civil Engineering Faculty	3	The course is aimed at familiarising the students with the basics of construction drawing, detail and product design rules, and their application in blueprints; students are taught to analyze construction blueprints, apply valid standards in construction blueprints, and draft construction blueprints based on design rules; and knowledge is imparted about the main drawing, design, and editing commands and the application of the AutoCAD system in the preparation of graphic documents (blueprints). During practical tasks, spatial and logical thinking is cultivated, the ability to draft and read various blueprints is developed, and using drawing tools and means is taught. The course is taught in the first and second semesters. The studies of this course are completed by an individual work performed by a student.	yes	yes

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15SF	Buildings Maintenance	Civil Engineering Faculty	3	The course is aimed at familiarising the students with the maintenance of buildings. During the course, the students are familiarised with the requirements and normative documents of the maintenance of buildings, the methodologies of the evaluation of the condition of building structures, taught on the evaluation of buildings and planning of the resources, analysis of the periodicity of building repairs, calculation of the payoff of the reconstructed partition constructions. The concepts of the low-energy and zero-energy house and the importance of the generation of energy from the renewable energy sources are analysed. The course is taught during the sixth semester of studies. The course studies are completed by an individual work of a student.	no	yes
16SF	Engineering Geodesy and Practice	Civil Engineering Faculty	6	The course is aimed at providing students with the fundamental information on geodesy, at teaching on how to perform measurement and marking works in the locality by using modern geodesy devices, to control the quality of construction works and compliance with the project. The course studies are completed with an examination.	no	yes
17SF	Statistics	Civil Engineering Faculty	3	The subject is designed for introducing the principles of collecting statistical data, theory of statistical indicators, finance statistics, business enterprise statistical indicators and their analysis. The course is completed with examination.	yes	yes
18SF	Transport System	Civil Engineering Faculty	3	The course unit is aimed at analyzing the main constituent parts of the transport system, technical infrastructure of the transportation, natural and urban transport environment, traffic regulation and management, to analyze development tendencies of the transport system, interoperability of different transport modes, their coordination, transport policy, to make an overview of the Lithuanian transport system. The course unit studies are finalized by the students' independent work.	yes	yes
19SF	Freight and Passenger Transportation	Civil Engineering Faculty	6	The subject is designed for mastering the organization of cargo passenger transportation by road, railway, waterway (sea and inland) transport. Analysing cargo qualities, their classification, grouping as consignment, packaging, marking, fixing, analysing road network and designing routes. Calculating technical – exploitation indicators and using them for traffic timetables. The course is completed with examination.	yes	yes

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20SF	Applied Software in Logistics	Civil Engineering Faculty	6	The subject is designed for providing theoretical and practical knowledge about customer service, storage, transportation and other information systems, familiarizing with the most popular computer programs in logistics. The course is completed with student's self-study work (project).	yes	yes
21SF	Transport Economics	Civil Engineering Faculty	6	The subject is designed for providing systematized knowledge about economics of different transport modes and its peculiarities developing logical thinking, teaching to analyse economic processes in transport sector, identify the effects of different external and internal factors on transport company performance, evaluate transport company performance results. The course is completed with a student's self-study assignment (project).	yes	yes
22SF	Transport Management and Business Organization	Civil Engineering Faculty	6	The subject is designed for introducing students to establishment peculiarities of transport companies with different transport modes, fundamentals of running them, organizing and planning performance, influence of innovations on launching new services, calculating and analysing transport company operation indicators. The course is completed with a student's self-study assignment (project).	yes	yes
23SF	Logistics	Civil Engineering Faculty	6	The subject is designed for familiarizing with logistics, its structural parts, teaching to analyse situations which influence transport company performance, teaching to apply business logistics principles when making decisions in transport operations, understand logistics chain. The course is completed with examination.	yes	yes
24SF	Combined Transportation	Civil Engineering Faculty	3	The subject is designed for examining the process of combined transport cargo freight, familiarize students with the relation among road, railway, water and air transport systems, combined transportation infrastructure and legal basis. The course is completed with student's self-study assignment.	yes	yes
25SF	Forwarding and Insurance	Civil Engineering Faculty	6	The subject is designed for analysing organizational and legal basics of forwarding company performance; learning to work out the documents necessary for cargo forwarding, familiarizing with customs procedures, key points and functions of insurance policy. The subject is completed with examination.	yes	yes
26SF	Green Logistics	Civil Engineering Faculty	3	The subject is designed for familiarizing with green logistics, its peculiarities, teaching to analyse green logistics management peculiarities and to use in transport and logistics company performance. The course is completed with student's self-study assignment.	yes	yes

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27SF	EU Transport Policy	Civil Engineering Faculty	3	The course aims at analyzing the EU transport policy aims and strategy for every means of transport; introducing to the EU legal system fundamentals; analyzing collaboration of international organizations with the EU states and their influence on creating the common road network system. The course is completed with a student's individual work (assignment). Upon completion of the course, students will be able to analyze transport development tendencies considering the EU transport policy aims; will be aware of the EU transport policy provisions, outlined in the "White Book"; analyze logistics processes considering the LR national transport program, prepared according to the EU transport policy aims and strategy. The course is completed with student's self-study assignment.	yes	yes
28SF	Warehouses and Terminals	Civil Engineering Faculty	6	The course aims at familiarizing students with the purpose of warehouse and terminals, their meaning in logistics, processes taking place in warehouses and terminals. Upon completion of the course studies, students will know the purpose and classification of warehouses and terminals; will know how to prepare warehousing system and the terminal plan; will be able to organize processes taking place in warehouses and terminals. The course is completed with examination.	yes	yes
TECHNICAL FACULTY						
01TF	Materials Engineering	Technical Faculty	3	The subject is intended to examine the engineering materials used in the manufacture of automobiles, the standards for marking engineering materials used in the EU. Subject content includes material structure, microanalysis, properties, mechanical tests (strength, hardness), application of ferrous and non-ferrous metals, their alloys, hard alloys, materials, heat and thermochemical treatment, blanks production methods, non-metallic, composite and polymeric materials, their production methods, environmental protection. The course examines the thermodynamics, kinetics and equilibrium of chemical processes in homogeneous and heterogeneous systems, electrochemical processes in chemical power sources and corrosion of metals, methods of corrosion protection of metals.	yes	yes

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02TF	Circuit Analysis	Technical Faculty	6	The subject is intended to consolidate the previously formed abilities to understand the electric and electromagnetic phenomena and establish their interconnection, to teach the calculation of circuit parameters, analyse, compare and use the acquired knowledge in practice.	yes	yes
03TF	Electronics	Technical Faculty	3	The subject is intended to acquaint the students with the fundamental knowledge of electronics, to study the key parameters and characteristics of electronic components, understand their applied character, apply basics of electronics in construction of various devices, assess electronic equipment and know the purpose of various electronic devices and compound elements.	yes	yes
04TF	Fundamentals of Microprocessor Controllers	Technical Faculty	6	The subject is devoted to provide knowledge about the structure of control instruments, learn to work with instruments of control, automation and security systems, control the systems, complete, program, test, analyze equipment.	yes	yes
05TF	Fundamentals of Electronics and Automation	Technical Faculty	6	The course is designed to introduce fundamentals of the electronics and automation, analyze the main parameters and characteristics of electronic and automation components, understand the nature of their application, and apply fundamental knowledge of electronics and automation for construction of different devices and for evaluation of electronic equipment.	yes	yes
06TF	Electrical Engineering Materials	Technical Faculty	3	The subject is devoted to studying of electrical engineering material structure, composition, mechanical, electrical, thermal, physical, and chemical properties. Students will be familiarized with essential properties of conducting, insulating, semi conducting materials, their application; modern electrical engineering materials.	yes	yes
07TF	Electrical Measurements	Technical Faculty	3	Students will be familiarized with SI-system units, master plates, counters and measuring elements, error of measurement, and instrument ratings of measurement equipment and devices.	yes	yes
08TF	Technological Practice I : Electrical Equipment Mounting Practice	Technical Faculty	6	Subject of a practice is determined in order to form ability to use knowledge of information technology for software control, to introduce with electronic elements marking, construction, installation methods. Students will be able to use computer tools, analyze technical data, process them and present the results, understand assembling technology. Students will be able to use technical documentation, organize a safe and environmentally friendly installation.	yes	yes

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09TF	Mechanics	Technical Faculty	3	The subject is designed to provide students with the theoretical mechanics, mechanics of materials, theoretical knowledge and practical skills. Course covers theoretical mechanics: statics, kinematics, dynamics fundamentals; mechanics of Materials Basics: tension and compression, cutting, twisting, bending; mechanical machinery elements, interconnections, mechanical gears, shafts, axles, bearings, couplings.	yes	yes
10TF	Robotics	Technical Faculty	3	The subject is intended to introduce to the role of robots, their design and operation features. For performing practical works, various simulated real-life situations are used and optimal solution is searched. Theoretical knowledge gained during lectures will be adapted in practical work.	yes	yes
11TF	Mechatronic Systems	Technical Faculty	3	The subject is designed to provide students with the theoretical knowledge of the elements of mechatronic systems, analyze the links between elements in the wiring diagram, mechatronic systems parameters and modes.	yes	yes
12TF	Equipment of Metal Manufacturing Technology	Technical Faculty	6	The subject is intended to introduce the students to the equipment of metal processing technologies, present their technical characteristics, operating principles and construction features, control ways, equipment and tools.	yes	yes
13TF	Automobiles Constructions	Technical Faculty	6	The subject is designed to provide knowledge of automobile equipment, the structural differences, and structural trends. The internal combustion engine structure is provided, the structural differences, power systems, automobile transmission, chassis, steering, structure, and operation principles.	yes	yes
14TF	Technical Measurements	Technical Faculty	3	The subject is intended to introduce students to the standardization system of the Republic of Lithuania and international standards, to teach students to assess parts suitability and technical measurements.	yes	yes
15TF	Automobile Electrical Equipment	Technical Faculty	6	The subject is designed to introduce electrical equipment used in a car, their structures, components and practical electrical devices working principle testing. The device parameters, characteristics and verification of methodology provided are analyzed.	yes	yes

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16TF	Engines	Technical Faculty	6	The subject is designed for students to master internal combustion engine theoretical and actual work cycles, mechanism and system operation and design features. Indicated and efficient engine characteristics are analyzed theoretically examined and practically: torque, power, absolute and comparative fuel costs, comparative power, engine efficient and thermal coefficients of performance, environmental and other parameters. Crankshaft-connecting rod mechanism kinematics and dynamics calculations are carried out.	yes	yes
17TF	Automotive Diagnostics	Technical Faculty	3	The subject is designed to introduce the automotive maintenance and repair system, performance technology, automotive technical operation companies use diagnostic tools, engines, control systems, electrical equipment, transmission, steering, and chassis diagnosis technology for and analysis of automotive technical condition evaluation results. Technological equipment used for automotive maintenance repairs are analyzed.	yes	yes
18TF	Automobile Maintenance Technology	Technical Faculty	6	The subject is designed to provide students with knowledge of car reliability, and processes of technological maintenance. Theoretical sessions and laboratory- practical work explore possible parts defects, their causes, and possible solutions. During the exercises car parts repair technologies are designed.	yes	yes
19TF	Control Systems of Automobiles	Technical Faculty	6	The subject is designed to introduce the car control system components, their characteristics, use features. The practical tasks are modeled on different types and various car function control systems, their functions, operational problems of different control systems functions are solved.	yes	yes
20TF	Technological Practice II: Destruction and Assemblage Practice	Technical Faculty	6	The objective of this practice is to introduce car structure, chassis equipment, steering mechanism, and practical application of theoretical knowledge working with engine mechanisms, transmissions, chassis disassembly and assembly according to the car manufacturer provided technologies. Understanding car components disassembly and assembly specifics, skills and abilities will enable to work better and help to organize the work at companies.	yes	yes
21TF	Technological Practice I	Technical Faculty	6	The objective of this practice is to introduce various car transport companies, work, equipment, and structure, and the car models being repaired, automobile repair practices. During the practice students will weld, solder, and do electrical wiring work. They will apply theoretical knowledge about equipment and materials for welding and soldering work and analyze work safety requirements.	yes	yes

Code	Subject	The Faculty at which the subject is taught	ECTS credits	Course Description	2023 Autumn	2024 Spring
22TF	Computer Modeling	Technical Faculty	3	The subject is intended to get acquainted with SolidWorks 3D design package. During the course of studying, the skills and abilities of designing the product are acquired: modeling 3D objects and drawing two-dimensional (2D) drawings. The subject provides knowledge of the design of shaft and plate types parts, sheet metal products, welded joints, products from standard profiles, castings, assembly units, and the use of standard element library. The subject provides skills for the engineering tools of the SolidWorks package.	yes	yes
23TF	Engineering Graphics	Technical Faculty	6	Course is meant to get acquainted with the theoretical concepts of engineering graphics, requirements of the state standards for technical drawings, formats and scales of drawings, design and drafting rules and to develop skills to apply it. Course content is based on strengthening basics of geometric, technical and structural drawing. Students are also introduced to the computer graphics program Solidworks: structure, working environment, drawing and editing tools, drawing methods, principles of 3D modelling and image-making. The study of the course ends with student's individual work.	yes	yes
24TF	Probability Theory and Statistics	Technical Faculty	3	Probability theory is the subject of the branch of mathematics which investigates the laws of mass and random events in the development and examining the effects of random mathematical models. This is an abstract science to promote universal education, the ability to think logically and to apply theoretical knowledge in practice. One of the main problems of probability theory - to create and validate methods that allow predicting various phenomena and testing results.	yes	no
25TF	Operation Systems	Technical Faculty	6	The subject purpose is to introduce OS structure, the main functions of the processes, memory control and virtual memory, management of input/output and file systems, protection and safety of operation system. The main operation systems are analyzed: MS Windows OS; Unix-like OS: Unix, Linux.. The course ends with an examination.	no	yes

Code	Subject	The Faculty at which the subject is taught	ECTS credits	Course Description	2023 Autumn	2024 Spring
26TF	Discreet Mathematics	Technical Faculty	6	The course is aimed at acquainting students with the concepts of probability theory and mathematical statistics, rules, tasks solving algorithms, to teach them describe simple, depending on chance, eventualities in the language of probability theory. They will be able to correctly formulate tasks of probability theory and statistics, and to solve them. The course is taught in the third semester. The course is completed with examination.	yes	no
27TF	Programming	Technical Faculty	6	The course is aimed at familiarizing students with principles of programs and algorithms, systems of programs and construction, programming methods, it teaches students to develop applied information programs using object-oriented programming language. Course content covers all stages of program development, data types, the basic object-oriented programming language elements, data and control structures, classes, introduces design programs for Windows systems environment. The course is taught in the second and third semesters. The second semester is completed with an individual work performed by a student. The third semester is completed with an individual work performed by a student (course paper).	yes	no
28TF	Information Systems Design	Technical Faculty	6	The course is designed to provide students with the basics of information systems development and design, object design methodology, unified modelling language UML. The course teaches to compose structured diagrams of behaviour and interface, to use UML CASE tools for creating models of information systems. Students learn to design information systems, select and apply appropriate framework for the relevant requirements. The subject is taught in the third semester. The third semester is completed by an individual work.	yes	no
29TF	Data Base Systems	Technical Faculty	6	The subject purpose is to present principles of modern Databases engineering, with Microsoft Access and MySQL Server, database management systems and to teach to develop applied Data mining and processing systems. The course scope covers all phases of system development: conceptual, logical and physical models. Subject is taught in the forth semester. The studies of the course are completed with an individual work performed by a student.	no	yes

Code	Subject	The Faculty at which the subject is taught	ECTS credits	Course Description	2023 Autumn	2024 Spring
30TF	Information Systems Security	Technical Faculty	6	The course familiarises students with modern technical systems, with principles of secure information system composition, of operation system security, of cryptography and of secure transmission of information. The course addresses information security management, information transmission network architecture, information transmission routing basics, as well as e-business, web, email, mobile network security; different services are subject to protection means; the course touches upon general information systems security problems: the classification of threats, risk assessment, the human factor, network infrastructure, espionage, passwords and login data interception. The subject is taught in the forth semester. The course is completed with a student's individual work.	no	yes
31TF	Mathematics	Technical Faculty	6	The course is designed to analyse fundamentals of mathematics, to apply the knowledge in technological and technical calculations, to analyse and assess the results of theoretical and experimental activity, to acquaint students with concepts, laws, rules of theory of probability and mathematical statistics, algorithms. The course is taught in the first and second semesters. The course is completed with examination.	no	yes
32TF	Digital Device Programming	Technical Faculty	3	The subject is designed to examine digital devices and their programming features used for further study of subjects. The architecture of single-crystal ARDUINO microcontrollers and their application possibilities in various devices and systems are analyzed. Provides basic knowledge of various types of ARDUINO component connections and their programming to the microcontroller. Programmable microcontrollers, their structure, programming, communication control systems, sensor / actuator buses, protocols and standards are analyzed. Subject studies are completed with an exam.	no	yes

Code	Subject	The Faculty at which the subject is taught	ECTS credits	Course Description	2023 Autumn	2024 Spring
33TF	Technological Practice 2	Technical Faculty	6	The subject is designed to deepen knowledge of application construction methods and systems, programming methods, to deepen knowledge in developing applications in the objective programming language and using the structured query language (SQL). The content of the subject includes the stages of program development, data and management structures, introduction to program construction systems in Windows environment (MS Visual Studio, Oracle APEX). The subject is taught in the fifth semester and ends with the student's independent work.	yes	yes
34TF	Human and Computer Interaction	Technical Faculty	3	The subject is designed to acquire knowledge about the quality assurance methods of human-computer interaction in the project systems development project, to develop the competence of conceptualization of interoperability, to teach to apply principles and methods to various paradigms of interaction.	no	yes