Study plan

Name of study plan: KOMBI bak. studium od 21-22 (obor LED), skok do 2.r.

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Technology in Transportation and Telecommunications

Type of study: Bachelor combined

Required credits: 128
Elective courses credits: 52
Sum of credits in the plan: 180

Note on the plan:

Name of the block: Compulsory courses Minimal number of credits of the block: 116

to degradation processes in materials, to defectoscopy and to main mechanical tests.

The role of the block: Z

Code of the group: 1S K LED 21-22 P

Name of the group: 1. sem. bak. KOMBI obor LED 21-22 povinné p edm ty Requirement credits in the group: In this group you have to gain 30 credits

Requirement courses in the group: In this group you have to complete 10 courses

Credits in the group: 30 Note on the group:

| Code | Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) | Completion | Credits | Scope | Semester | Role |
|---------|---|------------|---------|-----------|----------|------|
| 611CAL1 | Tutors, authors and guarantors (gar.) Calculus 1 Romana Zibnerová Ond ej Navrátil (Gar.) | Z,ZK | 7 | 2P+4C+22E | 3 Z | Z |
| 611LA | Linear Algebra Romana Zibnerová Romana Zibnerová Martina Be vá ová (Gar.) | Z,ZK | 3 | 2P+1C+10E | Z Z | Z |
| 612ZYDK | Introduction to Transportation Engineering Dagmar Ko árková Dagmar Ko árková (Gar.) | Z,ZK | 3 | 6B | z | Z |
| 618MTY | Materials Science and Engineering Vít Malinovský Jaroslav Valach (Gar.) | Z,ZK | 3 | 2P+1C+10E | 3 Z | Z |
| 611GIE | Geometry Vít Malinovský Šárka Vorá ová (Gar.) | KZ | 3 | 2P+2C+12E | Z | Z |
| 614ASD | Algorithm and Data Structures Jan Mejst ik | KZ | 3 | 0P+2C+8E | Z | Z |
| 614KSP | Constructing with Computer Aid Libor Židek | KZ | 2 | 0P+2C+8E | Z | Z |
| 618TED | Technical Documentation Vít Malinovský Jitka ezní ková (Gar.) | KZ | 2 | 1P+1C+8E | B Z | Z |
| 615DPLG | Transportation Psychology Jana Śtikarová | Z | 2 | 2P+0C+6E | B Z | Z |
| 616UDOP | Introduction into Vehicles Zuzana Radová Petr Bouchner (Gar.) | Z | 2 | 2P+0C+8E | B Z | Z |

Characteristics of the courses of this group of Study Plan: Code=1S K LED 21-22 P Name=1. sem. bak. KOMBI obor LED 21-22 povinné p edm ty

| 611CAL1 | Calculus 1 | Z,ZK | 7 |
|---------------------------|---|----------------------|-------------------|
| Sequence of real numb | ers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Geometric properties of n | dimensional Eukl | idean space and |
| Cartesian coordinate sy | rstem. Geometric meaning of the differential of functions several real variables, differential calculus of functions of several rea | ıl variables. | |
| 611LA | Linear Algebra | Z,ZK | 3 |
| Vector spaces (linear co | mbinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and | their solvability. D | eterminants and |
| their applications. Scala | r product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classification. | | |
| 612ZYDK | Introduction to Transportation Engineering | Z,ZK | 3 |
| Role of transportation in | land-use planning. Basic terms in transportation engineering. Traffic survey and traffic prognosis. Introduction to topic of road | s, public mass tra | nsport. Negative |
| impacts of transportation | n to environment and safety. | | |
| 618MTY | Materials Science and Engineering | Z,ZK | 3 |
| Basic course of materia | s science and engineering explains mechanical properties of structural materials based on their bonding forces and microstru | ucture. However th | ne main attention |
| is naid to matals as the | most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and | composites Atter | tion is also naid |

611GIE Geometry Orthographic and oblique projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves - parameterization, arc of the curve, torsion and curvature, Frenet's trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle moving on a curved path. 614ASD Algorithm and Data Structures 3 K7 Students will be familiarized with selected basic and derived data structures, algorithms, their properties and their design procedure. Students will analyze problems, propose theoretical solutions to the set task and the resulting algorithm write by means of flowcharts, practice in reading algorithms recorded by means of the flowchart and use the basics of Boolean algebra with forming the conditions for the algorithms. 614KSP Constructing with Computer Aid ΚZ "CAD systems" term determination. CAD role in projecting system model. Existing CAD systems on Czech market. Project creation, basic common work rules in graphic applications and CA systems. Co-ordinated systems, CAD environment skill (basics of constructing, dimensioning, modifications, user interfaces, projecting possibilites, AutoCAD environment profiles, drawings with raster foundaments). 618TED **Technical Documentation** K7 2 Technical standards, international standardization, technical drawings, representation of technical objects, technical diagrams and charts, dimensional and geometrical accuracy, arrangement of drawing sheets. 2 615DPLG Transportation Psychology Ζ Subject of psychology and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle construction. Psychological aspects of travel route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in transport operation. Introduction into Vehicles Ζ 2

Vehicles and transportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water transport. Alternative means

Code of the group: 2S K LED 21-22 P

Calculus 2

of transport. Lifting equipment and conveyors. Legislation.

Name of the group: 2. sem. bak. KOMBI obor LED 21-22 povinné p edm ty Requirement credits in the group: In this group you have to gain 30 credits

Requirement courses in the group: In this group you have to complete 8 courses

Credits in the group: 30

611CAL2

Note on the group: Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their Code Completion Credits Scope Semester Role members) Tutors, authors and guarantors (gar.) Calculus 2 611CAL2 Z,ZK 2P+3C+20B L Z Romana Zibnerová Romana Zibnerová Ond ej Navrátil (Gar.) Statistics L 611STAT Z,ZK 4 2P+2C+12B Ζ Pavel Provinský, Pavla Pecherková Pavla Pecherková Pavel Provinský Railway Lines and Stations 612ZTS Z,ZK 2P+2C+10B L 4 7 Tomáš Javo ík, Ond ej Trešl Structural Analysis 618SAT Z,ZK 4 2P+2C+14B L Tomáš Doktor Daniel Kytý (Gar.) **Systems Analysis** 620SYSA Z,ZK 5 2P+2C+14B L 7 Petr Bureš, Ji í R ži ka Zuzana B linová (Gar.) **Programming 614PRG** ΚZ 2 0P+2C+8B L 7 Transport Technology and Logistics 617TEDK ΚZ 4 12B L Z Michal Drábek Vít Janoš (Gar.) **Basics of Air Transport** 621ZALD ΚZ 0P+2C+8B L 7 Jakub Hospodka

Characteristics of the courses of this group of Study Plan: Code=2S K LED 21-22 P Name=2. sem. bak. KOMBI obor LED 21-22 povinné p edm ty

Z.ZK

Antiderivative, Newtonian integral, Riemannian integral of the function of one variable, improper Riemannian integral, Riemannian integral in Rn. Parametric description of regular k-dimensional surfaces in Rn, Riemannian integral over regular surfaces. Line and surface integrals of the second type, Stokes theorems, ordinary differential equations of the first order, linear differential equations with constant coefficients and its systems.

611STAT Statistics Z,ZK 4

Definition of probability, random variable and its description, known distributions, random vector, function of random variable. Methods of point estimation. Testing of statistical hypothesis. Regression and correlation, linear regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear regression, analysis of variance, multiple regression. the use of matrices in regression.

612ZTS Railway Lines and Stations Z,ZK 4

Rail transport. Railway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure. Spatial layout of railway lines. Railway control systems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail transport.

618SAT Structural Analysis Z,ZK 4

General system of forces in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically determinate beams and simple girders. Principle of virtual work. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss constructions. Cross-sectional characteristics of planar shapes. Fiber polygons and chains.

620SYSA Systems Analysis Z,ZK 5

Introduction to system sciences, system viewpoint, terminology, typical system analysis tasks, system identification, system interface and interface tasks, processes, system behaviour and its analysis, strong functions and processes, genetic code, system identity, system architecture. Tools for system analysis - Petri nets, decision tables, algorithms for structural tasks. Soft and hard systems, methods for soft system analysis.

Algorithm development, methods of structured programming, high-level programming languages, basics of C programming languages (types, variables, conditions, cycles, arrays, functions), programming techniques, complexity.

617TEDK Transport Technology and Logistics

Basic terms in transport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transport, organisation of traffic in each transport modus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using various transport modus.

621ZALD Basics of Air Transport

History, definitions, terminology, basic rules. VFR/IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio navigation. Weight, balance, performance. Flight planning, optimization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, ground handling, security. Air crew. Airlines and economics. Space technologies.

Code of the group: 3S K LED 21-22 P

Name of the group: 3. sem. bak. KOMBI obor LED 21-22 povinné p edm ty Requirement credits in the group: In this group you have to gain 30 credits

Requirement courses in the group: In this group you have to complete 8 courses

Credits in the group: 30 Note on the group:

| Code | Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.) | Completion | Credits | Scope | Semester | Role |
|---------|---|------------|---------|-----------|----------|------|
| 611FYZ | Physics Goce Chadzitaskos Zuzana Malá (Gar.) | Z,ZK | 5 | 2P+2C+18B | B Z | Z |
| 612MDE | Transport Models and Transport Excesses Josef Kocourek, Tomáš Pad lek Josef Kocourek (Gar.) | Z,ZK | 3 | 2P+1C+8B | B Z | Z |
| 617TGA | Graph Theory and its Applications in Transport Alexandra Dvo á ková Denisa Mocková (Gar.) | Z,ZK | 4 | 2P+2C+12B | B Z | Z |
| 618PZP | Elasticity and Strength Tomáš Doktor Ond ej Jiroušek (Gar.) | Z,ZK | 3 | 2P+1C+10B | B Z | Z |
| 620UITS | Introduction to Intelligent Transport Systems Vladimír Faltus Pavel Hrubeš (Gar.) | Z,ZK | 7 | 3P+2C+20B | B Z | Z |
| 612PPOK | Designing Roads, Highways and Motorways Tomáš Pad lek, Petr Kumpošt | KZ | 3 | 1P+2C+10B | B Z | Z |
| 614DATS | Database Systems Ond ej Smíšek Jana Kaliková (Gar.) | KZ | 2 | 1P+1C+10B | B Z | Z |
| 615JZ1A | Foreign Language - English 1 V ra Pastorková | Z | 3 | 0P+4C+10B | Z Z | Z |

Characteristics of the courses of this group of Study Plan: Code=3S K LED 21-22 P Name=3. sem. bak. KOMBI obor LED 21-22 povinné p edm ty

| 611FYZ | Physics | Z,ZK | 5 |
|---|--|---|---|
| | e dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics. | 1 –,–. 1 | • |
| 612MDE | Transport Models and Transport Excesses | Z,ZK | 3 |
| Parameters of the | raffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theor | y of queues, shock wa | aves. Quality o |
| transport and its assafety and fluency. | sessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the con- | sequences. Improvinç | g of transport |
| 617TGA | Graph Theory and its Applications in Transport | Z,ZK | 4 |
| Basic terms of gra | theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in | other scientific discip | olines. |
| 618PZP | Elasticity and Strength | Z,ZK | 3 |
| Tension and comp | ession. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of beam. Design of riveted | , bolted and welded jo | oint of structure |
| Analysis of deflect | on curve of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling. Beam on elastic | foundation. Strength | analysis. |
| 620UITS | Introduction to Intelligent Transport Systems | Z,ZK | 7 |
| Terminology and le | gislative framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamentals o | of information and tele | oommuniootio |
| systems for ITS P | | or innormation and tore | communicatio |
| • | inciples and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real exa | | |
| principles of ITS. | | | |
| principles of ITS. 612PPOK | Designing Roads, Highways and Motorways | mples of possible ap | plications of th |
| principles of ITS. 612PPOK Definition, types, o | | mples of possible ap | plications of th 3 n rural areas. |
| principles of ITS. 612PPOK Definition, types, o Range of vision for | Designing Roads, Highways and Motorways where ship, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and star | mples of possible ap | plications of th 3 n rural areas. |
| principles of ITS. 612PPOK Definition, types, o Range of vision for intersections. | Designing Roads, Highways and Motorways vnership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and star stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads | mples of possible ap | plications of th 3 n rural areas. |
| principles of ITS. 612PPOK Definition, types, of Range of vision for intersections. 614DATS | Designing Roads, Highways and Motorways where ship, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and star | KZ ndard speed. Route ir . Safety device. Cross | 3 arrural areas. Sings, junctions |
| principles of ITS. 612PPOK Definition, types, of Range of vision for intersections. 614DATS Basic concepts of | Designing Roads, Highways and Motorways whereship, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and star stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads Database Systems | KZ ndard speed. Route ir . Safety device. Cross | 3 n rural areas. sings, junction |
| principles of ITS. 612PPOK Definition, types, o Range of vision for intersections. 614DATS Basic concepts of | Designing Roads, Highways and Motorways whereship, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and star stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads Database Systems latabase systems, conceptual model, relational data model, the principles of normal forms, relational database design, security | KZ ndard speed. Route ir . Safety device. Cross | 3 n rural areas. sings, junction |

Code of the group: 4S K LED 21-22 P

Name of the group: 4. sem. bak. KOMBI obor LED 21-22 povinné p edm ty Requirement credits in the group: In this group you have to gain 26 credits

stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.

Requirement courses in the group: In this group you have to complete 8 courses

Credits in the group: 26 Note on the group:

| Code | Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.) | Completion | Credits | Scope | Semester | Role |
|---------|---|------------|---------|-----------|----------|------|
| 611MSP | Modeling of Systems and Processes Jana Kuklová, Bohumil Ková Bohumil Ková (Gar.) | Z,ZK | 4 | 2P+2C+12B | L | Z |
| 621LTN | Air Navigation | Z,ZK | 2 | 2P+1C+12B | L L | Z |
| 621LTTE | Aerodromes | Z,ZK | 4 | 2P+1C+12B | L | Z |
| 621ZYL1 | Principles of Flight 1 | Z,ZK | 5 | 2P+2C+16B | L | Z |
| 621LL1 | Aircraft 1 | KZ | 3 | 2P+1C+10B | L | Z |
| 621MRG | Meteorology | KZ | 3 | 1P+1C+10B | L | Z |
| 621ULCT | Aircraft Maintenance | Z | 2 | 2P+0C+8B | L | Z |
| 615JZ2A | Foreign Language - English 2 V ra Pastorková, Jan Feit | Z,ZK | 3 | 0P+4C+10B | L | Z |

Characteristics of the courses of this group of Study Plan: Code=4S K LED 21-22 P Name=4. sem. bak. KOMBI obor LED 21-22 povinné p edm ty

611MSP Modeling of Systems and Processes System and subsystem, external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of differential and differential equations. Linear and nonlinear system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer function. Stability of LTI systems. Discretization of continuous systems. System interconnection. 621LTN Air Navigation Z.ZK Earth - its shape, parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigation satellite systems. Air traffic services routes and their design. 621LTTE Z,ZK Aerodromes Aerodrome reference point and temperature, TORA, TODA, ASDA, LDA. Taxiway and apron. Clearway. Stopway. Obstacle limitation surfaces. Runway marking. Runway zone lights. Environmental conditions. Public traffic. 621ZYL1 Principles of Flight 1 Z,ZK 5 Aerodynamic drag, relation between drag and speed, streamline, boundary layer, formula of continuity, formula of Bernoulli, lift and drag, air flow and pressures around wing, angle of attack, reactions of wing in air flow, lift and drag of a wing and an aircraft, coefficient of lift and drag, critical angle of attack, wing with final span, induced drag, interference, devices for lift and drag increase. 621LL1 Aircraft 1 3 Aircraft structural and conceptual design types - definitions and basic knowledge of the problem. Development of requirements, aircraft definitions and categorisation. Aircraft loadings. Systems of primary and secondary airframe structure. Airframe and propulsion unit. Lectures are devoted to aeroplane topics. Meteorology Structure of atmosphere. Vertical stratification. Pressures QNH, QFE, QFF, QME. Instability. Atmospherical fronts. Atmospherical rainfall, origin fission. Turbulence. Powers causing wind. Cyclone and anticyclone. Gradient wind. Geostrofical and geocyklostrofical wind. Visibilities in air transport. Dangerous meteorological aspects. Meteorological maps. Climatology. Circulation. Intertropical front. Meteorological informations. 621ULCT Aircraft Maintenance Aircraft operations and technical operations. Maintenance and work processes. Defects search methods, status check diagnostic tools. Selection and qualification of aviation personnel. Basic documentation for maintenance. Optimization of time maintenance intervals. Regulation no. 1321/2014 Part 145. Human factors of aircraft maintenance. Regulation of director EASA for aircraft maintenance. Seminars will be focused on practical application. 615JZ2A Z.ZK Foreign Language - English 2 3 Grammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementary stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 12

The role of the block: PV

Code of the group: PVP KOMBI 21-22

Name of the group: PVP pro bak .KOMBI 21-22 pro LOG a LED obory (B3710) Requirement credits in the group: In this group you have to gain 12 credits

Requirement courses in the group: In this group you have to complete 3 courses

Credits in the group: 12

Note on the group:

| Code | Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.) | Completion | Credits | Scope | Semester | Role |
|---------|---|------------|---------|-------|----------|------|
| 621W1BC | Aviation safety and security | KZ | 4 | 8B | L | PV |

| | | <u> </u> | | 1 | 1 | 1 |
|---------|--|----------|---|----|---|----|
| 615W1BO | Work Safety and Health Protection in Transportation Petr Musil | KZ | 4 | 8B | L | PV |
| 621W1BS | Unmanned aircraft systems 1 Jakub Kraus | KZ | 4 | 8B | L | PV |
| 617W1EV | Public Sector Economy | KZ | 4 | 8B | Z | PV |
| 614W1HW | Computer Hardware | KZ | 4 | 8B | L | PV |
| 615W1HE | Work Hygiene and Ergonomics in Traffic | KZ | 4 | 8B | Z | PV |
| 617W1LL | Logistics of Passenger and Freight Air Transportation | KZ | 4 | 8B | L | PV |
| 617W1MD | Marketing in Transportation | KZ | 4 | 8B | Z | PV |
| 621W1MP | Matlab for project-oriented study | KZ | 4 | 8B | Z | PV |
| 617W1OF | Personal Finance Alexandra Dvo á ková | KZ | 4 | 8B | Z | PV |
| 617W1PM | Personnel Management Stanislava Holíková | KZ | 4 | 8B | L | PV |
| 614W1PZ | Advanced Data Processing in Spreadsheets | KZ | 4 | 8B | Z | PV |
| 614W1PJ | C Programming Language | KZ | 4 | 8B | Z | PV |
| 616W1PV | Operation, Construction and Maintenance of Vehicles | KZ | 4 | 8B | L | PV |
| 621W1RZ | Human Resources Management Šárka Václavíková | KZ | 4 | 8B | L | PV |
| 617W1ST | Titan Simulation | KZ | 4 | 8B | L | PV |
| 617W1SL | Sociology of Human Resources Stanislava Holíková | KZ | 4 | 8B | Z | PV |
| 617W1SK | Urban and Regional Rail Transport Systems | KZ | 4 | 8B | L | PV |
| 621W1TH | Aircraft Technical Handling | KZ | 4 | 8B | Z | PV |
| 614W1UP | Editing of Theses in MS Word | KZ | 4 | 8B | L | PV |

Characteristics of the courses of this group of Study Plan: Code=PVP KOMBI 21-22 Name=PVP pro bak .KOMBI 21-22 pro LOG a LED obory (B3710)

621W1BC | Aviation safety and security | K7 | 4

| | Aviation safety and security | KZ | 4 |
|---|--|---|--|
| History of safety and | security development in aviation. Modern tools for safety and security management. Research and development of safe and | secure systems. | |
| 615W1BO | Work Safety and Health Protection in Transportation | KZ | 4 |
| Fundamental legislat | ve, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportati | ion. Health protection | n programmes, |
| health insurance of h | ome and foreign business trips, statistics, working practice. | | |
| 621W1BS | Unmanned aircraft systems 1 | KZ | 4 |
| Unmanned Aviation I | Development. Aircraft design. Legislation in force in the Czech Republic. Planning and execution of the flight. Airspace division | n. Operational risks | and operational |
| procedures. Practical | flights. | | |
| 617W1EV | Public Sector Economy | KZ | 4 |
| | ial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment | | |
| tax system of the CR | state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, fund | ding from EU funds, p | orogram HDM-4 |
| 614W1HW | Computer Hardware | KZ | 4 |
| Computer architectur | e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separ | ate parts designing - | controllers, |
| arithmetic and logica | units, I/O subsystem. | | |
| 615W1HE | Work Hygiene and Ergonomics in Traffic | KZ | 4 |
| Basic knowledge of o | ccupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of th | ese factors on health | of workers. |
| • | on of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology | to possibilities and | skills of man. |
| Practical examples fr | om the field of transportation; relevant legislative. | | |
| 617W1LL | Logistics of Passenger and Freight Air Transportation | KZ | 4 |
| | | | |
| • | enger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aeric | ai transport process | passengers and |
| • | enger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aeria systems in air transport. Global distribution systems. | ai transport process | passengers and |
| air cargo. Information | | KZ | passengers and |
| air cargo. Information | systems in air transport. Global distribution systems. | KZ | 4 |
| air cargo. Information 617W1MD General principles of the application of ma | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger trans | KZ port and the resultin | 4 |
| air cargo. Information 617W1MD General principles of | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger trans | KZ | 4 |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfekting. Matlab for project-oriented study s is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exe | KZ port and the resultin KZ rcises will be prepar | 4 g differences in 4 ed according to |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfering. Matlab for project-oriented study | KZ port and the resultin KZ rcises will be prepar | 4 g differences in 4 ed according to |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfekting. Matlab for project-oriented study s is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual executes on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve Personal Finance | KZ port and the resultin KZ rcises will be preparement of students' M | 4 g differences in 4 ed according to latlab skills. |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (but | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfekting. Matlab for project-oriented study s is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual executes on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve Personal Finance dget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of | KZ port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, mort | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (bucconsumer loans, refir | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfekting. Matlab for project-oriented study s is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual executes on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve Personal Finance dget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of lancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability) | KZ port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, mort | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (buconsumer loans, refir (retirement savings a | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfecting. Matlab for project-oriented study s is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve Personal Finance dget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of ancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitabiliting insurance). | port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, mortry and adequacy), se | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (bu- consumer loans, refir (retirement savings a 617W1PM | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfecting. Matlab for project-oriented study sis focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve Personal Finance dget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of lancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability ind insurance). Personnel Management | KZ port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, morthy and adequacy), se | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the futur |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (buconsumer loans, refir (retirement savings a) 617W1PM | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfecting. Matlab for project-oriented study s is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve Personal Finance dget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of ancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitabiliting insurance). | KZ port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, morthy and adequacy), se | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the future |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (but consumer loans, refir (retirement savings a 617W1PM Human sources, wor 614W1PZ | systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfecting. Matlab for project-oriented study is is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve leading of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of ancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability and insurance). Personnel Management Personnel Management | KZ port and the resultin KZ rcises will be prepar ement of students' N KZ f housing (rent, mort ry and adequacy), se | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the futur 4 on. 4 |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (buc consumer loans, refir (retirement savings a 617W1PM Human sources, wor 614W1PZ Students will be fami | Systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfecting. Matlab for project-oriented study is is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve the presonal Finance depet, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of ancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability indices). Personnel Management Personnel Managemen | KZ port and the resultin KZ rcises will be prepar ement of students' N KZ f housing (rent, mort ry and adequacy), se KZ cultural communicat KZ rmulas and functions | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the futur 4 on. 4 s, including |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (buc consumer loans, refir (retirement savings a 617W1PM Human sources, wor 614W1PZ Students will be fami addressing, error deter | Marketing in Transportation | KZ port and the resultin KZ rcises will be prepar ement of students' N KZ f housing (rent, mort ry and adequacy), se KZ cultural communicat KZ rmulas and functions | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the futur 4 on. 4 s, including |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (buc consumer loans, refir (retirement savings a 617W1PM Human sources, wor 614W1PZ Students will be fami addressing, error deter | Systems in air transport. Global distribution systems. Marketing in Transportation marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transfecting. Matlab for project-oriented study is is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improve the presonal Finance depet, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of ancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability indices). Personnel Management Personnel Managemen | KZ port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, mort by and adequacy), se KZ cultural communications KZ rmulas and functions tting, solution finding | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the futur 4 on. 4 s, including |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (buc consumer loans, refir (retirement savings a 617W1PM Human sources, wor 614W1PZ Students will be fami addressing, error det data analysis. Examp 614W1PJ | Marketing in Transportation | KZ port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, mort by and adequacy), se KZ cultural communications ting, solution finding | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the future 4 on. 4 s, including , solver, macros |
| air cargo. Information 617W1MD General principles of the application of ma 621W1MP The subject's syllabu particular examples, 617W1OF Personal finance (buc consumer loans, refir (retirement savings a 617W1PM Human sources, wor 614W1PZ Students will be fami addressing, error det data analysis. Examp 614W1PJ C programming lange | Marketing in Transportation | KZ port and the resultin KZ rcises will be preparement of students' M KZ f housing (rent, mort by and adequacy), se KZ cultural communications ting, solution finding | 4 g differences in 4 ed according to latlab skills. 4 gage, savings, curing the future 4 on. 4 s, including , solver, macros |

| 616W1PV | Operation, Construction and Maintenance of Vehicles | KZ | 4 |
|---|--|--|---|
| Methods of vehicle | production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission mea | surement. Transmissi | on mechanism |
| General principles of | of engine diagnostics. | | |
| 621W1RZ | Human Resources Management | KZ | 4 |
| The position of hum | ian resources in the organization and related disciplines file. Substance, importance and challenges of human resources mai | nagement. Internal ar | nd external |
| environment of hum | an resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation | and remuneration of | staff. Positionir |
| dismissal and redun | ndancies of employees. Education of employees. Planning career management. | | |
| 617W1ST | Titan Simulation | KZ | 4 |
| Titan is a managem | ent game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same p | roduct. Students set a | a price and |
| determine the quant | tity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consec | quences of their decis | ions by the for |
| | | | |
| of financial corporat | te reports and they use this information for other business decisions. | | |
| of financial corporat 617W1SL | | KZ | 4 |
| 617W1SL | te reports and they use this information for other business decisions. Sociology of Human Resources Indicate the communication of the | | 4 planning, cultu |
| 617W1SL | Sociology of Human Resources | | 4 planning, cultu |
| 617W1SL Human resources arof the organization. | Sociology of Human Resources | | 4 planning, cultu |
| 617W1SL Human resources and of the organization. 617W1SK | Sociology of Human Resources nd their importance, work group as a special kind of social group, communication, personal management, modern manageme | ent, human resources | 4 |
| 617W1SL Human resources and the organization. 617W1SK Factors affecting tra | Sociology of Human Resources nd their importance, work group as a special kind of social group, communication, personal management, modern manageme Urban and Regional Rail Transport Systems | knt, human resources KZ ent, line networking. (| 4 Creating and |
| 617W1SL Human resources and the organization. 617W1SK Factors affecting traevaluation of the time | Sociology of Human Resources Individual their importance, work group as a special kind of social group, communication, personal management, modern management Urban and Regional Rail Transport Systems Insport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management | knt, human resources KZ ent, line networking. (| 4 Creating and |
| 617W1SL Human resources and the organization. 617W1SK Factors affecting tra | Sociology of Human Resources Individual their importance, work group as a special kind of social group, communication, personal management, modern management Urban and Regional Rail Transport Systems Insport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management | knt, human resources KZ ent, line networking. (| 4 Creating and |
| 617W1SL Human resources at of the organization. 617W1SK Factors affecting tra evaluation of the timmarketing. 621W1TH | Sociology of Human Resources nd their importance, work group as a special kind of social group, communication, personal management, modern manageme Urban and Regional Rail Transport Systems insport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line managementable. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport. | KZ ent, line networking. Cansport preferences. | 4 Creating and The role of |
| 617W1SL Human resources at of the organization. 617W1SK Factors affecting tra evaluation of the timmarketing. 621W1TH Aircraft towing and p | Sociology of Human Resources nd their importance, work group as a special kind of social group, communication, personal management, modern manageme Urban and Regional Rail Transport Systems insport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line managementable. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport Technical Handling | KZ ent, line networking. Cansport preferences. | 4 Creating and The role of |
| 617W1SL Human resources are of the organization. 617W1SK Factors affecting tracevaluation of the timmarketing. 621W1TH Aircraft towing and passangers onboard | Sociology of Human Resources Individual their importance, work group as a special kind of social group, communication, personal management, modern management Urban and Regional Rail Transport Systems Insport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line managemente table. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport Technical Handling Pushing tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and incident in the condition of the co | KZ ent, line networking. Cansport preferences. | 4 Creating and The role of |
| 617W1SL Human resources at of the organization. 617W1SK Factors affecting tra evaluation of the timmarketing. 621W1TH Aircraft towing and passangers onboard 614W1UP | Sociology of Human Resources Individual their importance, work group as a special kind of social group, communication, personal management, modern management Urban and Regional Rail Transport Systems Insport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management Interest technical circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport transport technical Handling Pushing tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and ding and offboarding. Operational processes of aircraft technical handling and regulations. Modernization and technical programment. | KZ ent, line networking. Cansport preferences. T KZ unloading units. Equipress. KZ | 4 Creating and The role of 4 Coment for 4 |
| 617W1SL Human resources are of the organization. 617W1SK Factors affecting tracevaluation of the time marketing. 621W1TH Aircraft towing and passangers onboard 614W1UP Students will be intresorted. | Sociology of Human Resources Individual their importance, work group as a special kind of social group, communication, personal management, modern management Urban and Regional Rail Transport Systems Insport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management Interest technical circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and ding and offboarding. Operational processes of aircraft technical handling and regulations. Modernization and technical programments are specified by the second processes of aircraft technical handling and regulations. Modernization and technical programments are specified by the second processes of aircraft technical handling and regulations. Modernization and technical programments are specified by the second processes of aircraft technical handling and regulations. Modernization and technical programments are specified by the second processes of aircraft technical handling and regulations. Modernization and technical programments are specified by the second processes of aircraft technical handling and regulations. | KZ ent, line networking. Cansport preferences. T KZ unloading units. Equipress. KZ create tables of cont | 4 Creating and The role of 4 Coment for 4 Coments, lists of |

List of courses of this pass:

| Code | Name of the course | Completion | Credits |
|----------------------|--|------------------------|---------------|
| 611CAL1 | Calculus 1 | Z,ZK | 7 |
| | umbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Geometric properties of n-dim an coordinate system. Geometric meaning of the differential of functions several real variables, differential calculus of functions of sev | | |
| 611CAL2 | Calculus 2 | Z.ZK | 5 |
| | ewtonian integral, Riemannian integral of the function of one variable, improper Riemannian integral, Riemannian integral in Rn. Para | , | _ |
| | faces in Rn, Riemannian integral over regular surfaces. Line and surface integrals of the second type, Stokes theorems, ordinary diff order, linear differential equations with constant coefficients and its systems. | • | • |
| 611FYZ | Physics | Z,ZK | 5 |
| | Kinematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics. | ' | ' |
| 611GIE | Geometry | KZ | 3 |
| | oblique projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves - param | | |
| | and curvature, Frenet's trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle moving | | |
| 611LA | Linear Algebra | Z,ZK | 3 |
| Vector spaces (line | ar combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and their their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classifications. | • | ninants and |
| 611MSP | Modeling of Systems and Processes | Z.ZK | 4 |
| | tem, external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of differe | _, | |
| | linear system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer function | | • |
| Linour una non | Discretization of continuous systems. System interconnection. | on. Otability of Erro | yotorno. |
| 611STAT | Statistics | Z,ZK | 4 |
| | l illity, random variable and its description, known distributions, random vector, function of random variable. Methods of point estimation. T | , | |
| | rrelation, linear regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear re | | |
| 3 | multiple regression, the use of matrices in regression. | , , | |
| 612MDE | Transport Models and Transport Excesses | Z,ZK | 3 |
| | traffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theory of qu | , , | s. Quality of |
| transport and its a | assessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consequences. | ences. Improving c | f transport |
| | safety and fluency. | | |
| 612PPOK | Designing Roads, Highways and Motorways | KZ | 3 |
| Definition, types, | ownership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standarc | d speed. Route in r | ural areas. |
| Range of vision for | stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Safet | ty device. Crossing | s, junctions, |
| | intersections. | | |
| 612ZTS | Railway Lines and Stations | Z,ZK | 4 |
| Rail transport. Ra | ailway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure. S Railway control systems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail t | | way lines. |
| 612ZYDK | Introduction to Transportation Engineering | Z,ZK | 3 |
| | on in land-use planning. Basic terms in transportation engineering. Traffic survey and traffic prognosis. Introduction to topic of roads, p | , | _ |
| Nois of transportati | impacts of transportation to environment and safety. | rubiic IIIass IIaIIspC | n i. Negative |
| | impacts of transportation to environment and safety. | | |

| 614ASD | Algorithm and Data Structures | KZ | 3 |
|--|--|--|--|
| | Algorithm and Data Structures Imiliarized with selected basic and derived data structures, algorithms, their properties and their design procedure. Students will analyze | | _ |
| | set task and the resulting algorithm write by means of flowcharts, practice in reading algorithms recorded by means of the flowchart ar | | |
| | algebra with forming the conditions for the algorithms. | | |
| 614DATS | Database Systems | KZ | 2 |
| Basic concepts | of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security and queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via | • . | , database |
| 614KSP | Constructing with Computer Aid | KZ | 2 |
| | erm determination. CAD role in projecting system model. Existing CAD systems on Czech market. Project creation, basic common wor | | |
| and CA systems | s. Co-ordinated systems, CAD environment skill (basics of constructing, dimensioning, modifications, user interfaces, projecting possib profiles, drawings with raster foundaments). | ilites, AutoCAD e | nvironment |
| 614PRG | Programming | KZ | 2 |
| | opment, methods of structured programming, high-level programming languages, basics of C programming languages (types, variable functions), programming techniques, complexity. | | les, arrays, |
| 614W1HW | Computer Hardware | KZ | 4 |
| | tecture, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate parithmetic and logical units, I/O subsystem. | | |
| 614W1PJ | C Programming Language | KZ | 4 |
| C programming la | nguage. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, strir Implementations of abstract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise or | | s and unions |
| 614W1PZ | Advanced Data Processing in Spreadsheets | KZ | 4 |
| | e familiar with principles of working in a spreadsheet. Graphic layout of the table appearance, formatting of numbers, insertion of formu | | , including |
| addressing, error | detection. Working with large spreadsheets, filters, advanced filters, database functions. Pivot tables and charts, conditional formatting, s | olution finding, so | olver, macros |
| 04.434.45 | data analysis. Examples and questions from various companies and training. | 1/7 | |
| 614W1UP | Editing of Theses in MS Word e introduced to the principles of creating and editing large documents and basic typographic rules. They will properly apply styles, crear | KZ | 4 |
| | aphs, etc. Footnotes, captions, index. They practice corrections of finished documents. The goal is to prepare students for seamless ed | | |
| gu. 00, tab.00, g.t | so that they are able to concentrate mainly on writing a thesis. | g alooo talloin | - and 1110000 |
| 615DPLG | Transportation Psychology | Z | 2 |
| | logy and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle const | - | |
| | vel route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in tra | | |
| 615JZ1A | Foreign Language - English 1 | Z | 3 |
| Grammatical struc | ctures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and constylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of | | s. Elementary |
| 615JZ2A | Foreign Language - English 2 | Z,ZK | 3 |
| | tures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and corstylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of | , | _ |
| CAELAIADO | | of rhetoric. | |
| 615W1BO | | of rhetoric. | 4 |
| | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. H | KZ | 1 - |
| Fundamental leg | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. | KZ | 1 - |
| Fundamental leg | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic | KZ ealth protection p | orogrammes, |
| Fundamental leg 615W1HE Basic knowledg | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. | KZ ealth protection p KZ factors on health | orogrammes, 4 of workers. |
| Fundamental leg 615W1HE Basic knowledg Creation and pro | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these totection of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to perfect the practical examples from the field of transportation; relevant legislative. | KZ ealth protection p KZ factors on health | orogrammes, 4 of workers. |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the other conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Insportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water | KZ ealth protection p KZ factors on health ossibilities and sl | 4 of workers. kills of man. |
| 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these obtection of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Insportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Altern | of workers. kills of man. |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the other control of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles le production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measurements. | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Altern | of workers. cills of man. |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehice | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these obtection of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Insportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles le production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission | 4 of workers. cills of man. 2 ative means 4 mechanism. |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the other control of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles le production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measurements. | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisation | 4 of workers. cills of man. 2 ative means 4 mechanism. 4 on of traffic in |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of occupational hygiene and ergonomics, and their application in transport. Working environment. Adaptation of technology to practical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Introduction systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Itele production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transports, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using the planning of the side of operator and client, organisation of city transport, logistic technologies and their aplication using the planning of the side of operator and client, organisation of city transport, logistic technologies and their aplication using the planning of the side of operator and client, organisation of city transport, logistic technologies and their aplication using the planning of the side of operator and client, organisation of city transport, logistic technologies and their aplication using the planning of the side of transport and client, organisation of city transpor | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisation | of workers. 4 of workers. cills of man. 2 ative means 4 mechanism. |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport r 617TGA | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of occupational hygiene and ergonomics, and their application in transport. Working environment. Adaptation of technology to practical examples from the field of transportation; relevant legislative. Introduction into Vehicles Insportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Ille production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transport transport technology and logistics. | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisation ng various transp Z,ZK | 4 of workers. kills of man. 2 lative means 4 mechanism. 4 on of traffic in wort modus. 4 |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport r 617TGA | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of occupational hygiene and ergonomics, and their application in transport. Working environment. Adaptation of technology to practical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Ite production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport Technology and Logistics Insport Technology and Logistics Insport Technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using Graph Theory and its Applications in Transport | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisation ng various transp Z,ZK | 4 of workers. cills of man. 2 lative means 4 mechanism. 4 on of traffic in oort modus. 4 |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport r 617TGA Basic terms 6 617W1EV Economic and fin | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the other of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to perfect the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Isportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Ille production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and Logistics particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transport technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using Graph Theory and its Applications in Transport of graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in curval theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of public sectors. | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisation ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, | 4 of workers. cills of man. 2 attive means 4 mechanism. 4 or of traffic in cort modus. 4 ciplines. 4 MCA, CEA) |
| 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport r 617TGA Basic terms 617W1EV Economic and fin | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the other of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Isportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Ille production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transport technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using Graph Theory and its Applications in Transport of graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in control public Sector Economy ancial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of public R, state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding from the product of the projects and their economic efficiency assessment, way of elaboration of PPP projects | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisation g various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, projects | 4 of workers. cills of man. 2 lative means 4 mechanism. 4 on of traffic in loort modus. 4 ciplines. 4 MCA, CEA), gram HDM-4. |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport in 617TGA Basic terms 617W1EV Economic and fin tax system of the 617W1LL | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these to tection of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Insport Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Ite production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transports, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using Graph Theory and its Applications in Transport of graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in control public Sector Economy ancial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assessment of public R, state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding from the proper in terms of logistics systems. Aerial transport and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial transport. | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisatic ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, projects KZ | 4 of workers. cills of man. 2 attive means 4 mechanism. 4 on of traffic in cort modus. 4 ciplines. 4 MCA, CEA), gram HDM-4 |
| 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport in 617TGA Basic terms 617W1EV Economic and fin tax system of the in 617W1LL Logistics airline p | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these obtection of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to practical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles Introduction and Maintenance of Vehicles Interport Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Ite production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measureme General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transport technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi Graph Theory and its Applications in Transport of graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in c Public Sector Economy ancial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assessment of public R, state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding fro Logistics of Passenger and Freight Air Transportation assenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of l | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisatic ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, proj KZ sport process pas | 4 of workers. dills of man. 2 attive means 4 mechanism. 4 on of traffic in the cort modus. 4 ciplines. 4 MCA, CEA) gram HDM-4 4 ssengers and |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport if 617TGA Basic terms 617TGA Conomic and fin tax system of the 617W1LL Logistics airline p | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the occupational hygiene and ergonomics, and their application in transport. Working environment. Adaptation of technology to practical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles Importation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Interpoduction. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transports technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using Graph Theory and its Applications in Transport of graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in the Public Sector Economy ancial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assessment of public R, state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding from the public projects at their economic efficiency assessment, | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisatic ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, pro- KZ sport process pas | 4 of workers. citils of man. 2 attive means 4 on of traffic ir voort modus. 4 ciplines. 4 MCA, CEA) gram HDM-4 seengers and |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport in 617TGA Basic terms 617W1EV Economic and fin tax system of the 617W1LL Logistics airline p 617W1MD General principle | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of occupational hygiene and ergonomics, and their application in transport. Working environment. Adaptation of technology to practical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Ile production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transports, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using Graph Theory and its Applications in Transport of graph Theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in computer of public sector, public choice theory, externalites, decisions about public finance allocation, economic assessment of public Rectors of Passenger and Freight Air Transportation assenger and cargo. Aircraft and airport terminals for passenger and Ergight Air Transportation air cargo. Information systems in air transport. Global distribution systems. Aerial trans air cargo. Information systems in air transport as a service, specifics of public passenger t | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisatio ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, pro- KZ sport process pas KZ and the resulting of | 4 of workers. idlls of man. 2 ative means 4 mechanism. 4 on of traffic in port modus. 4 diplines. 4 MCA, CEA), gram HDM-4. ssengers and 4 lifferences in |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport in 617TGA Basic terms 617TGA Each transport in 617W1EV Economic and fin tax system of the in 617W1LL Logistics airline p 617W1MD General principle 617W1OF Personal finance | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the occupational hygiene and ergonomics, and their application in transport. Working environment. Adaptation of technology to practical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles Introduction into Vehicles Importation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and water of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles Interpoduction. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measuremed General principles of engine diagnostics. Transport Technology and Logistics Insport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight transports technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication using Graph Theory and its Applications in Transport of graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in the Public Sector Economy ancial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assessment of public R, state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding from the public projects at their economic efficiency assessment, | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisatic ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, proj KZ sport process pas KZ and the resulting of KZ sing (rent, mortgal | 4 of workers. sills of man. 2 ative means 4 mechanism. 4 on of traffic in wort modus. 4 diplines. 4 MCA, CEA) gram HDM-4 ssengers and 4 lifferences in 4 ge, savings, |
| Fundamental leg 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport in 617TGA Basic terms 617W1EV Economic and fin tax system of the 617W1LL Logistics airline p 617W1MD General principle 617W1OF Personal finance | Work Safety and Health Protection in Transportation islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of the other control of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measureme General principles of engine diagnostics. Transport Technology and Logistics Introduction. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measureme General principles of engine diagnostics. Transport Technology and Logistics Introduction intr | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisatic ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, proj KZ sport process pas KZ and the resulting of KZ sing (rent, mortgal | 4 of workers. idlls of man. 2 attive means 4 mechanism. 4 on of traffic in port modus. 4 diplines. 4 MCA, CEA), gram HDM-4. 4 differences in 4 ge, savings, |
| 615W1HE Basic knowledg Creation and pro 616UDOP Vehicles and tran 616W1PV Methods of vehic 617TEDK Basic terms in tra each transport in 617TGA Basic terms 617TGA Each transport in 617W1EV Economic and fin tax system of the 617W1LL Logistics airline p 617W1MD General principle 617W1OF Personal finance consumer loans, in | Work Safety and Health Protection in Transportation Islative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. Health insurance of home and foreign business trips, statistics, working practice. Work Hygiene and Ergonomics in Traffic e of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these of tection of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to peractical examples from the field of transportation; relevant legislative. Introduction into Vehicles Introduction into | KZ ealth protection p KZ factors on health ossibilities and sl Z r transport. Alterr KZ ent. Transmission KZ sport, organisatic ng various transp Z,ZK ther scientific dis KZ ic projects (CBA, om EU funds, proj KZ sport process pas KZ and the resulting of KZ sing (rent, mortgal adequacy), secur KZ | 4 of workers. idills of man. 2 attive means 4 mechanism. 4 on of traffic in port modus. 4 diplication of traffic in port modus. |

| 617W1SK | Urban and Regional Rail Transport Systems KZ | | 4 |
|-----------------------------|--|---------------|----------------|
| - | g transport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management, line networking | • | ٠ ١ |
| evaluation of th | te timetable. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transport preference | ces. The | e role of |
| 617W1SL | marketing. Sociology of Human Resources KZ | | 4 |
| | and their importance, work group as a special kind of social group, communication, personal management, modern management, human resource | s nlanni | - 1 |
| Tamar rocourous | of the organization. | o piailii | ing, callaro |
| 617W1ST | Titan Simulation KZ | | 4 |
| | gement game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same product. Students | set a p | rice and |
| determine the qua | ntity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequences of their dec | cisions b | by the form |
| | of financial corporate reports and they use this information for other business decisions. | | |
| 618MTY | Materials Science and Engineering Z,ZF | | 3 |
| | aterials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructure. However Is the most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and composites. Att | | |
| is paid to metals a | to degradation processes in materials, to defectoscopy and to main mechanical tests. | CHUOH | s also palu |
| 618PZP | Elasticity and Strength Z,ZP | (| 3 |
| | ression. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of beam. Design of riveted, bolted and welde | | - |
| Analysis of defle | ection curve of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling. Beam on elastic foundation. Str | ength a | nalysis. |
| 618SAT | Structural Analysis Z,ZF | (| 4 |
| - | of forces in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically determinate beams and | | - |
| Principle of virtual | work. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss constructions. Cross-section | nal cha | racteristics |
| CAOTED | of planar shapes. Fiber polygons and chains. | | _ |
| 618TED | Technical Documentation KZ ards, international standardization, technical drawings, representation of technical objects, technical diagrams and charts, dimensional and geometric forms are considered. | atrical a | 2 |
| recillical starios | arrangement of drawing sheets. | ciricai a | ccuracy, |
| 620SYSA | Systems Analysis Z,ZF | <u> </u> | 5 |
| | tem sciences, system viewpoint, terminology, typical system analysis tasks, system identification, system interface and interface tasks, processes, | | - |
| and its analysis, | strong functions and processes, genetic code, system identity, system architecture. Tools for system analysis - Petri nets, decision tables, algorithm | ms for | structural |
| | tasks. Soft and hard systems, methods for soft system analysis. | | |
| 620UITS | Introduction to Intelligent Transport Systems Z,ZF | | 7 |
| | egislative framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamentals of information and t rinciples and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real examples of possible | | |
| systems for 113. Fi | principles of ITS. | аррііса | uons or the |
| 621LL1 | Aircraft 1 KZ | | 3 |
| Aircraft structural a | and conceptual design types - definitions and basic knowledge of the problem. Development of requirements, aircraft definitions and categorisation | ı. Aircra | ft loadings. |
| | Systems of primary and secondary airframe structure. Airframe and propulsion unit. Lectures are devoted to aeroplane topics. | | |
| 621LTN | Air Navigation Z,ZF | | 2 |
| Earth - its shape, | parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigation satellite s | systems | . Air traffic |
| COALTTE | services routes and their design. | , | 4 |
| 621LTTE | Aerodromes Z,ZP ence point and temperature, TORA, TODA, ASDA, LDA. Taxiway and apron. Clearway. Stopway. Obstacle limitation surfaces. Runway marking. Ru | | 4 |
| Acroaronic releic | Environmental conditions. Public traffic. | iiway 20 | nic lights. |
| 621MRG | Meteorology KZ | | 3 |
| | osphere. Vertical stratification. Pressures QNH, QFE, QFF, QME. Instability. Atmospherical fronts. Atmospherical rainfall, origin fission. Turbulence. | Powers | |
| wind. Cyclone and | $anticyclone. \ Gradient\ wind.\ Geostrofical\ and\ geocyklostrofical\ wind.\ Visibilities\ in\ air\ transport.\ Dangerous\ meteorological\ aspects.\ Meteorological\ respects$ | naps. C | limatology. |
| | Circulation. Intertropical front. Meteorological informations. | | |
| 621ULCT | Aircraft Maintenance Z | | 2 |
| • | and technical operations. Maintenance and work processes. Defects search methods, status check diagnostic tools. Selection and qualification of a tion for maintenance. Optimization of time maintenance intervals. Regulation no. 1321/2014 Part 145. Human factors of aircraft maintenance. Reg | | |
| Baoio accamonia | EASA for aircraft maintenance. Seminars will be focused on practical application. | alation | or unoctor |
| 621W1BC | Aviation safety and security KZ | | 4 |
| | of safety and security development in aviation. Modern tools for safety and security management. Research and development of safe and secure s | systems | i |
| 621W1BS | Unmanned aircraft systems 1 KZ | | 4 |
| Unmanned Aviation | on Development. Aircraft design. Legislation in force in the Czech Republic. Planning and execution of the flight. Airspace division. Operational risk | s and c | perational |
| | procedures. Practical flights. | | |
| 621W1MP | Matlab for project-oriented study KZ | 0.000 | 4 |
| | abus is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises will be prep oles, based on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improvement of studen | | - 1 |
| 621W1RZ | Human Resources Management KZ | - Iviati | 4 |
| | human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management. Intern | ا al and ا | |
| <u>=</u> ' | man resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation and remuneration of | | |
| | dismissal and redundancies of employees. Education of employees. Planning career management. | | |
| 621W1TH | Aircraft Technical Handling KZ | _ [| 4 |
| - | and pushing tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and unloading units. | | nent for |
| | assangers onboarding and offboarding. Operational processes of aircraft technical handling and regulations. Modernization and technical progres | s. | |
| 621ZALD History definitions | Basics of Air Transport KZ, terminology, basic rules. VFR/IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio navigation. Weight, bala | ince no | 2 rformance |
| | , terminology, basic rules. VER/IER. basics of aerodynamics. Propulsion of all chart. Aircraft design, basics of navigation, radio havigation, weight, basics of navigation, radio havigation. Weight, basics of havigation, radio havigation. | | |
| 5 p.c | | | , 5.0 |

621ZYL1 Principles of Flight 1 Z,ZK 5

Aerodynamic drag, relation between drag and speed, streamline, boundary layer, formula of continuity, formula of Bernoulli, lift and drag, air flow and pressures around wing, angle of attack, reactions of wing in air flow, lift and drag of a wing and an aircraft, coefficient of lift and drag, critical angle of attack, wing with final span, induced drag, interference, devices for lift and drag increase.

For updated information see http://bilakniha.cvut.cz/en/FF.html Generated: day 2024-05-22, time 00:22.