Study plan

Name of study plan: KOMBI bak. studium od 21-22 (obor LOG), skok do 3.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: 180 Elective courses credits: 0 Sum of credits in the plan: 180 Note on the plan:

Name of the block: Compulsory courses Minimal number of credits of the block: 162 The role of the block: Z

Code of the group: 1S K LOG LED 19-20 P Name of the group: 1. sem. bak. KOMBI obory LOG, LED 19-20 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) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
611CAL1	Calculus 1 Romana Zibnerová Ond ej Navrátil (Gar.)	Z,ZK	7	2P+4C+22B	Z	Z
611LA	Linear Algebra Romana Zibnerová Romana Zibnerová Martina Be vá ová (Gar.)	Z,ZK	3	2P+1C+10B	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+10B	Z	Z
611GIE	Geometry Vít Malinovský Šárka Vorá ová (Gar.)	KZ	3	2P+2C+12B	Z	Z
614ASD	Algorithm and Data Structures Jan Mejst ík	KZ	3	0P+2C+8B	Z	Z
614KSP	Constructing with Computer Aid	KZ	2	0P+2C+8B	Z	Z
618TED	Technical Documentation Vít Malinovský Jitka ezní ková (Gar.)	KZ	2	1P+1C+8B	Z	Z
615DPLG	Transportation Psychology Jana Štikarová	Z	2	2P+0C+6B	Z	Z
616UDOP	Introduction into Vehicles Zuzana Radová Petr Bouchner (Gar.)	Z	2	2P+0C+8B	Z	Z

Characteristics of the courses of this group of Study Plan: Code=1S K LOG LED 19-20 P Name=1. sem. bak. KOMBI obory LOG, LED 19-20 povinné p edm ty

611CAL1	Calculus 1	Z,ZK	7			
Sequence of real numbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Geometric properties of n-dimensional Euklidean space and						
Cartesian coordinate sy	stem. Geometric meaning of the differential of functions several real variables, differential calculus of functions of several rea	I variables.				
611LA	Linear Algebra	Z,ZK	3			
Vector spaces (linear co	Vector spaces (linear combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and their solvability. Determinants 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 to environment and safety.						
618MTY	Materials Science and Engineering	Z,ZK	3			
Basic course of materials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructure. However the main attention						
is paid to metals as the	most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and	composites. Atter	ntion is also paid			
to degradation processe	to degradation processes in materials, to defectoscopy and to main mechanical tests.					

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611GIE	Geometry	KZ	3
Orthographic and obliq	ue projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves - para	meterization, arc	of the curve,
torsion and curvature, I	Frenet's trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle moving on a c	urved path.	
614ASD	Algorithm and Data Structures	KZ	3
Students will be familiar	ized with selected basic and derived data structures, algorithms, their properties and their design procedure. Students will and	yze problems, pro	pose 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 basi	cs of Boolean
algebra with forming th	e conditions for the algorithms.		
614KSP	Constructing with Computer Aid	KZ	2
"CAD systems" term de	termination. CAD role in projecting system model. Existing CAD systems on Czech market. Project creation, basic common	work rules in grap	hic applications
and CA systems. Co-or	dinated systems, CAD environment skill (basics of constructing, dimensioning, modifications, user interfaces, projecting poss	ibilites, AutoCAD	environment
profiles, drawings with	raster foundaments).		
618TED	Technical Documentation	KZ	2
Technical standards, in	ternational standardization, technical drawings, representation of technical objects, technical diagrams and charts, dimension	al and geometric	al accuracy,
arrangement of drawing	g sheets.		
615DPLG	Transportation Psychology	Z	2
Subject of psychology a	nd its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle c	onstruction. Psych	ological aspects
of travel route and traffi	c conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in transport c	operation.	
616UDOP	Introduction into Vehicles	Z	2
Vehicles and transporta	tion systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and w	ater transport. Alt	ernative means
of transport. Lifting equ	ipment and conveyors. Legislation.		
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Code of the group: 2S K LOG LED 19-20 P Name of the group: 2. sem. bak. KOMBI obory LOG, LED 19-20 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
611CAL2	Calculus 2 Romana Zibnerová Romana Zibnerová Ond ej Navrátil (Gar.)	Z,ZK	5	2P+3C+20E	B L	Z
611STAT	Statistics Pavel Provinský, Pavla Pecherková Pavla Pecherková Pavel Provinský (Gar.)	Z,ZK	4	2P+2C+12E	B L	Z
612ZTS	Railway Lines and Stations Tomáš Javo ík, Ond ej Trešl	Z,ZK	4	2P+2C+10E	B L	Z
618SAT	Structural Analysis Tomáš Doktor Daniel Kytý (Gar.)	Z,ZK	4	2P+2C+14E	B L	Z
620SYSA	Systems Analysis Petr Bureš, Ji í R ži ka Zuzana B linová (Gar.)	Z,ZK	5	2P+2C+14E	B L	Z
614PRG	Programming Libor Žídek	KZ	2	0P+2C+8E	L	Z
617TEDK	Transport Technology and Logistics Michal Drábek Vít Janoš (Gar.)	KZ	4	12B	L	Z
621ZALD	Basics of Air Transport Jakub Hospodka	KZ	2	0P+2C+8E	B L	Z

Characteristics of the courses of this group of Study Plan: Code=2S K LOG LED 19-20 P Name=2. sem. bak. KOMBI obory LOG, LED 19-20 povinné p edm ty

611CAL2	Calculus 2	Z,ZK	5				
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	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 t	rack geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure.	Spatial layout of r	ailway 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 force	s in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically determina	ate beams and sin	nple girders.				
Principle of virtual work.	Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss construction	ons. Cross-section	al 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 t	ables, algorithms	for structural				
tasks. Soft and hard sys	tasks. Soft and hard systems, methods for soft system analysis.						

614PRG	Programming	KZ	2				
Algorithm development, methods of structured programming, high-level programming languages, basics of C programming languages (types, variables, conditions, cycles, arrays,							
functions), programming	g techniques, complexity.						
617TEDK	Transport Technology and Logistics	KZ	4				
Basic terms in transpor	technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight l	transport, organis	ation of traffic in				
each transport modus,	technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication u	using various trans	sport modus.				
621ZALD	Basics of Air Transport	KZ	2				
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, optimiza	ation of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, g	ground handling, s	ecurity. Air crew.				

Airlines and economics. Space technologies.

Code of the group: 3S K LOG 20-21 P

Name of the group: 3. sem. bak. KOMBI obor LOG 19-20 povinné p edm ty (obor LOG, ne specializace) 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	Z	Z
612MDE	Transport Models and Transport Excesses Josef Kocourek, Tomáš Pad lek Josef Kocourek (Gar.)	Z,ZK	3	2P+1C+8B	Z	Z
617TGA	Graph Theory and its Applications in Transport Alexandra Dvo á ková Denisa Mocková (Gar.)	Z,ZK	4	2P+2C+12B	Z	Z
618PZP	Elasticity and Strength Tomáš Doktor Ond ej Jiroušek (Gar.)	Z,ZK	3	2P+1C+10B	Z	Z
620UITS	Introduction to Intelligent Transport Systems Vladimír Faltus Pavel Hrubeš (Gar.)	Z,ZK	7	3P+2C+20B	Z	Z
612PPOK	Designing Roads, Highways and Motorways Tomáš Pad lek, Petr Kumpošt	KZ	3	1P+2C+10B	Z	Z
614DATS	Database Systems Ond ej Smíšek Jana Kaliková (Gar.)	KZ	2	1P+1C+10B	Z	Z
615JZ1A	Foreign Language - English 1 V ra Pastorková	Z	3	0P+4C+10B	Z	Z

Characteristics of the courses of this group of Study Plan: Code=3S K LOG 20-21 P Name=3. sem. bak. KOMBI obor LOG 19-20 povinné p edm ty (obor LOG, ne specializace)

611FYZ Physics	Z,ZK	5			
Kinematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics.					
612MDE Transport Models and Transport Excesses	Z,ZK	3			
Parameters of the traffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theory of	queues, shock w	aves. Quality of			
transport and its assessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the conseq	juences. Improvir	g of transport			
safety and fluency.					
617TGA Graph Theory and its Applications in Transport	Z,ZK	4			
Basic terms of graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in oth	ner scientific disci	plines.			
618PZP Elasticity and Strength	Z,ZK	3			
Tension and compression. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of beam. Design of riveted, bo	lted and welded	oint of structure.			
Analysis of deflection curve of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling. Beam on elastic fou	undation. Strengt	h analysis.			
620UITS Introduction to Intelligent Transport Systems	Z,ZK	7			
Terminology and legislative framework telematics systems and their architecture. Telematics systems in practice and their operation. Fundamentals of in	formation and tel	ecommunication			
systems for ITS. Principles and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real examp	les of possible ap	oplications of the			
principles of ITS.					
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 standard	rd speed. Route	in rural areas.			
Range of vision for stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Sa	afety device. Cros	sings, junctions,			
intersections.					
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 integrity of data, database					
queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via the WWW.					
615JZ1A Foreign Language - English 1	Z	3			
Grammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and	communicative s	kills. Elementary			
stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.					

Code of the group: 4S K LOG 20-21 P

Name of the group: 4. sem. bak. KOMBI obor LOG 20-21 povinné p edm ty Requirement credits in the group: In this group you have to gain 26 credits

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	s L	Z
617LGT	Logistics Daniel Pilát Tomáš Horák (Gar.)	Z,ZK	6	3P+2C+18B	S L	Z
617SFID	Public Administration and Financing in Transport	Z,ZK	4	2P+1C+12B	5 L	Z
611LP	Linear Programming Šárka Vorá ová, Ivan Nagy Ivan Nagy Šárka Vorá ová (Gar.)	KZ	3	2P+1C+12B	L	Z
616DPO	Vehicle Technology Josef Mík Josef Mík (Gar.)	KZ	2	2P+0C+10B	s L	Z
617EMY	Management Science	Z	2	2P+0C+8B	s L	Z
617PAZ	Carriage and Forwarding	Z	2	2P+0C+8B	5 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 LOG 20-21 P Name=4. sem. bak. KOMBI obor LOG 20-21 povinné p edm ty

611MSP	Modeling of Systems and Processes	Z,ZK	4
System and subsystem,	external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of diff	ferential and differ	ential equations.
Linear and nonlinear sy	stem, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer function	n. Stability of LTI	systems.
Discretization of continu	ous systems. System interconnection.		
617LGT	Logistics	Z,ZK	6
Logistics definition, basi	c concepts, store, warehouse, transport and handling equipment, logistics technology, logistics centers, information and intel	ligent logistics sy	stems, logistics
city.			
617SFID	Public Administration and Financing in Transport	Z,ZK	4
Basic issues of transpor	t and transport policy in the social context, environmental issues in transport, economical aspects of transport, public administ	stration and finance	cing of transport.
611LP	Linear Programming	KZ	3
Formulation of the probl	em of linear programming, transcription of some practical problems to the linear programming problems. Simplex and convex	polyedra. Simple	ex method, basic
solutions, duality princip	le in linear programming, stability of solution of linear programming problem. Traffic problem.		
616DPO	Vehicle Technology	KZ	2
Vehicle. Functions, princ	siples. Drive, vehicle construction. Road transport, safety, heavy duty vehicle desing, dynamics. Rail transport, safety, carriage	e design. Drive. E	lectric traction.
Transshipment. Technol	ogical components of various modes of transport. Management and control of various means of transport. Safety.		
617EMY	Management Science	Z	2
The introduction to ecor	nomical-mathematical models before its application in concrete technical and economical cases. The basic mathematical met	hods to modelise	economical
situations. Several class	es of problems are formulated and different methods used in qualitatively distinct real situations are introduced. The tasks of	interpretation and	d application.
617PAZ	Carriage and Forwarding	Z	2
Contracts of carriage an	d forwarding, waybills and documents; transport modes, multimodal transport, tariffs and prices in transport, rights and oblig	ations of carriers,	hauliers and
forwarders, duty and tar	iff agreements, INCOTERMS, insurance in transport.		
615JZ2A	Foreign Language - English 2	Z,ZK	3
Grammatical structures	and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and	communicative s	kills. Elementary
stylistics forms. Oral and	written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.		

Code of the group: 5S K LOG 21-22 P

Name of the group: 5. sem. bak. KOMBI obor LOG 21-22 povinné p edm ty (obor LOG, ne specializace) Requirement credits in the group: In this group you have to gain 23 credits Requirement courses in the group: In this group you have to complete 7 courses Credits in the group: 23 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
617EDPO	Economics of Transport Company	Z,ZK	5	2P+2C+14B	Z	Z
617FEU	Public Administration and Financing in Transport	Z,ZK	4	2P+1C+14B	Z	Z
617MAS	Small and Medium Enterprise	Z,ZK	3	2P+1C+12B	Z	Z
617TVD	Technology of Public Transport Michal Drábek Vít Janoš (Gar.)	Z,ZK	5	2P+2C+18B	Z	Z
614DMG	Datamining Ond ej Smíšek	KZ	2	0P+2C+10B	Z	Z
617MEKA	Methods of Economics Analysis	KZ	2	2P+0C+8B	Z	Z

623ZAP Basics of Law Milena Macková	Z	2	2P+0C+10B	Z	Z
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Characteristics of the courses of this group of Study Plan: Code=5S K LOG 21-22 P Name=5. sem. bak. KOMBI obor LOG 21-22 povinné p edm ty (obor LOG, ne specializace)

617EDPO	Economics of Transport Company	Z,ZK	5
Economy, marginal utility	/, marginal costs, function of supply and demand, market equilibrium, perfect competition and types of market arrangement. 1	ransportation ma	arket, transport
company, it's environme	nt, balance sheet, costs, revenue, profit and maximalization of profit. Financial management in transport, business plan, taxa	tion in transport.	
617FEU	Public Administration and Financing in Transport	Z,ZK	4
To get a basic overview	of the EU regional policy and its practical execution on the level of the member state, specific ability to find and analyze inform	nation about the	EU support
programmes.			
617MAS	Small and Medium Enterprise	Z,ZK	3
Small and medium ente	prise - plans, market, analysis, finance, management, decision making, survival, growth.		
617TVD	Technology of Public Transport	Z,ZK	5
The course contents a d	etailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the $ m g$	eneral transport	planning and
quantified transport dem	and. The course would be oriented on multiple and multi-level optimisation of passenger public transport system.		
614DMG	Datamining	KZ	2
614DMG			-
614DMG Types of data sources a	Datamining	uisition systems f	or data mining,
614DMG Types of data sources a mining characteristics of	Datamining nd knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acquired	uisition systems f	or data mining,
614DMG Types of data sources a mining characteristics of	Datamining nd knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acque concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesia	uisition systems f	or data mining,
614DMG Types of data sources a mining characteristics of Prediction. Cluster analy 617MEKA	Datamining nd knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acque concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesia sis. Mining in complex structured data, multimedia dbf., www.	uisition systems f an cob., using ne KZ	or data mining, ural networks). 2
614DMG Types of data sources a mining characteristics of Prediction. Cluster analy 617MEKA	Datamining nd knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acquisition concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesia sis. Mining in complex structured data, multimedia dbf., www. Methods of Economics Analysis	uisition systems f an cob., using ne KZ	or data mining, ural networks). 2
614DMG Types of data sources a mining characteristics of Prediction. Cluster analy 617MEKA The techniques of econo	Datamining nd knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acquisition concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesia sis. Mining in complex structured data, multimedia dbf., www. Methods of Economics Analysis	uisition systems f an cob., using ne KZ	or data mining, ural networks). 2
614DMG Types of data sources a mining characteristics of Prediction. Cluster analy 617MEKA The techniques of econo- indices. 623ZAP	Datamining Ind knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acquisition complex (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesia sis. Mining in complex structured data, multimedia dbf., www. Methods of Economics Analysis prical analysis in the domain of analysis of dependencies, analysis and construction of time series and comparsion of statist	uisition systems f an cob., using ne KZ ical values using Z	or data mining, ural networks). 2 differencies and 2
614DMG Types of data sources a mining characteristics of Prediction. Cluster analy 617MEKA The techniques of econo- indices. 623ZAP Basic orientation in the o	Datamining Image: Concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesia sis. Mining in complex structured data, multimedia dbf., www. Methods of Economics Analysis Image: Concepts (classes), mining analysis of dependencies, analysis and construction of time series and comparsion of statist Basics of Law Image: Concepts (classes)	uisition systems f an cob., using ne KZ ical values using Z plic, legal system	or data mining, ural networks). 2 differencies and 2 and in various

Code of the group: 6S K LOG 21-22 P

Name of the group: 6. sem. bak. KOMBI obor LOG 21-22 povinné p edm ty Requirement credits in the group: In this group you have to gain 23 credits Requirement courses in the group: In this group you have to complete 7 courses Credits in the group: 23

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
617IVD	Integration of Public Transport	ZK	4	3P+0C+12B	L	Z
617RAC	Rationalization and Quality of Transport	Z,ZK	7	4P+2C+22B	L	Z
617RPT	Project Management	Z,ZK	5	2P+2C+14B	L	Z
614MPG	Modern Programming Approaches	KZ	2	0P+2C+8B	L	Z
617GEDS	Geography of Transport Systems Milan K íž	KZ	2	2P+0C+8B	L	Z
617MRZ	Managerial Decision Making	Z	2	2P+0C+8B	L	Z
623DPSP	Traffic Law and Related Regulations	Z	1	2P+0C+8B	L	Z

Characteristics of the courses of this group of Study Plan: Code=6S K LOG 21-22 P Name=6. sem. bak. KOMBI obor LOG 21-22 povinné

p edm ty

617IVD Ir	ntegration of Public Transport	ZK	4
Transport policy, planning,	contracts, funding, clearing of traffic receipts, tariff systems, traffic and carriage controls, legal conditions within public tran	sport.	
617RAC R	ationalization and Quality of Transport	Z,ZK	7
Transport system, transpor	tation funding, cost calculation, efficiency, transport rationalization, quality management, standards and quality standardizati	on, quality manag	ement systems,
quality management in trar	nsport and logistics, marketing and transport quality, quality costs, quality measurement and monitoring, statistics in quality	management, in	nproving, focus
on the customer.			
617RPT P	roject Management	Z,ZK	5
Basic terms of the project i	management, project management standards, organizational structures in the project management, projects in transport a	nd transport infra	structure and
their specifics, feasibility st	udy and CBA, project evaluation, PPP projects.		
614MPG N	Iodern Programming Approaches	KZ	2
Principles of object oriente	d programming, polymorphism, references, memory allocation, inheritage, generic programming, operator overloading, ST	L library, object i	mplementation
of abstract data types, grap	ph and graph algorithm implementation focused on logistic problems.		
617GEDS G	Geography of Transport Systems	KZ	2
Regional differentiation of t	the transport system. Sociogeographic regionalization and its relation to transport. Transport and local and regional develop	oment. Spatial int	eraction -
theoretical and methodolog	jical framework. Mobility research - travel behavior, mode choice and the influence onto "modal-split." Modal competition. Pract	ical use of transp	ort-geographical
analysis in transportation p	planning.		
617MRZ N	Ianagerial Decision Making	Z	2
The course is divided into the	two main sections. The first section deals with individual-level processes that influence managers' decisions. The second s	ection considers	collective (that
is, group or organizational)) forces that affect managers' decisions.		

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
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	KZ	4
History of safety and se	curity development in aviation. Modern tools for safety and security management. Research and development of safe and security	cure systems.	
615W1BO	Work Safety and Health Protection in Transportation	KZ	4
Fundamental legislative	, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation.	Health protection	n programmes,
health insurance of hom	e and foreign business trips, statistics, working practice.		
621W1BS	Unmanned aircraft systems 1	KZ	4
Unmanned Aviation Dev	elopment. Aircraft design. Legislation in force in the Czech Republic. Planning and execution of the flight. Airspace division. C	Operational risks a	and operational
procedures. Practical fli	ghts.		
617W1EV	Public Sector Economy	KZ	4
Economic and financial	theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of p	oublic projects (CE	3A, MCA, CEA),
tax system of the CR, st	ate budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding	g from EU funds, p	orogram HDM-4.
614W1HW	Computer Hardware	KZ	4
Computer architecture,	basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate	parts designing -	controllers,
arithmetic and logical u	nits, I/O subsystem.		
615W1HE	Work Hygiene and Ergonomics in Traffic	KZ	4
Basic knowledge of occ	upational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these	factors on health	of workers.
Creation and protection	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 from	i the field of transportation; relevant legislative.		

617W1LL Logistics of Passenger and Freight Air Transportation	KZ	4
Logistics airline passenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial tra		•
air cargo. Information systems in air transport. Global distribution systems.		paccongore and
617W1MD Marketing in Transportation	KZ	4
General principles of marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transport		•
the application of marketing.		9
621W1MP Matlab for project-oriented study	KZ	4
The subject's syllabus is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercise		•
particular examples, based on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improvement		-
617W1OF Personal Finance	KZ	4
Personal finance (budget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of ho	using (rent, mort	gage, savings,
consumer loans, refinancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability ar	nd adequacy), se	curing the future
(retirement savings and insurance).		
617W1PM Personnel Management	KZ	4
Human sources, work group, man as personality, planning, choice, evaluation and education of human sources, work adaptation, teamwork, intercult	ural communicat	on.
614W1PZ Advanced Data Processing in Spreadsheets	KZ	4
Students will be familiar with principles of working in a spreadsheet. Graphic layout of the table appearance, formatting of numbers, insertion of formu	las and function	s, including
addressing, error detection. Working with large spreadsheets, filters, advanced filters, database functions. Pivot tables and charts, conditional formatting	g, solution finding	, solver, macros,
data analysis. Examples and questions from various companies and training.		
614W1PJ C Programming Language	KZ	4
C programming language. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, s	tring, files, struct	ures and unions.
Implementations of abstract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.		
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 measurer	ment. Transmissi	on mechanism.
General principles of engine diagnostics.		
621W1RZ Human Resources Management	KZ	4
The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources managed	ment. Internal an	d external
environment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation and r	remuneration of s	staff. Positioning,
dismissal and redundancies of employees. Education of employees. Planning career management.		
617W1ST Titan Simulation	KZ	4
Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produc	ct. Students set a	price and
determine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence	ces of their decis	ions by the form
of financial corporate reports and they use this information for other business decisions.		
617W1SL Sociology of Human Resources	KZ	4
Human resources and their importance, work group as a special kind of social group, communication, personal management, modern management, h		planning, culture
of the organization.		-
617W1SK Urban and Regional Rail Transport Systems	KZ	4
Factors affecting transport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management, li	ne networking. C	reating and
evaluation of the timetable. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transpo	-	-
marketing.		
621W1TH Aircraft Technical Handling	KZ	4
Aircraft towing and pushing tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and unload	ading units. Equip	ment for
passangers onboarding and offboarding. Operational processes of aircraft technical handling and regulations. Modernization and technical progress.		
614W1UP Editing of Theses in MS Word	KZ	4
Students will be introduced to the principles of creating and editing large documents and basic typographic rules. They will properly apply styles, creating and editing large documents and basic typographic rules.		-
figures, tables, graphs, etc. Footnotes, captions, index. They practice corrections of finished documents. The goal is to prepare students for seamless		
so that they are able to concentrate mainly on writing a thesis.	2	-,

Name of the block: Jazyky Minimal number of credits of the block: 6 The role of the block: J

Code of the group: JZ 2 K (5.-6.SEM) Name of the group: Jazyky KOMBI bak. pro 5. a 6. sem. (2.cizí jazyk) - pro B3710 Requirement credits in the group: In this group you have to gain 6 credits Requirement courses in the group: In this group you have to complete 2 courses Credits in the group: 6 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	Completion	Credits	Scope	Somostor	Role
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615JZ3I	Foreign Language - Italian 3	Z	3	0P+4C+10E	B Z	J
615JZ3N	Foreign Language - German 3 René Skalický	Z	3	0P+4C+10E	8 Z	J
615JZ3R	Foreign Language - Russian 3 Vilma Gottwaldová	Z	3	0P+4C+10E	8 Z	J

615JZ3S	Foreign Language - Spanish 3	Z	3	0P+4C+10B	Z	J
615JZ4F	Foreign Language - French 4	Z,ZK	3	0P+4C+10B	L	J
615JZ4I	Foreign Language - Italian 4	Z,ZK	3	0P+4C+10B	L	J
615JZ4N	Foreign Language - German 4 René Skalický, Sv tlana Petrová, Eva Rezlerová	Z,ZK	3	0P+4C+10B	L	J
615JZ4R	Foreign Language - Russian 4 Vilma Gottwaldová	Z,ZK	3	0P+4C+10B	L	J
615JZ4S	Foreign Language - Spanish 4	Z,ZK	3	0P+4C+10B	L	J
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List of courses of this pass:

Code	Name of the course	Completion	Credits
611CAL1	Calculus 1	Z,ZK	7
Sequence of real n	unbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Geometric properties of n-dim	ensional Euklidear	n space and
Cartesia	an coordinate system. Geometric meaning of the differential of functions several real variables, differential calculus of functions of se	veral real variables	
611CAL2	Calculus 2	Z,ZK	5
Antiderivative, No	evtonian integral, Riemannian integral of the function of one variable, improper Riemannian integral, Riemannian integral in Rn. Para	metric description	of regular
k-dimensional su	rfaces in Rn, Riemannian integral over regular surfaces. Line and surface integrals of the second type, Stokes theorems, ordinary diff	erential equations	of the first
	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
	I oblique projections, linear perspective. Topographic surfaces and their orthogonal projection. Differential geometry of curves - paran and curvature, Frenet's trihedron. Kinematics - a curve as a trajectory of the motion, the velocity and acceleration of a particle movin		
611LA	Linear Algebra	Z,ZK	3
	ar combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and the their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classificat	ir solvability. Deterr	-
611LP	Linear Programming	KZ	3
	problem of linear programming, transcription of some practical problems to the linear programming problems. Simplex and convex po solutions, duality principle in linear programming, stability of solution of linear programming problem. Traffic problem.	1 1	-
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 differences of the system and the system and the system as a system and the system and the system and the system as a system as		
Linear and non	linear system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer function Discretization of continuous systems. System interconnection.	on. Stability of LTI s	ystems.
611STAT	Statistics	Z,ZK	4
	ility, random variable and its description, known distributions, random vector, function of random variable. Methods of point estimation.		•
	rrelation, linear regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear regression	-	
	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		
transport and its a	assessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consequ safety and fluency.	ences. Improving o	f transport
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 standard	d speed. Route in ru	ural areas.
Range of vision for	stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Safe intersections.	ty device. Crossing	s, junctions,
612ZTS	Railway Lines and Stations	Z,ZK	4
	ailway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure. S	1 ' 1	-
	Railway control systems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail t		may intoo.
612ZYDK	Introduction to Transportation Engineering	Z.ZK	3
-	ion in land-use planning. Basic terms in transportation engineering. Traffic survey and traffic prognosis. Introduction to topic of roads, p	I ' I	-
	impacts of transportation to environment and safety.		nt. Negative
614ASD	Algorithm and Data Structures	KZ	3
	niliarized with selected basic and derived data structures, algorithms, their properties and their design procedure. Students will analyze		-
	et task and the resulting algorithm write by means of flowcharts, practice in reading algorithms recorded by means of the flowchart a		
	algebra with forming the conditions for the algorithms.		
614DATS	Database Systems	K7	2
614DATS Basic concepts of	Database Systems f database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an	KZ	2 database
	Database Systems f database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an gueries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via	d integrity of data,	
	f database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an	d integrity of data,	
Basic concepts of 614DMG	f database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via	d integrity of data, the WWW. KZ	database 2
Basic concepts of 614DMG Types of data sour	of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via Datamining	d integrity of data, the WWW. KZ sition systems for d	database 2 ata mining,
Basic concepts of 614DMG Types of data sour	of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via Datamining ces and knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acquis	d integrity of data, the WWW. KZ sition systems for d	database 2 ata mining,
Basic concepts of 614DMG Types of data sour mining characteris	of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via Datamining rces and knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acquisities of concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesian	d integrity of data, the WWW. KZ sition systems for d cob., using neural	database 2 ata mining,
Basic concepts of 614DMG Types of data sour mining characteris 614KSP	of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via Datamining rces and knowledge, data warehouses and OLAP technology for data mining, data preprocessing in the process of knowledge acquis titos of concepts (classes), mining association rules from relational db. and data warehousing, classification (decisions tree, Bayesian Prediction. Cluster analysis. Mining in complex structured data, multimedia dbf., www.	d integrity of data, the WWW. KZ sition systems for d cob., using neural KZ	database 2 ata mining, networks). 2
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615JZ1A	Foreign Language - English 1	Z	3
Frammatical structu	ures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and co stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles		Elementary
615JZ2A	Foreign Language - English 2	Z,ZK	3
Grammatical structu	ures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and co stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles		Elementar
615JZ3F	Foreign Language - French 3	Z	3
Grammar and styli	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I		-
and perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work features. Practice of oral and written presentation.	with (professional)	text and its
615JZ3I	Foreign Language - Italian 3	Z	3
Grammar and styli	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I	anguage structure	•
and perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work features. Practice of oral and written presentation.	with (professional)	text and its
615JZ3N	Foreign Language - German 3	Z	3
1	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I	anguage structure	knowledge
and perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work features. Practice of oral and written presentation.	with (professional)	text and its
615JZ3R	Foreign Language - Russian 3	Z	3
1	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I	1	-
and perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615JZ3S	features. Practice of oral and written presentation. Foreign Language - Spanish 3	Z	3
	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of l	-	
and perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615JZ4F	features. Practice of oral and written presentation. Foreign Language - French 4	Z,ZK	3
1	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I		-
and perceptive and	communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615JZ4I	features. Practice of oral and written presentation. Foreign Language - Italian 4	Z.ZK	3
	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I	1 '	-
and perceptive and	communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615JZ4N	features. Practice of oral and written presentation.	Z,ZK	3
1	Foreign Language - German 4 stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I		-
and perceptive and	communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615JZ4R	features. Practice of oral and written presentation. Foreign Language - Russian 4	Z,ZK	3
	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of l	· · ·	-
and perceptive and	communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615JZ4S	features. Practice of oral and written presentation. Foreign Language - Spanish 4	Z,ZK	3
	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I		-
and perceptive and	communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615W1BO	features. Practice of oral and written presentation. Work Safety and Health Protection in Transportation	KZ	4
1	lative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. H		1
-	health insurance of home and foreign business trips, statistics, working practice.		-
615W1HE	Work Hygiene and Ergonomics in Traffic	KZ	4
	of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these ection of working conditions that do not damage public health. Mutual links man-machine-environment. Adaptation of technology to p		
	Practical examples from the field of transportation; relevant legislative.		
616DPO	Vehicle Technology	KZ	2
venicle. Functions,	principles. Drive, vehicle construction. Road transport, safety, heavy duty vehicle desing, dynamics. Rail transport, safety, carriage or Transshipment. Technological components of various modes of transport. Management and control of various means of transport	-	ric traction.
616UDOP	Introduction into Vehicles	Z	2
Vehicles and trans	portation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and wate	r transport. Alterna	ative means
616W1PV	of transport. Lifting equipment and conveyors. Legislation. Operation, Construction and Maintenance of Vehicles	KZ	4
1	production. Vehicle maintenance. Vehicle diagnostics. Maintenance and repair plans. Engine maintenance and emission measurem		1 -
	General principles of engine diagnostics.		-
617EDPO	Economics of Transport Company I utility, marginal costs, function of supply and demand, market equilibrium, perfect competition and types of market arrangement. Tra	Z,ZK	5 5 5
	s utility, marginal costs, function of supply and demand, market equilibrium, perfect competition and types of market arrangement. In s environment, balance sheet, costs, revenue, profit and maximalization of profit. Financial management in transport, business plar	-	-
617EMY	Management Science	Z	2
	to economical-mathematical models before its application in concrete technical and economical cases. The basic mathematical method		
	I classes of problems are formulated and different methods used in qualitatively distinct real situations are introduced. The tasks of ir	iterpretation and a	ppilcation.
	Public Administration and Financing in Transport	774	1
617FEU	Public Administration and Financing in Transport erview of the EU regional policy and its practical execution on the level of the member state, specific ability to find and analyze inforr	Z,ZK	4 U support

			2
617GEDS	Geography of Transport Systems	KZ	
-	entiation of the transport system. Sociogeographic regionalization and its relation to transport. Transport and local and regional develo		
eoretical and me	thodological framework. Mobility research - travel behavior, mode choice and the influence onto "modal-split." Modal competition. Practica	I use of transport	-geograph
04711/0	analysis in transportation planning.	71/	
617IVD	Integration of Public Transport	ZK	4
	sport policy, planning, contracts, funding, clearing of traffic receipts, tariff systems, traffic and carriage controls, legal conditions within		
617LGT	Logistics	Z,ZK	6
ogistics definition	n, basic concepts, store, warehouse, transport and handling equipment, logistics technology, logistics centers, information and intellige	ent logistics syste	ems, logist
	City.		
617MAS	Small and Medium Enterprise	Z,ZK	3
	Small and medium enterprise - plans, market, analysis, finance, management, decision making, survival, growth.		
617MEKA	Methods of Economics Analysis	KZ	2
e techniques of	economical analysis in the domain of analysis of dependencies, analysis and construction of time series and comparsion of statistical	I values using dif	ferencies
	indices.		
617MRZ	Managerial Decision Making	Z	2
he course is divi	ded into two main sections. The first section deals with individual-level processes that influence managers' decisions. The second sec	tion considers co	ollective (t
	is, group or organizational) forces that affect managers' decisions.		
617PAZ	Carriage and Forwarding	Z	2
Contracts of carr	iage and forwarding, waybills and documents; transport modes, multimodal transport, tariffs and prices in transport, rights and obligat	ions of carriers, h	nauliers ar
	forwarders, duty and tariff agreements, INCOTERMS, insurance in transport.		
617RAC	Rationalization and Quality of Transport	Z,ZK	7
	transportation funding, cost calculation, efficiency, transport rationalization, quality management, standards and quality standardization,		-
ality manageme	ent in transport and logistics, marketing and transport quality, quality costs, quality measurement and monitoring, statistics in quality	nanagement, imp	roving, fo
	on the customer.		
617RPT	Project Management	Z,ZK	5
asic terms of th	e project management, project management standards, organizational structures in the project management, projects in transport and	d transport infras	tructure a
	their specifics, feasibility study and CBA, project evaluation, PPP projects.		
617SFID	Public Administration and Financing in Transport	Z,ZK	4
sic issues of tra	nsport and transport policy in the social context, environmental issues in transport, economical aspects of transport, public administrat	tion and financing	g of transp
617TEDK	Transport Technology and Logistics	KZ	4
isic terms in trai	sport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran	sport, organisatio	on of traff
ach transport m	nodus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi	ng various transp	port modu
617TGA	Graph Theory and its Applications in Transport	Z,ZK	4
		2,21	
Basic terms c	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in c	,	1
Basic terms c 617TVD	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in o	,	1
617TVD		other scientific dis Z,ZK	ciplines.
617TVD	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in o Technology of Public Transport	ther scientific dis Z,ZK neral transport pl	ciplines.
617TVD	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in c Technology of Public Transport ents a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ge	ther scientific dis Z,ZK neral transport pl	ciplines. 5 anning ar
617TVD The course cont 617W1EV	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in o Technology of Public Transport ents a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ge quantified transport demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport	ther scientific dis Z,ZK neral transport pl system. KZ	anning ar
617TVD The course cont 617W1EV conomic and fina	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in on Technology of Public Transport ents a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ge quantified transport demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport Public Sector Economy	ther scientific dis Z,ZK neral transport pl system. KZ ic projects (CBA,	anning ar
617TVD The course content 617W1EV conomic and fina	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in one of the contract of the	ther scientific dis Z,ZK neral transport pl system. KZ ic projects (CBA,	anning ar
617TVD The course cont 617W1EV conomic and fina (system of the C 617W1LL	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Technology of Public Transport ents a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ge quantified transport demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport Public Sector Economy ncial 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 fre	ther scientific dis Z,ZK neral transport pl system. KZ ic projects (CBA, om EU funds, pro KZ	ciplines. 5 anning ar 4 MCA, CI gram HDI 4
617TVD The course cont 617W1EV conomic and fina < system of the C 617W1LL	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Technology of Public Transport ents a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ge quantified transport demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport Public Sector Economy ncial 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 Logistics of Passenger and Freight Air Transportation	ther scientific dis Z,ZK neral transport pl system. KZ ic projects (CBA, om EU funds, pro KZ	ciplines. 5 anning ar 4 MCA, CI gram HDI 4
617TVD The course cont 617W1EV conomic and fina (system of the C 617W1LL gistics airline pa	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Technology of Public Transport ents a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ge quantified transport demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport Public Sector Economy ncial 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 Logistics of Passenger and Freight Air Transportation Issenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial transport	ther scientific dis Z,ZK neral transport pl system. KZ ic projects (CBA, om EU funds, pro KZ	ciplines. 5 anning ar 4 MCA, CF gram HDP 4 ssengers
617TVD The course cont 617W1EV conomic and fina (system of the C 617W1LL gistics airline pa 617W1MD	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Technology of Public Transport ants a detailed description of new knowledge and basic principles of hierarchical planning of public transport system accenting the ge quantified transport demand. The course would be oriented on multiple and multi-level optimisation of passenger public transport Public Sector Economy ncial 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 Logistics of Passenger and Freight Air Transportation ssenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial transport. Global distribution systems.	ther scientific dis Z,ZK neral transport pl system. KZ ic projects (CBA, om EU funds, pro KZ sport process pac	ciplines. 5 anning au 4 MCA, Cl gram HDI gram HDI ssengers
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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.			
618TED	Technical Documentation	KZ	2
Technical standards, international standardization, technical drawings, representation of technical objects, technical diagrams and charts, dimensional and geometrical accuracy,			
arrangement of drawing sheets.			
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.			
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 of infor	mation and telecon	nmunication
systems for ITS. Principles and technical support measurement of traffic data, localization and navigation. Practical work with traffic data. Real examples of possible applications of the			
principles of ITS.			
621W1BC	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.			
621W1BS	Unmanned aircraft systems 1	KZ	4
Unmanned Aviation Development. Aircraft design. Legislation in force in the Czech Republic. Planning and execution of the flight. Airspace division. Operational risks and operational			
procedures. Practical flights.			
621W1MP	Matlab for project-oriented study	KZ	4
The subject's syllabus is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises will be prepared according to			
particular examples, based on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improvement of students' Matlab skills.			
621W1RZ	Human Resources Management	KZ	4
	numan resources in the organization and related disciplines file. Substance, importance and challenges of human resources manage		
environment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation and remuneration of staff. Positioning,			
dismissal and redundancies of employees. Education of employees. Planning career management.			
621W1TH	Aircraft Technical Handling	KZ	4
Aircraft towing and pushing tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and unloading units. Equipment for			
passangers onboarding and offboarding. Operational processes of aircraft technical handling and regulations. Modernization and technical progress.			
621ZALD	Basics of Air Transport	KZ	2
History, definitions,	terminology, basic rules. VFR/IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio navigation.	Weight, balance, p	erformance.
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.			
623DPSP	Traffic Law and Related Regulations	Z	1
Analysis of selec	ted laws in transportation domain (e. g. Road Act, Road Transport Act, Civil Aviation Act, Railways Act, Inland Navigation Act), select	ted EU transport le	gislation.
623ZAP	Basics of Law	Z	2
Basic orientation in the Czech legal system. The course is primarily intended to provide students with orientation in fundamentals of the Czech Republic, legal system and in various			
forms of law, including adoption of the basic principles of European Community law. The course consists of selected chapters from the public and private law and European Community			
law.			

For updated information see <u>http://bilakniha.cvut.cz/en/FF.html</u> Generated: day 2024-05-19, time 16:55.