## Study plan

## Name of study plan: LED bak.prez.15/16

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 full-time

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: 128

The role of the block: Z

Code of the group: 1.S.BP 13/14

Name of the group: 1.sem.bak.prez. 13/14

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 12 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
17E	Economics	Z,ZK	3	2+1	Z	Z
11GIE	Geometry Old ich Hykš, Pavel Provinský, Šárka Vorá ová Old ich Hykš Old ich Hykš (Gar.)	KZ	3	2P+2C+12B	Z	Z
14KSP	Constructing with Computer Aid Martin Brumovský, Martin Fiala, Radek Kratochvíl, Lukáš Svoboda, Jan Vogl, Drahomír Schmidt Lukáš Svoboda Drahomír Schmidt (Gar.)	KZ	2	0P+2C+8B	Z	Z
11LA	Linear Algebra Pavel Provinský, Lucie Kárná, Martina Be vá ová Martina Be vá ová Martina Be vá ová (Gar.)	Z,ZK	3	2P+1C+10B	Z	Z
11MTA	Mathematical Analysis	Z,ZK	4	2+2	Z	Z
18MRI1	Materials 1	Z,ZK	3	2+1	Z	Z
TV-1	Physical Education	Z	1		Z	Z
18TTED	Creation of Technical Documentation	KZ	2	2+1	Z	Z
22UN	Traffic Accidents Introduction	Z	2	2+0	Z	Z
12ZADI	Introduction to Transportation Engineering	Z,ZK	3	2+1	Z	Z
14ZINF	Fundamentals of Informatics	KZ	2	0+2	Z	Z
21ZLD	Introduction to Air Transport	KZ	2	2+1	Z	Z

Characteristics of the courses of this group of Study Plan: Code=1.S.BP 13/14 Name=1.sem.bak.prez. 13/14

17E	Economics	Z,ZK	3
Microeconomic and m	nacroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consu	imers and produc	ers. Market
structures. Labour and	d capital, efficiency, ownership, public choice.		
11GIE	Geometry	KZ	3
Differential geometry	of curves - parameterization, the arc of the curve, torsion and curvature, Frenet's trihedron. Kinematics - a curve as a trajector	y of the motion, th	ne velocity, and
acceleration of a part	cle moving on a curved path.		
14KSP	Constructing with Computer Aid	KZ	2
"CAD systems" term	determination. 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-	ordinated systems, CAD environment skill (basics of constructing, dimensioning, modifications, user interfaces, projecting poss	sibilites, AutoCAD	environment
profiles, drawings with	raster foundaments).		

11LA	Linear Algebra	Z,ZK	3
Vector spaces (line	ar combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations an	d their solvability. De	terminants and
their applications.	Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classification.		
11MTA	Mathematical Analysis	Z,ZK	4
Sequences and se	ries of real numbers and its convergence. Basic properties of functions. Differential and integral calculus of the real function of one	e real variable. Power	series, Fourier
series and foundat	ions of Fourier transform.		
18MRI1	Materials 1	Z,ZK	3
Crystal structure. E	lasics of thermodynamics of metals and their alloys. Balanced binary diagrams. Alloys of iron with carbon. Deterioration of solid	solutions. Heating pr	ocessing of
steel and cast iron	s. Physical features. Mechanical features. Dephectostopic testing. Corosion.		
TV-1	Physical Education	Z	1
18TTED	Creation of Technical Documentation	KZ	2
Technical standard	s, international standardization, types of technical drawings, representation of technical objects, technical diagrams and charts, din	nensional and geome	etrical accuracy
arrangement of dra	wing sheets, types of schemes and their creation.		
22UN	Traffic Accidents Introduction	Z	2
Traffic accident as	a physical process, systematic submission, vehicle x human x infrastructure interaction, accidents statistics, aircraft accidents, a	accidents on railways	, accidents on
	a physical process, systematic submission, vehicle x human x infrastructure interaction, accidents statistics, aircraft accidents, a affic accidents, other aspects, accidental prevention.	accidents on railways	s, accidents on
		z,ZK	s, accidents on
waterways, road tra	affic accidents, other aspects, accidental prevention.	Z,ZK	3
waterways, road tra	affic accidents, other aspects, accidental prevention.  Introduction to Transportation Engineering estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic pr	Z,ZK	3
waterways, road tr 12ZADI Traffic survey. Terre	affic accidents, other aspects, accidental prevention.  Introduction to Transportation Engineering estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic pr	Z,ZK	3
waterways, road tra 12ZADI Traffic survey. Terre Traffic and environ 14ZINF	affic accidents, other aspects, accidental prevention.  Introduction to Transportation Engineering estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prement.	Z,ZK rognosis. Traffic safet	3 y. Air transport 2
waterways, road tr. 12ZADI Traffic survey. Terre Traffic and environ 14ZINF Introduction to fact	affic accidents, other aspects, accidental prevention.  Introduction to Transportation Engineering estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prement.  Fundamentals of Informatics	Z,ZK rognosis. Traffic safet  KZ Number systems inc	3 y. Air transport 2 cl. arithmetic
waterways, road tr. 12ZADI Traffic survey. Terre Traffic and environ 14ZINF Introduction to fact	affic accidents, other aspects, accidental prevention.  Introduction to Transportation Engineering astrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prement.  Fundamentals of Informatics alty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission. thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and process.	Z,ZK rognosis. Traffic safet  KZ Number systems inc	3 y. Air transport 2 cl. arithmetic
waterways, road tr. 12ZADI Traffic survey. Terre Traffic and environ 14ZINF Introduction to fact calculations. Algori	affic accidents, other aspects, accidental prevention.  Introduction to Transportation Engineering astrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prement.  Fundamentals of Informatics alty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission. thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and process.	Z,ZK rognosis. Traffic safet  KZ Number systems inc	3 y. Air transport 2 cl. arithmetic
waterways, road tr. 12ZADI Traffic survey. Terre Traffic and environ 14ZINF Introduction to fact calculations. Algori graphs, calculation 21ZLD	affic accidents, other aspects, accidental prevention.  Introduction to Transportation Engineering astrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prement.  Fundamentals of Informatics alty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission. thms and their proprieties. Flow charts for algorithms drawing. Mathematic and logic ordering algorithms incl. functions and process, functions.	Z,ZK rognosis. Traffic safet  KZ Number systems incedures. Work with MS	3 y. Air transport 2 cl. arithmetic 3-Excel - tables

Code of the group: 3.S.BP 14/15

Name of the group: 3.sem.bak.prez.14/15

Requirement credits in the group: In this group you have to gain 27 credits

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

Credits in the group: 27 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
11DAD	Differential and Difference Equations	Z,ZK	3	2+1	Z	Z
11FY2	Physics 2	Z,ZK	4	2+2	Z	Z
12MDE	Transport Models and Transport Excesses Milan Dont, Josef Kocourek	Z,ZK	3	2P+1C+8B	Z	Z
12PPOK	Designing Roads, Highways and Motorways  Josef Kocourek, Petr Šatra, Tomáš Pad lek, Petr Kumpošt	KZ	3	1P+2C+10B	Z	Z
18PZP	Elasticity and Strength Jan Vy ichl, Jitka ezní ková, Daniel Kytý, Jan Šleichrt, Tomáš Doktor, Tomáš Fíla, Nela Kr má ová, Jan Falta, Radim Dvo ák,	Z,ZK	3	2P+1C+10B	Z	Z
11SIS	Statistics	Z,ZK	2	1+1	Z	Z
20SSA	Systems Analysis	Z,ZK	3	2+1	Z	Z
14UATT	Introduction to Automatization and Telecommunication Systems	KZ	2	3+0	Z	Z
16UDDM	Introduction to Transportation and Manipulation Technics	ZK	2	2+0	Z	Z
14ZAET	Fundamentals of Electrotechnics	KZ	2	2+1	Z	Z

11DAD	Differential and Difference Equations	Z,ZK	3
Difference equations	s and its systems. Some solvable types of differential equations of the first order. Linear differential equations of the n-th order. Methor	ds for solution of th	ne homogeneou
equation, solution o	f inhomogeneous equation by means of variation of constants. Power series and their use for solution of differential equation. Bound	dary value problen	n. Eigennumbe
and function for diffe	erential equation. Fourier series of function.		
11FY2	Physics 2	Z,ZK	4
Magnetic field, elec	tromagnetic field. Optics, quantum character of electromagnetic radiation. Introduction into quantization, hydrogen atom. Multi-ele	ectron atoms, the	nuclei. Basics o
,	tromagnetic field. Optics, quantum character of electromagnetic radiation. Introduction into quantization, hydrogen atom. Multi-ele	ectron atoms, the	nuclei. Basics o
solid body physics.	tromagnetic field. Optics, quantum character of electromagnetic radiation. Introduction into quantization, hydrogen atom. Multi-ele	Z,ZK	nuclei. Basics o
solid body physics.		Z,ZK	3
solid body physics.  12MDE  Parameters of the to	Transport Models and Transport Excesses	Z,ZK f queues, shock v	3 vaves. Quality o
solid body physics.  12MDE  Parameters of the transport and its as	Transport Models and Transport Excesses raffic flow, communications load, line and urban systems. Theory o	Z,ZK f queues, shock v	3 vaves. Quality o
solid body physics.  12MDE  Parameters of the to	Transport Models and Transport Excesses raffic flow, communications load, line and urban systems. Theory o	Z,ZK f queues, shock v	3 vaves. Quality o

Definition, types, ownership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standard 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. Safety device. Crossings, junctions, intersections.

18P7P Elasticity and Strength Tension and compression. Bending of beam. Shear stress in bending of beam. Design and analysis of cross section of beam. Design of riveted, bolted and welded joints of structures. Analysis of deflection curve of beams. Torsion of circular cross sections. Combined loading. Stability. 11SIS **Statistics** Z,ZK Point estimation, properties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and correlation, linear regression, correlation coefficient, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, use of matrices in regression. Systems identification. Typical tasks of systems analysis: on the interface, routes in system, decomposition and integration, on systems feedback. Capacity tasks, process analysis. Task about behaviour, aim behaviour, the genetic code, architecture and identity of systems. Fundamentals of technical cybernetics, stability and reliability of systems 14UATT Introduction to Automatization and Telecommunication Systems Basic axioms of technical cybernetics, automatization in transportation, human as the weakest element, signalling in transportation, modelling and projecting of transport systems, integrated technological and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, modulating methods, multimedial networks and services. NGN networks. 16UDDM Introduction to Transportation and Manipulation Technics Means of transportation and transportation systems. Principles, functions and arrangement of means of transportation. Motors and their characteristics. Water transportation. Manipulating technics. Principles of lifting machines and conveyors. Legislature. Fundamentals of Electrotechnics ΚZ 2 Basic electrotechnic terms, circuit quantities. Periodic courses characteristics. Electric circuits elements and basic circuit members. Assignating of bipoles and basic circuit elements. Solution to direct current circuits with a help of circuit analysis elementar methods: method of consecutive reduction, unloaded voltage divider, current divider. Transfiguration star-triplangel

Code of the group: 4.S.BLED 13/14

and principle of superposition in direct current circuits.

Name of the group: 4.sem.LED bak.prez. 13/14

communication, navigation and surveillance aviation systems are concerned.

Requirement credits in the group: In this group you have to gain 21 credits

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

Credits in the group: 21 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
18KIAD	Kinematics and Dynamics	Z,ZK	2	2+1	L	Z
21LL1	Aircraft 1 Jakub Kraus	KZ	3	2P+1C+10E	L L	Z
21LRY	Aircraft Engines	Z,ZK	2	2+1	L	Z
21LPS1	Flight Operation & Requirements and Legislation 1	Z	1	1+1	L	Z
21LTTE	Aerodromes	Z,ZK	4	2P+1C+12E	B L	Z
11MSP	Modeling of Systems and Processes Lucie Kárná, Bohumil Ková, Jana Kuklová Jana Kuklová Bohumil Ková (Gar.)	Z,ZK	4	2P+2C+12E	B L	Z
21ZT	ATM Systems Vladimír Machula, Stanislav Pleninger Stanislav Pleninger (Gar.)	ZK	2	2P+0C	Z,L	Z
21ZLE1	Principles of Flight 1	KZ	3	2+1	L	Z

18KIAD	Kinematics and Dynamics	Z,ZK	2
Motion along a line, n	otion along a curve. Kinematics of rigid plane, kinematics of rigid body. Point mass kinematics, system of point masses. Point ma	ss dynamics and	system of point
	notion. Method of Newton. Princle of D´Alembert. Free and forced vibration with one degree of freedom. Viscous damping. Impa ith multiple degrees of freedom.	ct theory. Introduc	ction to the
21LL1	Aircraft 1	KZ	3
	conceptual design types - definitions and basic knowledge of the problem. Development of requirements, aircraft definitions and secondary airframe structure. Airframe and propulsion unit. Lectures are devoted to aeroplane topics.	categorisation. A	ircraft loadings.
21LRY	Aircraft Engines	Z,ZK	2
	theoretical background, operational characteristics and construction schemes. Propellers, operational characteristics. Turbine cuction schemes, operational characteristics. Turbojet and turbofan engines, basic construction modules, and their operational c	•	•
21LPS1	Flight Operation & Requirements and Legislation 1	Z	1
	n requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 1-9. Aviation Requirements of Czech Report exposition, introduction to new legislation based on European Community Directives and Regulations.	oublic L1-L9. Rqui	rement of ICAO
21LTTE	Aerodromes	Z,ZK	4
Aerodrome reference Environmental condit	point and temperature, TORA, TODA, ASDA, LDA. Taxiway and apron. Clearway. Stopway. Obstacle limitation surfaces. Runway ons. Public traffic.	marking. Runwa	y zone lights.
11MSP	Modeling of Systems and Processes	Z,ZK	4
System and subsyste	m, external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of diffe	erential and differe	ential equations.
Linear and nonlinear	system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer function	. Stability of LTI s	ystems.
Discretization of cont	nuous systems. System interconnection.		
21ZT	ATM Systems	ZK	2

21ZLE1 Principles of Flight 1

ΚZ

Aerodynamic drag, relation between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, 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.

Code of the group: 4.S.BLED VÝB R 13/14

Name of the group: 4.sem.LED výb r p edm tu 13/14

Requirement credits in the group: In this group you have to gain 2 credits

Requirement courses in the group: In this group you have to complete 1 course

Credits in the group: 2 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
14WS1	Webdesign With Web Standards 1	KZ	2	0+2	L	Z
14ZM	Fundamentals of Parametric Programming	KZ	2	0+2	L	Z

Characteristics of the courses of this group of Study Plan: Code=4.S.BLED VÝB R 13/14 Name=4.sem.LED výb r p edm tu 13/14

14WS1 Webdesign With Web Standards 1

ΚZ

2

HTTP, URL, markup languages HTML and XHTML, anchors, tables, images, lists, forms, features of CSS, rules of accessible web pages, usability of web pages, problems of different browsers, one, two and three column pages, page validation, conditional comments, CSS hacks.

14ZM Fundamentals of Parametric Programming

KZ 2

Basics of work at products and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and export from and to another systems. Fundamentals of assemblies creation.

Code of the group: 5.S.BLED 12/13

Name of the group: 5.sem.LED bak.prez. 12/13

Requirement credits in the group: In this group you have to gain 21 credits

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

Credits in the group: 21 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
17TGA	Graph Theory and its Applications in Transport  Alena Rybi ková, Denisa Mocková, Dušan Teichmann	Z,ZK	4	2P+2C+12B	Z	Z
21LL2	Aircraft 2	Z,ZK	5	2+2	Z	Z
21LTN	Air Navigation Jakub Kraus	Z,ZK	2	2P+1C+12B	L	Z
21ZLE2	Principles of Flight 2	Z,ZK	4	2+1	Z	Z
21LPS2	Flight Operation & Requirements and Legislation 2	ZK	1	2+0	Z	Z
14DB	Database Systems	KZ	2	0+2	Z	Z
21DPL	Airports - Design and Operation	KZ	1	2+0	Z	Z
21LA1	English in Aviation 1	Z	2	0+2	Z	Z

Characteristics of the courses of this group of Study Plan: Code=5.S.BLED 12/13 Name=5.sem.LED bak.prez. 12/13

17TGA	Graph Theory and its Applications in Transport	Z.ZK	4
	th theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in of	1 '	iplines.
21LL2	Aircraft 2	Z,ZK	5
Manufacturers resp	onsibility, responsibilities of operator and professional supervising; legislation in area of airworthiness; international and national	standards; static :	solidity of aircraf
structures; aeroelas	sticity; inherent and operational reliability of aircraft structure; fatigue strength; aircraft structure lifetime presumption.		
21LTN	Air Navigation	Z,ZK	2
Earth - its shape, p	arameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navig	gation satellite sys	tems. Air traffic
services routes and	I their design.		
21ZLE2	Principles of Flight 2	Z,ZK	4
Ways of producing	thrust, propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, pr	opeller operation	modes, propelle
airstream effect, gy	roscopic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive lo	ad, manoeuvres,	stability and
controllability, trans	sonic speeds.		
21LPS2	Flight Operation & Requirements and Legislation 2	ZK	1
Continuing in educa	ation of graduated experts in aviation requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 11-18	Aviation Require	ements of Czech
Republic L11-L18.	Rquirement of ICAO Doc. 4444 analysis and exposition, introduction to EASA legislation.		

14DB	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.							
21DPL	Airports - Design and Operation	KZ	1				
Introductory conditions	for development planing runway systems and terminal facilities. Strength of pavements, approximate analysis of RWY distan	ce. Investment pla	ining-operator				
activities. Certification of	activities. Certification of international airports - standard checking. Irregular events.						
21LA1	English in Aviation 1	Z	2				
Terminology used in civil aviation in the general context and emphasiye on the ability to receive information only in English.							

Code of the group: 5.S.BLED VÝB R 12/1

Name of the group: 5.sem.LED výb r p edm tu 12/13

Requirement credits in the group: In this group you have to gain 2 credits

Requirement courses in the group: In this group you have to complete 1 course

Credits in the group: 2 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
14PT	Advanced Methods of Parametric Programming	KZ	2	0+2	Z	Z
14WS2	Webdesign With Web Standards 2	KZ	2	0+2	Z	Z

Characteristics of the courses of this group of Study Plan: Code=5.S.BLED VÝB R 12/1 Name=5.sem.LED výb r p edm tu 12/13

	0 1 7	<u>/</u>	
14PT	Advanced Methods of Parametric Programming	KZ	2
Assemblies prograr	ıming - tools and methodology of working subassemblies and assemblies, sheet metal parts modelling, welded assemblies, pipe	elines, and distribu	ıtion lines.
Photorealistic output	trendering - physical and material properties, lighting sources. MKP - visual example.		
14WS2	Webdesign With Web Standards 2	KZ	2
Advanced CSS tech	niques. Multi-level menu. SEO - Search Engine Optimization. Web technologies: JavaScript, Flash, PHP, AJAX. AccessKey, Favi	con, rollovers, ligh	ntboxes. Using
API for mans or sea	rching. Audit and page statistics. Use of useful scripts. Systems for content management		

Code of the group: 6.S.BLED BC PRÁCE 1

Name of the group: 6.sem.LED bakalá ská práce 12/13

Requirement credits in the group: In this group you have to gain 2 credits

Requirement courses in the group: In this group you have to complete 1 course

Credits in the group: 2 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
17BPLE	Bachelor Thesis (for Branch LED)	Z	2	0+3	L	Z
21BPLE	Bachelor Thesis (for Branch LED)	Z	2	0+3	L	Z

Characteristics of the courses of this group of Study Plan: Code=6.S.BLED BC PRÁCE 1 Name=6.sem.LED bakalá ská práce 12/13

		Junional Junion P	
17BPLE	Bachelor Thesis (for Branch LED)	Z	2
Expert assistance durin	g the processing of bachelor thesis and preparation for oral bachelor degree graduation.		
21BPLE	Bachelor Thesis (for Branch LED)	Z	2
Expert assistance durin	g the processing of bachelor thesis and preparation for oral bachelor degree graduation.	·	

Code of the group: 6.S.BLED 13/14

Name of the group: 6.sem.LED bak.prez. 13/14

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 10 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
17ERP	Company Economy and Management	Z,ZK	3	2+1	L	Z
21EKL	Air Transport Economy	Z,ZK	3	2P+1C	Z	Z

21OBP	Air Transport Business Eva Endrizalová, Peter Vittek	Z,ZK	3	2P+1C+12B	L	Z
21PPL	Flight Planning and Performance	Z,ZK	3	2+1	L	Z
14ISYS	Information Systems	KZ	2	2+0	L	Z
21LIC	Human Factors	KZ	2	2+0	L	Z
21PJE	Aircraft Instruments	KZ	2	2P+0C+8B	L	Z
21RIL	Air Traffic Control	KZ	2	2+0	L	Z
17DAS	Transportation and Communication Law	Z	1	2+0	L	Z
21LA2	English in Aviation 2	Z	2	0+2	L	Z

Characteristics of the courses of this group of Study Plan: Code=6.S.BLED 13/14 Name=6.sem.LED bak.prez. 13/14

	Company Economy and Management	Z,ZK	3
Company and its no	eighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory	, financial manageme	nt, investment
appraisal, basics of	f management, organizational structures, human resources management, marketing, company strategy, business plan.		
21EKL	Air Transport Economy	Z,ZK	3
The aim of the coul	rse is to introduce students to the basic issues of economics and then to follow up on more complex problems of air transport	. Students will thus ur	nderstand the
principles of demar	nd and supply in air transport and the specific problems related to these topics. At the same time, they will gain a comprehens	sive understanding of	costs and their
different types as w	rell as airline revenues and yields.		
210BP	Air Transport Business	Z,ZK	3
Aviation business a	and transport operations is a core subject for understanding operational relationships in air transport. It focuses on the proces	s and functional arran	gements as well
as the economic as	spects and infrastructure of air transport.		
21PPL	Flight Planning and Performance	Z,ZK	3
Mass and balance,	load of aircraft, determination of centre of gravity, loadsheet, trimsheet, aircraft weighing, overloading of aircraft, basic charact	eristic speeds, runwa	v characteristics,
take off and landing	g performance, drift down, MEL, ETOPS´, flight planning and monitoring, routing, FL and speeds selection, charts, ICAO ATC	FPL, aerodrom opera	ation minimums,
fuel plan, operation	al flight plan.		
14ISYS	Information Systems	KZ	2
State-of-the-art too	ls of objects control (control and planning) including problems related to these toole use, theory of information and knowledge	e, knowledge and exp	ert systems, IS
planning methodolo	ogies, transaction systems, theory of computer networks, semantic webs and sensitivity analysis.		
21LIC			
ZILIC	Human Factors	KZ	2
_	Human Factors e & Amp; limitations, capability & Description of the samp; limitations, capability & Description of the samp; environment of the	I	-
Human performace		ronment, breathing &	amp; circulation,
Human performace sensory system, he	& limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envir	ronment, breathing &	amp; circulation,
Human performace sensory system, he	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envi ealth & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information processi	ronment, breathing &	amp; circulation,
Human performace sensory system, he & mp; model of human 21PJE	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envite alth & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.	ronment, breathing & ang, memory & amp; le	amp; circulation, arning, theory
Human performace sensory system, he & mp; model of hu 21PJE Overview of aircraft	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envited the damp; hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments	ronment, breathing & ng, memory & amp; le	amp; circulation, arning, theory
Human performace sensory system, he & model of hu 21PJE Overview of aircraft systems, gyroscopi	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  t instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a	ronment, breathing & ng, memory & amp; le	amp; circulation, arning, theory
Human performace sensory system, he & model of hu 21PJE Overview of aircraft systems, gyroscopi 21RIL	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  It instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a condicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data process.	ronment, breathing & ang, memory & amp; le KZ ir data computer, icing processing systems.	amp; circulation, arning, theory  2 g monitoring
Human performace sensory system, he & model of hu 21PJE Overview of aircraft systems, gyroscopi 21RIL Air traffic services a	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  it instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a ic indicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data part of Traffic Control	ronment, breathing & ring, memory & processing systems.  KZ  KZ  KZ  Craft flying through sp	amp; circulation, arning, theory  2 g monitoring  2 pace. Flight plan
Human performace sensory system, he & mp; model of human 21PJE Overview of aircraft systems, gyroscopi 21RIL Air traffic services at the form, content.	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  It instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a ic indicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data part Traffic Control  and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for air	ronment, breathing & ring, memory & processing systems.  KZ  KZ  KZ  Craft flying through sp	amp; circulation, arning, theory  2 g monitoring  2 pace. Flight plan,
Human performace sensory system, he & mp; model of human 21PJE Overview of aircraft systems, gyroscopi 21RIL Air traffic services at the form, content.	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  Instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a ic indicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data part Traffic Control  and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for air Separation of aircraft. Reports of air traffic services, the form, content. Harmonization and integration of ATC. CFMU and its su	ronment, breathing & ring, memory & processing systems.  KZ  KZ  KZ  Craft flying through sp	amp; circulation, arning, theory  2 g monitoring  2 pace. Flight plan
Human performace sensory system, he & model of human performace sensory system, he & model of human performance of the systems, gyroscopical syste	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession and error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  It instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a condition in indicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data part of Air Traffic Control  and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for air distribution of air air traffic services, the form, content. Harmonization and integration of ATC. CFMU and its sure.  New trends in the area of ATC.	ronment, breathing & ng, memory & ng; le  KZ ir data computer, icing processing systems.  KZ rcraft flying through spibsystems. Flexible us	amp; circulation, arning, theory  2 g monitoring  2 pace. Flight plan,
Human performace sensory system, he & model of human performace sensory system, he & model of human performance of the systems, gyroscopical PIL Air traffic services at the form, content. SEUA. RVSM, RNP. INTOAS	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession and error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  Instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a condition indicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data part of Air Traffic Control  and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for air distribution of aircraft. Reports of air traffic services, the form, content. Harmonization and integration of ATC. CFMU and its sufficient of the area of ATC.  Transportation and Communication Law	ronment, breathing & ng, memory & ng; le  KZ ir data computer, icing processing systems.  KZ rcraft flying through spibsystems. Flexible us	amp; circulation, arning, theory  2 g monitoring  2 pace. Flight plan
Human performace sensory system, he & model of human performace sensory system, he & model of human performance of the systems, gyroscopical syste	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the Amp; hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  t instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a cindicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data part Traffic Control  and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for air distribution. Organization of air traffic services, the form, content. Harmonization and integration of ATC. CFMU and its surfus the area of ATC.  Transportation and Communication Law communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, patent.	ronment, breathing & ronment, breathing & rong, memory & rong, le KZ in data computer, icing processing systems. KZ craft flying through splaystems. Flexible us	amp; circulation, arning, theory  2 g monitoring  2 pace. Flight plan se of airspace -
Human performace sensory system, he & model of human performace sensory system, he & model of human performance of the systems, gyroscopical PIL Air traffic services at the form, content. Secondary European performance of the systems of t	e & limitations, capability & competence, accident statistics, flight safety, basics of flight physiology, man & envised the & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information procession man error, body rhythms & sleep, stress, fatigue, working methods.  Aircraft Instruments  t instrumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, a cindicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data part Air Traffic Control and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for air deparation of aircraft. Reports of air traffic services, the form, content. Harmonization and integration of ATC. CFMU and its suffer transportation and Communication Law communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, patent.  English in Aviation 2	ronment, breathing & ronment, breathing & rong, memory & rong, le KZ in data computer, icing processing systems. KZ craft flying through splaystems. Flexible us	amp; circulation, arning, theory  2 g monitoring  2 pace. Flight plan se of airspace -

Name of the block: Semestrální projekt Minimal number of credits of the block: 6

The role of the block: ZP

Code of the group: XB 4,5,6 13/14

Name of the group: Projekty bak. 4.5.6.sem. (od)13/14 - 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 3 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 members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
11X31	Project 1	Z	2	0P+1C	L	ZP
12X31	Project 1	Z	2	0P+1C	L	ZP
14X31	Project 1	Z	2	0P+1C	L	ZP
15X31	Project 1	Z	2	0P+1C	L	ZP
16X31	Project 1	Z	2	0P+1C	L	ZP

17X31	Project 1 Alena Rybi ková, Denisa Mocková, Dušan Teichmann, Roman Št rba, Milan K íž, Václav Baroch, Daniel Pilát, Michal Drábek, Alexandra Dvo á ková, Václav Baroch (Gar.)	Z	2	0P+1C	L	ZP
18X31	Project 1	Z	2	0P+1C	L	ZP
20X31	Project 1	Z	2	0P+1C	L	ZP
21X31	Project 1 Peter Vittek, Jakub Kraus, Andrej Lališ, Jakub Hospodka, Slobodan Stoji , Lenka Hanáková, Terézia Pilmannová, Natalia Guskova, Kate ina Grötschelová,	Z	2	0P+1C	L	ZP
22X31	Project 1	Z	2	0P+1C	L	ZP
23X31	Project 1 Milena Macková	Z	2	0P+1C	L	ZP
11X32	Project 2	Z	2	0P+2C	Z	ZP
12X32	Project 2	Z	2	0P+2C	Z	ZP
14X32	Project 2	Z	2	0P+2C	Z	ZP
15X32	Project 2	Z	2	0P+2C	Z	ZP
	Project 2			+		
16X32	Petr Bouchner, Tereza Kunclová	Z	2	0P+2C	Z	ZP
17X32	Project 2 Alena Rybi ková, Denisa Mocková, Dušan Teichmann, Andrea Hrní ková, Milan K íž, Václav Baroch, Daniel Pilát, Michal Drábek, Alexandra Dvo á ková,	Z	2	0P+2C	Z	ZP
18X32	Project 2	Z	2	0P+2C	Z	ZP
20X32	Project 2	Z	2	0P+2C	Z	ZP
21X32	Project 2 Eva Endrizalová, Peter Vittek, Jakub Kraus, Andrej Lališ, Jakub Hospodka, Slobodan Stoji , Lenka Hanáková, Terézia Pilmannová, Natalia Guskova,	Z	2	0P+2C	Z	ZP
22X32	Project 2	Z	2	0P+2C	Z	ZP
23X32	Project 2	Z	2	0P+2C	Z	ZP
11X33	Project 3	Z	2	0P+1C	L	ZP
12X33	Project 3 Josef Kocourek, Tomáš Pad lek, Dagmar Ko árková	Z	2	0P+1C	L	ZP
14X33	Project 3	Z	2	0P+1C	L	ZP
15X33	Project 3	Z	2	0P+1C	L	ZP
16X33	Project 3	Z	2	0P+1C		ZP
17X33	Project 3  Alena Rybi ková, Denisa Mocková, Dušan Teichmann, Roman Št rba, Milan K íž, Václav Baroch, Daniel Pilát, Michal Drábek, Alexandra Dvo á ková, Václav Baroch (Gar.)	Z	2	0P+1C	L	ZP
18X33	Project 3	Z	2	0P+1C	L	ZP
20X33	Project 3	Z	2	0P+1C	L	ZP
21X33	Project 3  Andrej Lališ, Slobodan Stoji , Lenka Hanáková, Terézia Pilmannová, Lukáš Popek, Iveta Kameníková, Milan Kameník, Marek Šudoma, Viktor Valenta,	Z	2	0P+1C	L	ZP
22X33	Project 3	Z	2	0P+1C	L	ZP
23X33	Project 3	Z	2	0P+1C	L	ZP
	es of the courses of this group of Study Plan: Code=XB 4,5,6 13/14 Name	e=Projekty	bak. 4.5			_
11X31 12X31	Project 1 Project 1				Z Z	2
14X31	Project 1			_	Z	2
15X31	Project 1				Z	2
16X31	Project 1				Z	2
17X31	Project 1				Z	2
18X31	Project 1				Z	2
20X31	Project 1				Z	2
21X31	Project 1				Z	2
22X31	Project 1				7	2

22X31

23X31 11X32

12X32

14X32

15X32

16X32

17X32

18X32

Project 1

Project 1

Project 2

2

2

2

2

2

2

2

2

Z

Z

Ζ

Z

Z

Z

\_ Z Z

20X32	Project 2	Z	2
21X32	Project 2	Z	2
22X32	Project 2	Z	2
23X32	Project 2	Z	2
11X33	Project 3	Z	2
12X33	Project 3	Z	2
14X33	Project 3	Z	2
15X33	Project 3	Z	2
16X33	Project 3	Z	2
17X33	Project 3	Z	2
18X33	Project 3	Z	2
20X33	Project 3	Z	2
21X33	Project 3	Z	2
22X33	Project 3	Z	2
23X33	Project 3	Z	2

Name of the block: Compulsory courses in the program

Minimal number of credits of the block: 30

The role of the block: P

Code of the group: 2.S.BP 13/14

Name of the group: 2.sem.bak.prez. 13/14

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 12 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
17EDOT	Economy, Transport, Telecommunications	KZ	2	2+0	L	Р
11FY1	Physics 1	Z,ZK	4	2P+2C	L	Р
11MVP	Mathematical Analysis of Function of More Variables	Z,ZK	3	2+2	L	Р
18MRI2	Materials 2	KZ	2	2+0	L	Р
11PT	Probability	Z	2	1+1	L	Р
12PKD	Rail Transport Designing	Z,ZK	3	2+2	L	Р
14SIAP	Networks and Protocols	KZ	2	1+1	L	Р
18ST	Statics	Z,ZK	3	2+1	L	Р
17TDL	Transport Technology and Logistics	Z,ZK	3	2+2	L	Р
TV-2	Physical Education	Z	1		L	Р
20UIS	Introduction to ITS	Z,ZK	3	2+1	L	Р
14UPRO	Introduction to Programming	KZ	2	0+2	L	Р

haracteristics of the courses of this group of Study Plan: Code=2.S.BP 13/14 Name=2.sem.bak.prez. 13/14	•	
17EDOT Economy, Transport, Telecommunications	KZ	2
Transport, telecommunications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport	t modes, ITS, susta	inability.
11FY1 Physics 1	Z,ZK	4
(inematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics, electric field, directed electric	current.	
11MVP Mathematical Analysis of Function of More Variables	Z,ZK	3
Metric spaces, sequences in metric spaces, limit of sequence in metric space. Differential calculus of functions of several variables, differential of functions of several variables, differential of functions.	• •	
defined functions, extremes of functions of several variables. Integral calculus of functions of several variables, Riemann integral, integral over curv	es and surfaces in F	R3, application
of integral calculus in physics.		
18MRI2 Materials 2	1/7	_
18MRI2   Materials 2	KZ	2
Fundamental concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the co	1 1	2
· · · · · · · · · · · · · · · · · · ·	1 1	2
Fundamental concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the co	mposite materials.	2 robability mass
Fundamental concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the collaboration	mposite materials.  Z ability distribution, p	
Fundamental concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the collaboration of the collaboration of the collaboration of the collaboration of probability. Personal probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability concepts: elementary events and events, definitions and interpretation of probability.	mposite materials.  Z ability distribution, p	=
Fundamental concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the content of the	mposite materials.  Z ability distribution, p	=
Fundamental concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the content of the	mposite materials.  Z ability distribution, p ix. Mixed distribution  Z,ZK	ns, mixture of

4SIAP	Networks and Protocols	KZ	2
Basic communica	ation model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance	e of basic network pr	otocols (ARP,
RARP, TCP, UDP,	Telnet, FTP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and fu	ndamentals of own v	eb presentation
lesign by the mea	ans of web sites.		
8ST	Statics	Z,ZK	3
eneral system o	of forces. Calculation of reactions of mass objects and compound systems. Assessment of internal forces on statically determinal	te beam and simple	framework.
Principle of virtual	I works. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss consi	truction, method of jo	ints and method
of sections. Geom	netry of cross sections. Plane fiber polygons and catenary cables.		
17TDL	Transport Technology and Logistics	Z,ZK	3
	Transport Technology and Logistics Insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetable	1 ' 1	3 inger and freigh
Basic terms in trai	, ,	ling. Planning in pasa	
Basic terms in trai ransport. Organis	insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetable	ling. Planning in pasa	
Basic terms in trai ransport. Organis	insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabl sation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public	ling. Planning in pasa	
Basic terms in trai ransport. Organis and their applicati	Insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabl sation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of publication using various transport means.	ling. Planning in pasa	
Basic terms in traing an application of their appli	Insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetable sation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of publication using various transport means.  Physical Education	ling. Planning in passic city transport. Logis	tic technologie
Basic terms in transport. Organis and their application TV-2 20UIS ntelligent Transport	Insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetable sation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public ion using various transport means.  Physical Education Introduction to ITS	ling. Planning in passe c city transport. Logis  Z  Z,ZK  role of standardizati	tic technologie  1  3 on. Information
Basic terms in transport. Organis and their application TV-2 20UIS ntelligent Transport	Insport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetable sation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public ion using various transport means.  Physical Education  Introduction to ITS  ort Systems (ITS), their objectives and vision. ITS in the world, in Europe and in the Czech Republic. Architecture of ITS and the	ling. Planning in passe c city transport. Logis  Z  Z,ZK  role of standardizati	tic technologie  1  3 on. Information

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 4

The role of the block: PV

functions), programming techniques, complexity.

Code of the group: Y1-BLED 15/16

Name of the group: PVP bak.prez.LED 15/16

Requirement credits in the group: In this group you have to gain 4 credits

Requirement courses in the group: In this group you have to complete 2 courses

Credits in the group: 4 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
17Y1AF	Alternative Forms of Transportation Project Financing	KZ	2	2+0	Z	PV
18Y1AM	Anatomy, Mobility and Safety of Man  Jitka Jirová	KZ	2	2P+0C	Z	PV
14Y1AV	Animation and Visualization	KZ	2	2P+0C	L	PV
20Y1AE	Applied Electronics	KZ	2	2P+0C	Z	PV
14Y1AP	Automatization in Mail	KZ	2	2+0	Z	PV
14Y1BE	Barrierless Transport	KZ	2	2P+0C	L	PV
15Y1BO	Work Safety and Health Protection in Transportation Petr Musil, Eva Rezlerová	KZ	2	2P+0C	L	PV
14Y1BM	Biometric Methods	KZ	2	2P+0C	Z	PV
23Y1DZ	Data and Their Processing for Engineering Fields Needs	KZ	2	2P+0C	Z	PV
15Y1DU	History of Art and Society	KZ	2	2+0	Z	PV
15Y1DZ	History of Railway Eva Rezlerová, Martin Jacura	KZ	2	2P+0C	L	PV
12Y1DS	Project Documentation in Practice	KZ	2	2P+0C	Z	PV
18Y1D1	Dynamics of Routes and Vehicles 1	KZ	2	2+0	Z	PV
17Y1EV	Public Sector Economy Veronika Faifrová	KZ	2	2P+0C	Z	PV
20Y1EK	Qualification in Electrical Engineering	KZ	2	2P+0C	L	PV
16Y1EN	Energy Requirements of Vehicles	KZ	2	2P+0C	L	PV
20Y1EA	<b>Environmental Aspects of Transport</b>	KZ	2	2P+0C	Z	PV
15Y1EH	European Integration within Historical Context Jan Feit	KZ	2	2P+0C	Z	PV
18Y1EM	Experimental Methods in Mechanics Daniel Kytý	KZ	2	2P+0C	Z	PV
21Y1FN	Factors Affecting the Rate of Accidents in Aviation	KZ	2	2+0	Z	PV
15Y1FD	French Area Studies and Transportation	KZ	2	2P+0C	L	PV
14Y1GD	GIS and Maps Digitalization	KZ	2	2+0	Z	PV
14Y1HW	Computer Hardware	KZ	2	2P+0C	L	PV

15Y1HL	History of Civil Aviation  Eva Rezlerová, Vladimír Plos	KZ	2	2P+0C	L,Z	PV
15Y1HD	History of City Mass Transport Milan Dont, Eva Rezlerová	KZ	2	2P+0C	Z	PV
12Y1HD	Traffic Noise Dagmar Ko árková, Libor Ládyš	KZ	2	2P+0C	L	PV
15Y1HE	Work Hygiene and Ergonomics in Traffic Petr Musil, Eva Rezlerová	KZ	2	2P+0C	Z	PV
16Y1IS	Interactive simulators and simulations	KZ	2	2P+0C	L	PV
12Y1KN	Combined Transportation	KZ	2	2P+0C	Z	PV
23Y1KO	Petr Nejedlý  Quantum Physics and Optoelectronics	KZ	2	2P+0C	L	PV
20Y1K	Cybernetics	KZ	2	2+0	Z	PV
21Y1LR	Radio Technology in Aviation	KZ	2	2+0	L	PV
17Y1LL	Logistics of Passenger and Freight Air Transport Petra Skolilová Petra Skolilová (Gar.)	KZ	2	2P+0C	L	PV
20Y1LN	Location and Navigation	KZ	2	2P+0C	L	PV
21Y1MZ	Managerial Ethics	KZ	2	2+0	Z	PV
11Y1MM	Mathematical Models in Economy	KZ	2	2P+0C	Z	PV
18Y1MT	Engineering Materials  Jaroslav Valach	KZ	2	2P+0C	L	PV
14Y1MP	Modeling Complex Assemblies and Models in Parametric Modeller	KZ	2	2P+0C	Z	PV
17Y1ND	Maritime Transportation	KZ	2	2+0	Z	PV
15Y1NE	German in the Economy and Society	KZ	2	2P+0C	Z	PV
14Y1NP	Non-parametric 3D Modelling	KZ	2	2+0	Z	PV
20Y1NS	Neural Networks	KZ	2	2+0	Z	PV
21Y1OL	Security of Air Transport	KZ	2	2+0	L	PV
23Y1OK	Protection of Critical Objects and Infrastructures	KZ	2	2P+0C	L	PV
20Y1OI	Fare Collection and Information Systems Milan Sliacky, Patrik Horaž ovský Milan Sliacky (Gar.)	KZ	2	2P+0C	L	PV
14Y1OP	Operating System	KZ	2	2P+0C	Z	PV
14Y1OL	Linux Operating System	KZ	2	2+0	Z	PV
17Y1OF	Personal Finance	KZ	2	2P+0C	Z	PV
11Y1PV	Parametrical and Multicriterial Programming Olga Vraštilová	KZ	2	2P+0C	Z	PV
17Y1PM	Personnel Management	KZ	2	2P+0C	L	PV
12Y1PC	Pedestrian and Cycling Transport  Denis Liutov	KZ	2	2P+0C	L	PV
20Y1PO	Weather, Air Quality and Transportation	KZ	2	2+0	Z	PV
14Y1PG	Computer Graphics	KZ	2	2P+0C	L	PV
14Y1P2	Computer Aid of Transportation Projecting 2	KZ	2	2P+0C	Z	PV
18Y1PS	Computer Simulations in Mechanics Petr Zlámal	KZ	2	2P+0C	L	PV
14Y1PI	Corporate Information System	KZ	2	2P+0C	Z	PV
12Y1PD	Assessment of Transport Structures	KZ	2	2P+0C	Z	PV
20Y1PK	Product Quality Management Processes  Martin Leso	KZ	2	2P+0C	Z	PV
14Y1PJ	C Programming Language	KZ	2	2P+0C	Z	PV
12Y1C1	Designing Roads in Civil 3D I Tomáš Honc	KZ	2	2P+0C	L	PV
12Y1C2	Designing Roads in Civil 3D II Tomáš Honc	KZ	2	2P+0C	Z	PV
14Y1PA	3D Modeling in AutoCAD	KZ	2	2P+0C	Z	PV
16Y1PV	Operation, Construction and Maintenance of Vehicles	KZ	2	2P+0C	L	PV
12Y1PU	Organization Disposition of Railway Stations	KZ	2	2P+0C	L	PV
12Y1RZ	Railway Lines Reconstruction	KZ	2	2+0	Z	PV
16Y1RE	Control and Electronic Vehicle Systems Josef Mik, P emysl Toman	KZ	2	2P+0C	Z	PV
21Y1RZ	Human Resources Management	KZ	2	2P+0C	L	PV
17Y1ST	Titan Simulation	KZ	2	2P+0C	L	PV
20Y1SC	Sensors and Actuators	KZ	2	2P+0C	L	PV

11Y1SI	Transportation Software Engineering	KZ	2	2P+0C	Z	PV
22Y1SZ	Forensic Expertise	KZ	2	2P+0C	L	PV
16Y1KS	Quality and Reliability of Vehicles  Jaroslav Machan, David Lehet	KZ	2	2P+0C	Z	PV
12Y1SU	Road Management and Maintenance Dagmar Ko árková, Otakar Vacín	KZ	2	2P+0C	L	PV
18Y1SN	Statically Nondeterminated Structures	KZ	2	2+0	Z	PV
21Y1TH	Aircraft Technical Handling	KZ	2	2P+0C	Z	PV
16Y1TJ	Technological Quality Aspects	KZ	2	2+0	Z	PV
20Y1TD	Telematics Databases	KZ	2	2+0	Z	PV
11Y1TG	Graph Theory Lucie Kárná Lucie Kárná (Gar.)	KZ	2	2P+0C	L	PV
14Y1TI	Creating Interactive Internet Applications	KZ	2	2P+0C	L	PV
21Y1UT	Airports Maintenance	KZ	2	2+0	L	PV
18Y1UK	Introduction of Rail Vehicles Jitka ezní ková, Josef Kolá	KZ	2	2P+0C	L	PV
12Y1VC	Waterways and Shipping	KZ	2	2P+0C	Z	PV
23Y1VS	Negotiation and Cooperation Milena Macková	KZ	2	2P+0C	Z	PV
14Y1VM	Development of Applications for Mobile Devices	KZ	2	2P+0C	Z	PV
16Y1VT	Development in Railroad Vehicles	KZ	2	2P+0C	L	PV
14Y1W1	Webdesign 1	KZ	2	2P+0C	Z	PV
14Y1W2	Webdesign 2	KZ	2	2P+0C	L	PV
16Y1ZG	Introduction into Applied Computer Graphics	KZ	2	2P+0C	L	PV
11Y1ZF	Introduction to Solid State Physics	KZ	2	2+0	Z	PV
21Y1ZA	Basics of Aerobatics	KZ	2	2+0	L	PV
14Y1ZM	Fundamentals of parametric and adaptive modeling	KZ	2	2P+0C	L	PV
11Y1ZM	Foundation of MATLAB Programming Šárka Vorá ová <b>Šárka Vorá ová</b> Sárka Vorá ová (Gar.)	KZ	2	2P+0C	L	PV
12Y1ZU	Principles of Urbanism Karel Hájek	KZ	2	2P+0C	Z	PV
16Y1ZL	Vehicle Testing, Legislation and Construction  Josef Mik, Zuzana Radová	KZ	2	2P+0C	Z	PV

17Y1AF	Alternative Forms of Transportation Project Financing	KZ	2
There will be specife	ed such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come fi	rom its budget, but	the final debtor
is not a direct particip	pant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an	alternative source	of transportation
project.			
18Y1AM	Anatomy, Mobility and Safety of Man	KZ	2
Survey of tissues. An	atomical structure and growth of bones. Articular joint. Remodelling of bone tissue. Anatomical structure of muscles. Blood circula	ation and nervous s	stem. Structure
and biomechanics of	f muscular-skeletal system. Injury of human organs and musculo-skeletal system during traffic accidents. Mobility of ill and injur	red man and his tre	atment. Human
joint prostheses. Pro	tective means and traffic safety regulations.		
14Y1AV	Animation and Visualization	KZ	2
Advanced modification	ons and modeling of NURBS, Patch objects, selection of objects (according to filter and properties). 3D Studio MAX systems and	d Space Warp objec	ts. Atmospheric
and other effects, re	ndering filters, Motion blur, advanced animations, Motion panel. Modeling for morphing and animation, bone formation, animati	on using Inverse Ki	nematics.
20Y1AE	Applied Electronics	KZ	2
Basic electronic sem	niconductor components, their principles, characteristics and typical connection diagrams. Semiconductor PN junction diodes, t	ransistors, thyristor	operational
amplifiare basic logi			
ampliners, basic logi	c gates. Functions of basic electronic circuits and methods for their designs (rectifiers, voltage regulator with Zener diode, trans	sistor as an amplifie	r, operational
	c gates. Functions of basic electronic circuits and methods for their designs (rectifiers, voltage regulator with Zener diode, trans ting and noninverting amplifier).	sistor as an amplifie	r, operational
amplifier as an inver		sistor as an amplifie	r, operational
amplifier as an inver	ting and noninverting amplifier).	KZ	2
amplifier as an inver 14Y1AP Technology of post s	ting and noninverting amplifier).  Automatization in Mail	KZ nsmission by electr	2 onic way,
amplifier as an inver 14Y1AP Technology of post s application of new inf	ting and noninverting amplifier).  Automatization in Mail  shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra	KZ nsmission by electr	2 onic way,
amplifier as an inver 14Y1AP Technology of post s application of new intechnological princip	ting and noninverting amplifier).  Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information transformation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e-	KZ nsmission by electr	2 onic way,
amplifier as an inver 14Y1AP Technology of post s application of new int technological princip 14Y1BE	ting and noninverting amplifier).  Automatization in Mail  shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information traformation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to eles of end telecommunication devices.	KZ nsmission by electr	2 onic way, work interfaces
amplifier as an inver 14Y1AP Technology of post s application of new intechnological princip 14Y1BE The issue of barrierle of barrierless enviror	ting and noninverting amplifier).  Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- eles of end telecommunication devices.  Barrierless Transport ess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud ment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation systems.	KZ nsmission by electr-communication net	2 onic way, work interfaces 2 stical knowledge
amplifier as an inver 14Y1AP Technology of post s application of new int technological princip 14Y1BE The issue of barrierle of barrierless enviror	ting and noninverting amplifier).  Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- eles of end telecommunication devices.  Barrierless Transport ess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud	KZ nsmission by electr-communication net	2 onic way, work interfaces 2 stical knowledge
amplifier as an inver 14Y1AP Technology of post s application of new int technological princip 14Y1BE The issue of barrierle of barrierless enviror Theoretical knowled	ting and noninverting amplifier).  Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- eles of end telecommunication devices.  Barrierless Transport ess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud ment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation systems.	KZ nsmission by electr-communication net	2 onic way, work interfaces 2 stical knowledge
amplifier as an inver 14Y1AP Technology of post s application of new int technological princip 14Y1BE The issue of barrierle of barrierless enviror Theoretical knowled	ting and noninverting amplifier).  Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- eles of end telecommunication devices.  Barrierless Transport ess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud ment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation syst ge will be supplemented by practical examples.	KZ nsmission by electr -communication net KZ ents will gain theore tems and transporta	2 onic way, work interfaces 2 stical knowledge tion technology
amplifier as an inver 14Y1AP Technology of post s application of new intechnological princip 14Y1BE The issue of barrierle of barrierless enviror Theoretical knowled 15Y1BO Fundamental legisla	Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- eles of end telecommunication devices.  Barrierless Transport ess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud ment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation syst ge will be supplemented by practical examples.  Work Safety and Health Protection in Transportation	KZ nsmission by electr -communication net KZ ents will gain theore tems and transporta	2 onic way, work interfaces 2 stical knowledge tion technology
amplifier as an invertible and amplifier as an invertible and application of new intechnological princip 14Y1BE. The issue of barrierles enviror Theoretical knowled 15Y1BO. Fundamental legisla health insurance of the insurance	Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- eles of end telecommunication devices.  Barrierless Transport ess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud ment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation syst ge will be supplemented by practical examples.  Work Safety and Health Protection in Transportation tive, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation	KZ nsmission by electr -communication net KZ ents will gain theore tems and transporta	2 onic way, work interfaces 2 stical knowledge tion technology
amplifier as an inver 14Y1AP Technology of post s application of new intechnological princip 14Y1BE The issue of barrierle of barrierless enviror Theoretical knowled 15Y1BO Fundamental legisla health insurance of h	Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- tiles of end telecommunication devices.  Barrierless Transport tess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud ment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation syst ge will be supplemented by practical examples.  Work Safety and Health Protection in Transportation tive, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation nome and foreign business trips, statistics, working practice.	KZ nsmission by electr-communication net KZ ents will gain theoretems and transportation. Health protection	2 onic way, work interfaces  2 stical knowledge tion technology 2 a programmes,
amplifier as an inver 14Y1AP Technology of post s application of new intechnological princip 14Y1BE The issue of barrierle of barrierless enviror Theoretical knowled 15Y1BO Fundamental legisla health insurance of h 14Y1BM Basic biometric term	Automatization in Mail shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information tra formation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- eles of end telecommunication devices.  Barrierless Transport ess accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stud ment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation syst ge will be supplemented by practical examples.  Work Safety and Health Protection in Transportation tive, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation mome and foreign business trips, statistics, working practice.  Biometric Methods	KZ nsmission by electr -communication net  KZ ents will gain theore tems and transporta  KZ n. Health protection  KZ hand geometry, ir	2 onic way, work interfaces  2 stical knowledge tion technology 2 programmes, 2 s recognition,

23Y1DZ			
Courses of risk hasi	Data and Their Processing for Engineering Fields Needs eterms, data collection, data sets, data random uncertainty and data epistemic uncertainty, data processing, hazard, risk, val	KZ	2 Lempirical and
	example determination and risk determination, methods for variants' creation, decision support systems.	ide seales, analytica	i, ciripiricai ario
15Y1DU	History of Art and Society	KZ	2
	ions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic	lic. Stations, bridges	, industrial
buildings. Design of t			
15Y1DZ	History of Railway	KZ	2
=	s, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First y development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train co	-	
=	way junctions. Excursions and projections.	ririections, railway iii	ies coristi delloi
12Y1DS	Project Documentation in Practice	KZ	2
_	n creating. Project documentation types. Support materials for project documentation creating. Building permit obtaining proc	cess. Budget and pri	cing. Practical
creation of some pro	ect documentation parts.		
18Y1D1	Dynamics of Routes and Vehicles 1	KZ	2
	of vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure	re vibration and allo	wable criteria.
17Y1EV	sorbers of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.		2
	Public Sector Economy ial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of	KZ	<del>-</del>
	state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, func		
20Y1EK	Qualification in Electrical Engineering	KZ	2
Practical experience	with measurements in laboratories, electrical equipment, power supply, electrical installation of low voltage, electric shock ha	1 1	abeling, nomina
voltage, maximum al	owed currents, electrical equipment protection against short circuit and overload protection, control and revision, first aid, leg	islation, standards a	and regulations
	nd safety and electrical engineering.		
16Y1EN	Energy Requirements of Vehicles	KZ	2
•	iving inertial of the vehicles. Types of energy - kinetic, static, heat, chemical and others. Ways of energy change into kinetic er	nergy. Combustion e	ngine, electric
20Y1EA	air engine. Energy accumulation means, accumulator, flywheel, fuel cell. Energy recuperation. WTW analysis.  Environmental Aspects of Transport	KZ	2
-	ן בחיוויסווויפוזנמו אַסְפְּבנֹזְ סוֹ ווימוזַסְסְינוּ ere, weather observation network, weather in transportation, road meteorology. Weather forecasting, data assimilation, probal		_
·	tants and their effects, atmospheric chemistry, traffic emissions. Greenhouse gasses, carbon cycle, a role of energy and tran		
15Y1EH	European Integration within Historical Context	KZ	2
Versailles system, for	mation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communis	sm. Little Entente, its	principles and
-	itler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war a	and its consequence	s for Europe.
	n-German relationship - a driving power of starting European integration.		
18Y1EM	Experimental Methods in Mechanics	KZ	2
	e of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destru	<del>-</del>	nais. Design of
experimental proced	ures and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement	t Fatigue and lifetime	e prediction
	ures and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement ss testing. Introduction to electron microscopy. Errors in measurement.	t. Fatigue and lifetim	e prediction.
Instrumented hardne		t. Fatigue and lifetim	e prediction.
Instrumented hardne 21Y1FN	ss testing. Introduction to electron microscopy. Errors in measurement.	KZ	2
Instrumented hardne 21Y1FN Introduction. The sco and interpretation of	ss testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation	KZ d international comr	2 nittees. Analysi
Instrumented hardnet 21Y1FN Introduction. The scotand interpretation of reports.	ss testing. Introduction to electron microscopy. Errors in measurement.    Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC)	KZ d international comr formation from the ir	2 nittees. Analysi
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD	ss testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC) and Transportation	KZ d international comr formation from the ir	2 nittees. Analysi evestigation
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports.  15Y1FD France - geography a	ss testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EV), Regulation (EV	KZ d international comr formation from the ir KZ traffic, specialised t	2 nittees. Analysi evestigation
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU) and Transportation and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastron	KZ d international comr formation from the ir KZ traffic, specialised to	2 nittees. Analysi nvestigation 2 erminology.
Instrumented hardner 21Y1FN Introduction. The score and interpretation of reports. 15Y1FD France - geography a French society and content	Ess testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroid GIS and Maps Digitalization	KZ d international comr formation from the ir KZ traffic, specialised tonomy. KZ	2 nittees. Analysi nvestigation 2 erminology.
Instrumented hardner 21Y1FN Introduction. The score and interpretation of reports. 15Y1FD France - geography are French society and continuous the score of the s	Est testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroid GIS and Maps Digitalization es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of database.	KZ d international comr formation from the ir KZ traffic, specialised tonomy. KZ	2 nittees. Analysi nvestigation 2 erminology.
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain	Est testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroid GIS and Maps Digitalization es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of database.	KZ d international comr formation from the ir KZ traffic, specialised tonomy. KZ	2 nittees. Analysi nvestigation 2 erminology.
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroid GIS and Maps Digitalization es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.	KZ d international common formation from the in KZ traffic, specialised to nomy. KZ ases. Interlinking ext	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architectur arithmetic and logica	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EU). Human factor. Utilization of the Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Re	KZ d international common formation from the in KZ traffic, specialised to nomy. KZ ases. Interlinking extended to KZ at the parts designing of KZ	2 erminology.  2 ernal reference 2 controllers,
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation of the Regulation of the Regulation of the Regulation (EC), Regulation of the Regulatio	KZ d international common formation from the in  KZ traffic, specialised training.  KZ ases. Interlinking ext  KZ  Attraction from the in  KZ  Attraffic, specialised training.  KZ  Attraction from the in  KZ  Attraction from the in  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  K	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,
Instrumented hardner 21Y1FN Introduction. The score and interpretation of reports. 15Y1FD France - geography affective society and contained the score and score and score are score and score and score are s	Est testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulat	KZ d international common formation from the information from KZ traffic, specialised to home.  KZ ases. Interlinking extends to home.  KZ ate parts designing and the information from the informatio	2 erminology.  2 ernal reference 2 controllers, 2 ezech Republic
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EC), Regulation (EU). Human factor. Utilization of the Regulation (EC), Regulation (EC)	KZ d international common formation from the information from KZ traffic, specialised to home.  KZ ases. Interlinking extends to home.  KZ ate parts designing and the information from the informatio	2 erminology.  2 ernal reference 2 controllers, 2 ezech Republic
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecture arithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroi GIS and Maps Digitalization es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separatunits, I/O subsystem.  History of Civil Aviation development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic et of civil aviation. Airline companies. Supersonic flying.	KZ d international common formation from the information from KZ ases. Interlinking extended to the information from KZ ate parts designing from KZ at of airports in the Cra of aviation. Golde	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 ezech Republic n era of civil
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecture arithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastron (EIS and Maps Digitalization)  es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware  e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separaturits, I/O subsystem.  History of Civil Aviation  development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development aviations. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic el of civil aviation. Airline companies. Supersonic flying.  History of City Mass Transport	KZ d international common formation from the information from KZ ases. Interlinking extended to the information from KZ at parts designing from KZ at of airports in the Cran of aviation. Golder	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 ezech Republic n era of civil
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecture arithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroi GIS and Maps Digitalization es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separatunits, I/O subsystem.  History of Civil Aviation development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic et of civil aviation. Airline companies. Supersonic flying.	KZ d international common formation from the information from KZ ases. Interlinking extended as the information formation from KZ at parts designing from KZ at of airports in the Cran of aviation. Golder KZ and formation from KZ and developments and developments and developments.	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 ezech Republic n era of civil
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and co 14Y1GD Work with map source with drawings contain 14Y1HW Computer architectura arithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass of clearance systems. F	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastron GIS and Maps Digitalization  es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware  e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separaturits, I/O subsystem.  History of Civil Aviation  development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic elof civil aviation. Airline companies. Supersonic flying.  History of City Mass Transport ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport in the world, development of tram, bus and trolley-bus systems.	KZ d international common formation from the information from KZ ases. Interlinking extended as the information formation from KZ at parts designing from KZ at of airports in the Cran of aviation. Golder KZ and formation from KZ and developments and developments and developments.	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 ezech Republic n era of civil
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecture arithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. F 12Y1HD Acoustic introduction	Factors Affecting the Rate of Accidents in Aviation pe of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of international regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastron and Maps Digitalization es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databating maps.  Computer Hardware e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separation its, I/O subsystem.  History of Civil Aviation development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development as aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic election of civil aviation. Airline companies. Supersonic flying.  History of City Mass Transport transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise basic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regu	kZ d international common formation from the information from the inform	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 except Republic n era of civil  2 ents of tariff an  2 pustic climate in
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecture arithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. H 12Y1HD Acoustic introduction area, principles of ur	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of information of the Regulation (EC), Regulation (EU). Human factor. Utilization of information in the regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroical GIS and Maps Digitalization as and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware  e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separatunits, I/O subsystem.  History of Civil Aviation development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development as aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic et of civil aviation. Airline companies. Supersonic flying.  History of City Mass Transport transport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport in the world, development of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise  basic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regulation acoustic, noise transmission, soundproofing. Types of noise sources in area. Determination of acoustic situation in the area.	kZ d international common formation from the information from the inform	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 except Republic n era of civil  2 ents of tariff an  2 pustic climate i
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. H 12Y1HD Acoustic introduction area, principles of ur computing and meas	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation (EC), Regulation (EU). Human factor. Utilization of interpretation (EC), Regulation (EU). Human factor. Utilization of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastron GIS and Maps Digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware  e., basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separationists, I/O subsystem.  History of Civil Aviation  development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development as aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic elocitivil aviation. Airline companies. Supersonic flying.  History of City Mass Transport  ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current traitsory of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise  absictering transport noise. Acoustic studies, measuring protocol.	kZ d international common formation from the information from the inform	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 except Republic n era of civil  2 ents of tariff an  2 oustic climate i
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecture arithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. H 12Y1HD Acoustic introduction area, principles of ur computing and meas 15Y1HE	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state and ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of international and national organizations in civil aviation. The scope of the investigation organisations within the state and ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroically and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware  e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separaturits, I/O subsystem.  History of Civil Aviation  development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development as aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic electrical civil aviation. Airline companies. Supersonic flying.  History of City Mass Transport  ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport in the world, development of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise  a coustic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legis	KZ d international common formation from the information from KZ ases. Interlinking extends as late parts designing at the parts designing from KZ at of airports in the Cara of aviation. Golder KZ ends and developmental Slovakia.  KZ lations. Creation access of interest. Method	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 exect Republic n era of civil  2 ents of tariff an  2 oustic climate in dology of
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass of clearance systems. F 12Y1HD Acoustic introduction area, principles of un computing and meas 15Y1HE Basic knowledge of c	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state and ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of international and national organizations and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air utiliture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroi GIS and Maps Digitalization  Be and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databating maps.  Computer Hardware  Be a basic of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separaturits, I/O subsystem.  History of Civil Aviation  development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development as aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic et of civil aviation. Airline companies. Supersonic flying.  History of City Mass Transport  Transport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise  Beaci terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acou	kZ d international common formation from the information from the inform	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 exect Republic n era of civil  2 ents of tariff an  2 oustic climate in dology of  2 n of workers.
Instrumented hardner 21Y1FN Introduction. The scorand interpretation of reports. 15Y1FD France - geography a French society and contained the society and contained the score and score an	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state and ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of international and national organizations in civil aviation. The scope of the investigation organisations within the state and ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroically and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware  e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separaturits, I/O subsystem.  History of Civil Aviation  development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development as aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic electrical civil aviation. Airline companies. Supersonic flying.  History of City Mass Transport  ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport in the world, development of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise  a coustic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legis	kZ d international common formation from the information from the inform	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 exect Republic n era of civil  2 ents of tariff an  2 oustic climate in dology of  2 n of workers.
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass of clearance systems. F 12Y1HD Acoustic introduction area, principles of ur computing and meas 15Y1HE Basic knowledge of c Creation and protect Practical examples fr	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of independence of the Regulation (EC), Regulation (EU). Human factor. Utilization of independence of the Regulation (EC), Regulation (EU). Human factor. Utilization of independence of the Regulation (EC), Regulation (EU). Human factor. Utilization of independence of the Regulation (EC), Regulation (EU). Human factor. Utilization of independence of the Regulation (EC), Regulation (EU). Human factor. Utilization strains and treating transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroid ulture. Current political system of gastroid data factors. As a spatial sign maps.  Computer Hardware  e. basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separatunits, I/O subsystem.  History of Civil Aviation  development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development us aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic et of civil aviation. Airline companies. Supersonic flying.  History of Civil Mass Transport ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trustory of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Re	kZ d international common formation from the information from the inform	2 nittees. Analys nvestigation  2 erminology.  2 ernal reference  2 controllers,  2 exect Republic n era of civil  2 ents of tariff an  2 oustic climate in dology of  2 n of workers.
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports. 15Y1FD France - geography a French society and o 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. H 12Y1HD Acoustic introduction area, principles of ur computing and meas 15Y1HE Basic knowledge of o Creation and protect Practical examples fr	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of information and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastroi GIS and Maps Digitalization as and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separatunits, I/O subsystem.  History of Civil Aviation development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Developmer us aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic eloficivil aviation. Airline companies. Supersonic flying.  History of City Mass Transport ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport in the world, development of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise basic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regulation acoustic, noise transmission, soundproofing. Types of noise sources in area. Determination of acoustic situation in the arturement of transport noise. Acoustic studies, measuring protocol.  Work Hygiene and Ergonomics, and their application in transport. Working environment factors, and the influence of the on of working conditions that do not damage public health. Mutual links	kZ d international common formation from the information from the inform	2 erminology.  2 ermal reference  2 controllers,  2 except Republic on era of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil except a controller of civil except a controller of con
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports.  15Y1FD France - geography a French society and o 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. F 12Y1HD Acoustic introduction area, principles of ur computing and meas 15Y1HE Basic knowledge of o Creation and protect Practical examples fr 16Y1IS Simulation theory an	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of information of the Regulation (EC), Regulation (EU). Human factor. Utilization of information in	kZ d international common formation from the information from the inform	2 erminology.  2 ermal reference  2 controllers,  2 except Republic on era of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil  2 ents of tariff and except a controller of civil except a controller of ci
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports.  15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. F 12Y1HD Acoustic introduction area, principles of ur computing and meas 15Y1HE Basic knowledge of c Creation and protect Practical examples fr 16Y1IS Simulation theory an Simulation of vehicle 12Y1KN	sa testing. Introduction to electron microscopy. Errors in measurement.  Factors Affecting the Rate of Accidents in Aviation of of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of interpretation of regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air utilization. Uses and district transport. Road traffic, motorways, railway traffic, TGV, air utilization. Research of their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware  e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separaunits, I/O subsystem.  History of Civil Aviation development of aircrafts in Eginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development as aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic electric dividualition. Airline companies. Supersonic flying.  History of City Mass Transport ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trilistory of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise  a basic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regulan acoustic, noise transmission, soundproofing. Types of noise sources in area. Determinati	kZ d international common formation from the information from the inform	2 erminology.  2 ermal reference  2 ermal reference  2 econtrollers,  2 except Republication era of civil  2 ents of tariff and  2 ents of workers.  skills of a man  2 methods.
Instrumented hardner 21Y1FN Introduction. The sco and interpretation of reports.  15Y1FD France - geography a French society and c 14Y1GD Work with map source with drawings contain 14Y1HW Computer architecturarithmetic and logica 15Y1HL Beginnings of flying, World airports. Famo aviation. Modern era 15Y1HD History of city mass to clearance systems. F 12Y1HD Acoustic introduction area, principles of ur computing and meas 15Y1HE Basic knowledge of c Creation and protect Practical examples fr 16Y1IS Simulation theory an Simulation of vehicle	Factors Affecting the Rate of Accidents in Aviation per of international and national organizations in civil aviation. The scope of the investigation organisations within the state an ICAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of information and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air ulture. Current political system. System of education, studying in France. Selected authors of French literature. French gastron IGIS and Maps Digitalization es and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databasing maps.  Computer Hardware e, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separation into the internation of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development aviation. Airline companies. Supersonic flying.  History of Cityl Aviation History of Cityl Mass Transport ransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current transport of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and Traffic Noise basic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regulan acoustic, noise transmission, soundproofing. Types of noise sources in area. Determination of acoustic situation in the anterment of transport noise. Acoustic studies, measuring protocol.  Work Hygiene and Ergonomics in Traffic coupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of the on of working conditions that do not damage public health. Mutual links: man-machine-environment. Adaptation of technology on the field of transport	kZ d international common formation from the information from the inform	2 erminology.  2 ermal reference  2 ermal reference  2 econtrollers,  2 except Republication era of civil  2 ents of tariff and  2 ents of workers.  skills of a man  2 methods.

20Y1K Cybernetics Fundamentals of information theory, dynamic systems, the principle of feedback, logical systems. Finite automata as a special case of dynamical systems.	KZ	2
and automata.		
21Y1LR Radio Technology in Aviation  Electric signals and the wave spectrum. Analog and digital modulations. Noises. Filters. Resonance circuits. Electromagnetic field. Electromagnetic v	KZ wave propagation.	2 .Wave ranges
in aviation, radiation and reception of electromagnetic field. Antennas in aviation, receivers and transmitters.  17Y1LL Logistics of Passenger and Freight Air Transport	KZ	2
Logistics airline passenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial tair cargo. Information systems in air transport. Global distribution systems.		1
20Y1LN Location and Navigation	KZ	2
Description and examples of road networks, localization on the network. Routing algorithms, their properties and implementation. Description and extransport connections, routing algorithms, their properties and implementation.		,
21Y1MZ   Managerial Ethics The basic terminology of managerial ethics. Basics of etiquette and rules of social contact. Social events. Etiquette of working contacts. The art of pres	KZ sentation and nego	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
image. Diplomatic protocol. Managerial ethics. Business ethics.		
11Y1MM   Mathematical Models in Economy The goal of the course is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their programming is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained optimization.	KZ ram implementati	2 on. The outcom
18Y1MT Engineering Materials	KZ	2
Systematic overview of main classes of materials used in technical design. In addition to main classes of materials, i. e. metals, ceramics, polymers to biological materials and to biomimetics. Integral approach to material selection process is also demonstrated based on so called Ashby's selection		attention is paid
14Y1MP Modeling Complex Assemblies and Models in Parametric Modeller Assemblies programming - tools and methodology of working subassemblies and assemblies, sheet metal parts modelling, welded assemblies, pipe	KZ elines, and distribu	2 ution lines.
Photorealistic output rendering - physical and material properties, lighting sources. MKP - visual example.	KZ	2
17Y1ND   Maritime Transportation  History and importance of the maritime transportation, theoretical discipline in maritime transportation, seafaring vessels, maritime ports and their units transportation.	1	1
maritime ports, transport corridors and link by maritime, river and rail transport I and II, global maritime corridors, logistics of maritime transportation, containers, ITS in maritime transport.	maritime transpor	tation and smart
15Y1NE German in the Economy and Society	KZ	2
Recent economic and social issues of German speaking countries and of the EU. Reading and listening of texts. Lexical, grammatical and semantic selected topics.	analysis of texts.	Discussion on
14Y1NP Non-parametric 3D Modelling	KZ	2
Work in 3D non-parametric modeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, objects and reflexes. Region of finition of work with lights, materials and reflexes. Medals presentation	ct data creation, w	ork with data
connected with external database. Basic definition of work with lights, materials and reflexes. Models presentation.  20Y1NS	KZ	2
The basic structure and function of human brain and its main functional blocks and building elements - neurons. Models of neurons, modelling their of artificial neural networks.	1	basic paradigms
21Y10L Security of Air Transport	KZ	2
The development of civil aviation. Definitions and regulations. History of acts of unlawful interference. Terrorism in aviation. National security program at airports - operational procedures. Modern means of protection and control.	า. Crisis managen	nent. Protection
23Y1OK Protection of Critical Objects and Infrastructures	KZ	2
Types of technological systems, critical item, risks and their courses, criticality, vulnerability, connectivity, dependability, resilience, failure, protection, sinfrastructures.	safety of critical ob	ejects and critical
20Y1OI Fare Collection and Information Systems	KZ	2
Fare collection systems in public transport and their components (on-board units, validators, turnstiles,). Information systems and their component panels) and operators (cycles, location or current delay of vehicles,). The issue of tariff systems. Other examples of clearance systems (parking		ables, maps,
14Y1OP Operating System	KZ	2
Distributions. Installation GNU/Linux OS. X-window system. Rights management - users and groups, ACL rights. Filesystems and attributes. Prograr runlevels. Basic console programs / commands. Config files. SW management, package systems. Programs in graphic shell - text, spreadsheet, gra	-	
communication. Services management. Safe and secure configuration of OS. Remote administration.		,
14Y10L Linux Operating System Distributions. GNU/Linux system installation. X-window system. Rights - Users and Groups, ACL rights. Filesystems and file attributes. Programs and	KZ processes. Boot	of OS, runlevels.
$Basic\ console\ commands.\ Configuration\ files.\ Managing\ SW\ system.\ Programs\ in\ graphic\ mode\ -\ tools\ for\ text,\ graphics,\ sound,\ video,\ communication\ programs\ for\ text,\ graphics\ graphi$		
of OS secure configuration. Remote administration.  17Y10F Personal Finance	KZ	2
Personal finance (budget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of he	ousing (rent, mort	gage, savings,
consumer loans, refinancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability a (retirement savings and insurance).	and adequacy), se	ecuring the future
11Y1PV Parametrical and Multicriterial Programming	KZ	2
Solution to the problem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints  17Y1PM Personnel Management	s. Computation of e	efficient solution.
17Y1PM   Personnel Management   Personnel Man	1	1
12Y1PC Pedestrian and Cycling Transport  Pourse for pedestrians Pedestrian grassings Medifications for blind dim sighted and disabled people. Pesign of cycle routes patwerk Ways of cycle routes for blind dim sighted and disabled people.	KZ	2
Routes for pedestrians. Pedestrian crossings. Modifications for blind, dim-sighted and disabled people. Design of cycle routes network. Ways of cycle routes for cyclists. Separation of cyclists from other transport modes. Cycle tracks and its design - one way streets, reserved traffic lanes, bus stops, crossing tracks and its design - one way streets, reserved traffic lanes, bus stops, crossing tracks and its design - one way streets.	-	
crossroads. Traffic signs and road marking for cyclists.	1/7	
20Y1PO   Weather, Air Quality and Transportation State of the atmosphere, weather observation network, weather in transportation, road meteorology. Weather forecasting, data assimilation, probabil	KZ istic forecasts, fore	2 ecast evaluation.
Air quality, main pollutants and their effects, atmospheric chemistry, traffic emissions. Greenhouse gasses, carbon cycle, a role of energy and transp	portation in climate	e change.
14Y1PG   Computer Graphics Basic formats of graphic and possibilities of their editing and mutual conversion. Use of individual types according to character of work. Work with editing and mutual conversion.	KZ diting programs (w	2 vithin the user
level scope) using layers, DPI, colors. Basics of digital photography, scanning and computer technology like monitors and graphics cards.		

14Y1P2 Computer Aid of Transportation Projecting 2		
	KZ	2
Overview of CAx application for transportation projecting aid. AutoCAD environment possibilities of basic tasks automatizing (programming, scripting		
modification (attributes, relation to databases). Work in projecting group, external references. Basic tasks for cummunication projecting (clotoidic transporting). Project of OR graduiting	nsition curve, cross	and longitudinal
section). Basics of 3D modelling.	1/7	
18Y1PS   Computer Simulations in Mechanics	KZ	2
Principles and overview of tools for stress analysis of structures. Numerical methods in mechanics, finite element method. Geometric model develor from other CAE systems. Assignment of material properties. The types of elements and their use. Discretization of solid model. Boundary condition		
tasks of structural and modal analysis. Introduction to complex nonlinear problems.	is and application o	Title load. Dasic
14Y1PI Corporate Information System	KZ	2
Data-information-knowledge, components of information system, syntatic and semantic sense of data, structure of corporate information system, p	1	
(personalistic, production, storage, etc.), corporate information politic and information control, risks of information system operation, legal environment		•
state information system, information system security, data protection, safety politics.		
12Y1PD Assessment of Transport Structures	KZ	2
Assessment of transport structures, the EIA process. Multicriteria assessment methods, risk analysis, SWOT analysis. Landscape character, possibility		
transport structures on the landscape. Rating fragmentation and landscape connectivity in the preparation of linear structures. Practical examples of the landscape is a structure of linear structure.	of assessment of tra	affic buildings on
the environment.	147	
20Y1PK Product Quality Management Processes	KZ	2
General principles of organization management. Management systems and international standards; quality management systems. Quality products of standards for systems management, management principles. Principles of process management, monitoring and measurement systems management.	-	
for systems management. Process management principles. Metrology and testing. Product certification.	ent. Offilorni framew	ork or standards
14Y1PJ C Programming Language	KZ	2
C programming language. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation	1	<del>-</del>
Implementations of abstract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise operators.	,	
12Y1C1 Designing Roads in Civil 3D I	KZ	2
The course is devoted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software. Students go thro	1	
particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calculation.	-	-
explanation of the traffic building design in the real-life profession.		
12Y1C2 Designing Roads in Civil 3D II	KZ	2
The course is devoted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software. Students go throads as such, by the means of a 3D software.	ough the complete of	lesign of this
particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calculation.	The previously acqu	ired skills are
improved and developed. Students learn to design intersections.		
14Y1PA 3D Modeling in AutoCAD	KZ	2
Work in 3D non-parametric modeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, objects, user se	ect data creation, v	vork with data
connected with external database. Basic definition of work with lights, materials and reflexes. Models presentation.	147	
16Y1PV Operation, Construction and Maintenance of Vehicles	KZ	2
Methods of vehicle production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measurements of engine diagnostics.	rement. Iransmissi	on mecnanism.
General principles of engine diagnostics.  12Y1PU Organization Disposition of Railway Stations	KZ	2
Connecting station. Passenger transport equipment. Freight transport equipment. Branch lines and railway traffic inside industrial company areas.	1	
Reserve stations. Technology of work in railway station with regard to its disposition. Railway station documentations in the Czech Republic railway		adion yards.
12Y1RZ Railway Lines Reconstruction	KZ	2
Principles of track maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles	1	
parameters - causes and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway su	-	-
	KZ	2
16Y1RE Control and Electronic Vehicle Systems	I NZ	_
16Y1RE   Control and Electronic Vehicle Systems Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis	1	on. Conventional
· · · · · · · · · · · · · · · · · · ·	sadvantages, function	
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis	sadvantages, function	
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic control	sadvantages, function	
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, distant hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic control comfort systems.	sadvantages, function of safety, communication of the KZ	cation and
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic control comfort systems.  21Y1RZ  Human Resources Management  The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources mana environment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are	sadvantages, function of the safety, communication of the safety of the	2 d external
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	sadvantages, function of safety, communion of safety.	2 d external staff. Positioning,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	sadvantages, function of second remuneration of second rem	2 d external staff. Positioning,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	KZ gement. Internal and remuneration of states.	2 d external staff. Positioning, 2 a price and
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	KZ gement. Internal and remuneration of states.	2 d external staff. Positioning, 2 a price and
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	KZ gement. Internal and remuneration of s  KZ duct. Students set a	2 d external staff. Positioning,  2 a price and ions by the form
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources managenvironment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence of financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators	KZ gement. Internal and remuneration of s  KZ duct. Students set a ences of their decis	2 d external staff. Positioning, 2 a price and ions by the form
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management  The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management environment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation  Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence of financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators  Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sensors	KZ gement. Internal and remuneration of s  KZ duct. Students set a ences of their decis	2 d external staff. Positioning, 2 a price and ions by the form
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management  The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management environment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation  Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence of financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators  Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sensors attae (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.	kZ gement. Internal and remuneration of s  KZ duct. Students set a ences of their decise  KZ cors of mechanical, e	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources managenvironment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence of financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sensors at the (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering	KZ gement. Internal and remuneration of s  KZ duct. Students set a ences of their decis  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  K	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	KZ gement. Internal and remuneration of s  KZ duct. Students set a ences of their decis  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  K	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	KZ gement. Internal and remuneration of s  KZ duct. Students set a ences of their decis  KZ  KZ  KZ  Cors of mechanical, e  KZ  Cors of mechanical, e	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 armal techniques
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	KZ gement. Internal and remuneration of sences of their decisers of mechanical, ementation using for KZ	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 armal techniques
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management  The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources mana environment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation  Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequence of financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators  Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sensitate (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering  Basic concepts of software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implience and practical usuage.  22Y1SZ   Forensic Expertise	KZ gement. Internal and remuneration of sences of their decisers of mechanical, ementation using for KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  Ementation using for KZ  KZ  Ementation using for KZ  Sic legislation, basic	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 armal techniques  2 c forensic acts,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ	KZ gement. Internal and remuneration of sences of their decisers of mechanical, ementation using for KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  KZ  Ementation using for KZ  KZ  Ementation using for KZ  Sic legislation, basic	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 armal techniques  2 c forensic acts,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic control confort systems.  21Y1RZ   Human Resources Management   The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation and dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation  Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequent financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators  Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sens state (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering  Basic concepts of software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implience in the obtaining proofs, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, foren expert role in the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evidence report, elements. Finding, expert testimony / report.	KZ gement. Internal and remuneration of sences of their decisers of mechanical, ementation using for KZ  KZ  KZ  KZ  KZ  KZ  KZ  Sic legislation, basic lences collection, si	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 crmal techniques  2 c forensic acts, te inspection,
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management   The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources mana environment of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequent of financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators   Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sens state (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering   Basic concepts of software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implient practical usuage.  22Y1SZ   Forensic Expertise   Historical evolution of forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, foren expert role in the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evic forensic report, elements. F	KZ gement. Internal and remuneration of standard remuneration dences of their decises of mechanical, examples of their decises of standard remuneration using for KZ sic legislation, basic lences collection, sidences collection, sidences collection, sidences collection. Fig. KZ	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 armal techniques  2 c forensic acts, te inspection,  2 MEA (Failure
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, dis and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management   The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same productermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequent financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators  Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sens state (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering  Basic concepts of software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implience reports engineering, rorensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, foren expert role in the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evic forensic report, elements. Finding, expert testimony / report.  16Y1KS   Quality and Reli	KZ gement. Internal and remuneration of standard remuneration dences of their decises of mechanical, examples of their decises of standard remuneration using for KZ sic legislation, basic lences collection, sidences collection, sidences collection, sidences collection. Fig. KZ	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 armal techniques  2 c forensic acts, te inspection,  2 MEA (Failure
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, die and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequent financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators   Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sens state (temperature, humicity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering  Basic concepts of software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implience evolution of forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, forensic report, elements. Finding, expert testimony / report.  16Y1KS   Quality and Reliability theory in design, development, production and operation of vehicles. Definition and possible approach to quality and reliability Mode and Effects Analysis), OF	KZ gement. Internal and remuneration of second KZ duct. Students set a gences of their decise KZ ors of mechanical, experiences collection, sidences collection, sidences collection. FI ds used in industrial	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 rmal techniques  2 c forensic acts, te inspection,  2 MEA (Failure I applications.
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, die and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequent of financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators  Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sens state (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering  Basic concepts of software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implicant practical usuage.  22Y1SZ   Forensic Expertise   Historical evolution of forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, forensic report, elements. Finding, expert testimony / report.  16Y1KS   Quality and Reliability of Vehicles  Quality and reliability theory in design, development, production and operation of v	KZ gement. Internal and remuneration of second control of second c	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 rmal techniques  2 c forensic acts, te inspection,  2 MEA (Failure I applications.
Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, die and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic controcomfort systems.  21Y1RZ   Human Resources Management The position of human resources in the organization and related disciplines file. Substance, importance and challenges of human resources management of human resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation are dismissal and redundancies of employees. Education of employees. Planning career management.  17Y1ST   Titan Simulation Titan is a management game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same prodetermine the quantity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequent financial corporate reports and they use this information for other business decisions.  20Y1SC   Sensors and Actuators   Principles of sensors and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sens state (temperature, humicity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements.  11Y1SI   Transportation Software Engineering  Basic concepts of software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implience evolution of forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, forensic report, elements. Finding, expert testimony / report.  16Y1KS   Quality and Reliability theory in design, development, production and operation of vehicles. Definition and possible approach to quality and reliability Mode and Effects Analysis), OF	KZ gement. Internal and remuneration of second control of second c	2 d external staff. Positioning,  2 a price and ions by the form  2 electro-magnetic,  2 rmal techniques  2 c forensic acts, te inspection,  2 MEA (Failure I applications.

18Y1SN	Statically Nondeterminated Structures	KZ	2
	m element, virtual work. Strength method. Frame analysis by strength method. Deformation method. Frame analysis by defo		
grid. Beam on elastic W shells. Examples of calc	inkler's foundation. Calculation beam on elastic foundation. Basement of the mathematical elasticity. Calculation of walls. Cal	culation of plates.	Cylindrical
21Y1TH	Aircraft Technical Handling	KZ	2
	ing tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and unlo		
	and offboarding. Operational processes of aircraft technical handling and regulations. Modernization and technical progress.		
16Y1TJ	Technological Quality Aspects	KZ	2
	ation. Quality management. Standards of Quality Management and its application. Quality system creation. Tools and methods of	of quality improven	nent. Conformity
	tal certification. Workplace certification. QMS integration. Classification, certification of products and producers.		
20Y1TD	Telematics Databases	KZ	2
11Y1TG	bases, work with OpenStreetMap layer, use of Linux OS and PostgreSQL with PostGIS extension, real traffic data.	KZ	2
- 1	Graph Theory ninology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees,		
•	eath, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence	· · · · · · · · · · · · · · · · · · ·	-
	tational complexity, dealing with NP-complete problems, heuristic approach.	·	
14Y1TI	Creating Interactive Internet Applications	KZ	2
Possibilities of scripting	language PHP. Overview of PHP language syntax, and functions. Analysis of finished scripts and demonstration of solutions.	Your own applicati	on programmed
in PHP language.			
21Y1UT	Airports Maintenance	KZ	2
	nance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of	aircraft. De-icing /	anti-icing liquid.
Operating procedures, li 18Y1UK	Introduction of Rail Vehicles	KZ	2
	d parameters rail transport systems - railway and urban transport. Basis driving mechanics rail vehicles - equation of motion		
	nning resistance. Acceleration force. Analyzing driving cycle rail vehicle. Speed-power diagrams and characteristics rail vehicl		-
	n concept rail vehicles and drive of wheel set.	•	
12Y1VC	Waterways and Shipping	KZ	2
Basic modes of transport	rt. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages	of water transport	. Basic systems
	a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways a	and its operation. T	he legal regime
	rigation rules of operation, navigation maps.	1/7	
23Y1VS	Negotiation and Cooperation   lotiation. The influence of personality traits on the negotiations. Negotiation and commanding. Teamwork. Variants teams. Info	KZ	2
<del>_</del>	, the essence of negotiation, the differences in negotiation in business and in crisis situations, the principle of "win both", spe		
trust.	, and decented at negotiation, and amorphodo in negotiation in statement and an entire of the principle of this section, spe	55 d. 14 5.4	ag, a.e reie e.
14Y1VM	Development of Applications for Mobile Devices	KZ	2
	nming, Java programming language, development environment, operating system Android, development application - widgets	s, containers, threa	ads, menu,
permissions, services, C			
16Y1VT	Development in Railroad Vehicles	KZ	2
	n. Railroad vehicle parametres regulation. Control and driving of railroad vehicles. Importance in heavy duty and personal tra als in design. International standardization.	insportation. Critic	al situation
14Y1W1	Webdesign 1	KZ	2
	ا asics of communication HTTP, URL and addressing, markup languages HTML and XHTML, HTML tags, rules of web accessil		
	of web browsers, creating one to three column layout pages, sites validation, conditional comments. Topics will be practiced	-	
14Y1W2	Webdesign 2	KZ	2
Students will learn adva	nced techniques CSS, responsive webdesign, CSS frontends, content management systems, JavaScript, jQuery, SEO, web	server installation	+ configuration
directives. Topics will be	practiced on practical examples.		
16Y1ZG	Introduction into Applied Computer Graphics	KZ	2
· - ·	sion and applications with emphasis on transport, including development and research. Colours, colour perception, colour so		•
graphics software.	nentary algorithms for graphic data workout. Visualisation principles and tasks, technics, graphics and visualisation HW basic	s. Introduction to	2D and 3D
11Y1ZF	Introduction to Solid State Physics	KZ	2
	tal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties		
Magnetism.			
21Y1ZA	Basics of Aerobatics	KZ	2
The history, developmen	at and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual	elements, compet	ition aerobatics,
<del></del>	eparation for practicing aerobatics and safety training, competitive psychology and concentration on performance.		
14Y1ZM	Fundamentals of parametric and adaptive modeling	KZ	2
· · · · · · · · · · · · · · · · · · ·	cts and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from the second state of accompliance creation.	m 2D sketches. Im	port and export
11Y1ZM	tems. Fundamentals of assemblies creation.	KZ	
	Foundation of MATLAB Programming of algorithmization, flow charts, description of MATLAB environment and its settings, MATLAB help, mathematical operators, n		ents operations.
	outputs, graphics, optimization and program code debugging.		sporations,
12Y1ZU	Principles of Urbanism	KZ	2
	and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Space		
Types of towns or cities	with a certain prevailing function, forms of their development. Brief overview of land-use planning.		
16Y1ZL	Vehicle Testing, Legislation and Construction	KZ	2
Vehicle, bus and motorbi	ke costruction, aggregate computing, driving resistance, build and parameters of traction, constructional arrangement of person	nal cars, trucks, but	ses, motorbikes,

Name of the block: Jazyky

Minimal number of credits of the block: 12

legislation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical modelling in testing.

Code of the group: JZ-B-3.4 12/13

Name of the group: Jazyk bak. 5.6.sem. od 12/13

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:

. 1010 011 1110 9100		1			1	
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
15JZ3A	Foreign Language - English 3  Eva Rezlerová, Jan Feit, Markéta Musilová, Lenka Monková, Marie Michlová, Peter Morpuss, Jitka He manová, Dana Boušová, Barbora Horá ková,	Z	3	0P+4C	Z	J
15JZ4A	Foreign Language - English 4 Eva Rezlerová, Jan Feit, Markéta Musilová, Lenka Monková, Marie Michlová, Peter Morpuss, Jitka He manová, Barbora Horá ková, Markéta Vojanová	Z,ZK	3	0P+4C	L	J
15JZ3F	Foreign Language - French 3 Eva Rezlerová, Irena Veselková	Z	3	0P+4C+10B	Z	J
15JZ4F	Foreign Language - French 4 Eva Rezlerová, Irena Veselková	Z,ZK	3	0P+4C+10B	L	J
15JZ3N	Foreign Language - German 3 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	3	0P+4C+10B	Z	J
15JZ4N	Foreign Language - German 4 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z,ZK	3	0P+4C+10B	L	J
15JZ3R	Foreign Language - Russian 3 Eva Rezlerová, Marie Michlová	Z	3	0P+4C+10B	Z	J
15JZ4R	Foreign Language - Russian 4 Eva Rezlerová, Marie Michlová	Z,ZK	3	0P+4C+10B	L	J
15JZ3S	Foreign Language - Spanish 3 Eva Rezlerová, Nina Hricsina Puškinová	Z	3	0P+4C+10B	Z	J
15JZ4S	Foreign Language - Spanish 4 Eva Rezlerová, Nina Hricsina Puškinová	Z,ZK	3	0P+4C+10B	L	J

#### Characteristics of the courses of this group of Study Plan: Code=JZ-B-3.4 12/13 Name=Jazyk bak. 5.6.sem. od 12/13

15JZ3A Foreign Language - English 3 Ζ Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written form. Technical texts and their features; terminology.

15JZ4A Foreign Language - English 4

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study - pilot. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written form. Technical texts and their features; terminology.

15JZ3F Foreign Language - French 3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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 features. Practice of oral and written presentation.

Foreign Language - French 4

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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 features. Practice of oral and written presentation.

15JZ3N Foreign Language - German 3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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 features. Practice of oral and written presentation.

15JZ4N Foreign Language - German 4 Z,ZK

Ζ

3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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 features. Practice of oral and written presentation.

15JZ3R Foreign Language - Russian 3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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

features. Practice of oral and written presentation. 15JZ4R Foreign Language - Russian 4

Z,ZK

Ζ

3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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 features. Practice of oral and written presentation.

15JZ3S Foreign Language - Spanish 3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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 features. Practice of oral and written presentation.

Foreign Language - Spanish 4

Z,ZK

3

Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge 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 features. Practice of oral and written presentation.

Code of the group: JZ-B-1,2 11/12

Name of the group: Jazyk bak.3.4.sem.od 11/12

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:

15.I74S

rioto 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
15JZ1A	Foreign Language - English 1 Eva Rezlerová, Jan Feit, Markéta Musilová, Lenka Monková, Marie Michlová, Peter Morpuss, Jitka He manová, Dana Boušová, Barbora Horá ková,	Z	3	0P+4C+10B	Z	J
15JZ2A	Foreign Language - English 2  Eva Rezlerová, Jan Feit, Markéta Musilová, Lenka Monková, Marie Michlová, Peter Morpuss, Jitka He manová, Dana Boušová, Barbora Horá ková,	Z,ZK	3	0P+4C+10B		J
15JZ1F	Foreign Language - French 1	Z	3	0+4	Z	J
15JZ2F	Foreign Language - French 2	Z,ZK	3	0+4	L	J
15JZ1N	Foreign Language - German 1	Z	3	0+4	Z	J
15JZ2N	Foreign Language - German 2	Z,ZK	3	0+4	L	J
15JZ1R	Foreign Language - Russian 1	Z	3	0+4	Z	J
15JZ2R	Foreign Language - Russian 2	Z,ZK	3	0+4	L	J
15JZ1S	Foreign Language - Spanish 1	Z	3	0+4	Z	J
15JZ2S	Foreign Language - Spanish 2	Z,ZK	3	0+4	L	J

### Characteristics of the courses of this group of Study Plan: Code=JZ-B-1,2 11/12 Name=Jazyk bak.3.4.sem.od 11/12

15JZ1A Foreign Language - English 1 Z 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.

15JZ2A Foreign Language - English 2

Z,ZK

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.

15JZ1F Foreign Language - French 1

Z

3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

15JZ2F Foreign Language - French 2

Z,ZK

3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

15JZ1N Foreign Language - German 1

Z

3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

15JZ2N Foreign Language - German 2

Z,ZK

3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

15JZ1R Foreign Language - Russian 1

Z

3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

5JZ2R Foreign Language - Russian 2

Z,ZK

3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

15JZ1S Foreign Language - Spanish 1

Ζ

3

Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

15JZ2S Foreign Language - Spanish 2 Z,ZK 3
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.

# List of courses of this pass:

Code	Name of the course	Completion	Credits
11DAD	Differential and Difference Equations	Z,ZK	3
Difference equations	s and its systems. Some solvable types of differential equations of the first order. Linear differential equations of the n-th order. Methods for	'	mogeneous
equation, solution of	f inhomogeneous equation by means of variation of constants. Power series and their use for solution of differential equation. Boundary and function for differential equation. Fourier series of function.	value problem. Eig	gennumbers
11FY1	Physics 1	Z,ZK	4
I I	atics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermodynamics, electric field, directed		•
11FY2	Physics 2	Z.ZK	4
	tromagnetic field. Optics, quantum character of electromagnetic radiation. Introduction into quantization, hydrogen atom. Multi-electro solid body physics.	, ,	ei. Basics of
11GIE	Geometry	KZ	3
	try of curves - parameterization, the arc of the curve, torsion and curvature, Frenet`s trihedron. Kinematics - a curve as a trajectory of	the motion, the ve	elocity, and
	acceleration of a particle moving on a curved path.		
11LA	Linear Algebra	Z,ZK	3
	ar combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and thei	,	ninants and
	their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classification	on.	
11MSP	Modeling of Systems and Processes	Z,ZK	4
System and subsyst	tem, external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of differe		al equations.
	inear system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer functio  Discretization of continuous systems. System interconnection.		
11MTA	Mathematical Analysis	Z,ZK	4
	ies of real numbers and its convergence. Basic properties of functions. Differential and integral calculus of the real function of one real	'	ries, Fourier
•	series and foundations of Fourier transform.		,
11MVP	Mathematical Analysis of Function of More Variables	Z.ZK	3
	uences in metric spaces, limit of sequence in metric space. Differential calculus of functions of several variables, differential of function	, ,	_
	extremes of functions of several variables. Integral calculus of functions of several variables, Riemann integral, integral over curves ar	· •	, ,
	of integral calculus in physics.		
11PT	Probability	7	2
11PT Descriptive statistic:	Probability  s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability	Z distribution, proba	2 ability mass
Descriptive statistic	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability	distribution, proba	ability mass
Descriptive statistic	•	distribution, proba	ability mass
Descriptive statistics and density, mome	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Modistributions. Law of large numbers, central limit theorem.	distribution, proba lixed distributions,	ability mass mixture of
Descriptive statistics and density, mome	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Modistributions. Law of large numbers, central limit theorem.  Statistics	distribution, probablixed distributions,	ability mass mixture of
Descriptive statistic and density, momentum of the statistic and density of the statistic and density, momentum of the statistic and density and de	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Moreover distributions. Law of large numbers, central limit theorem.  Statistics  Toperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and of the stimators.	distribution, probablized distributions,  Z,ZK correlation, linear r	ability mass mixture of 2 regression,
Descriptive statistics and density, momentum of the state	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Moreover distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression,	distribution, probablixed distributions,  Z,ZK correlation, linear ruse of matrices in	ability mass mixture of 2 regression, regression.
Descriptive statistic and density, mome 11SIS Point estimation, procorrelation coefficier 11X31	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. No distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and continuous of the determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1	distribution, probablixed distributions,  Z,ZK correlation, linear ruse of matrices in	ability mass mixture of  2 regression, regression.
Descriptive statistic and density, mome 11SIS Point estimation, procorrelation coefficier 11X31 11X32	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. No distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2	distribution, probablised distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z	ability mass mixture of  2 regression, regression. 2 2
Descriptive statistic and density, mome 11SIS Point estimation, proceeding 11X31 11X32 11X33	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions is controlled by the distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and on the controlled by the distribution, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z  Z	ability mass mixture of  2 regression, regression.  2 2
Descriptive statistic and density, mome and density, momentum and density, momentum and density and de	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions is controlled by the distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and on the controlled by the distribution, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, and project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy	distribution, probablisted distributions,  Z,ZK correlation, linear ruse of matrices in  Z  Z  Z  KZ	ability mass mixture of  2 regression, regression.  2 2 2 2
Descriptive statisticand density, mome and density, momentum and density and density, momentum and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions is controlled in the control of the properties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and on the coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, analysis of variance, and analysis of variance, analysis of variance,	distribution, probablisted distributions,  Z,ZK correlation, linear if use of matrices in  Z Z Z KZ implementation. 1	ability mass mixture of 2 regression, regression. 2 2 2 2 2
Descriptive statistic and density, mome and density, mome and density mome	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions are distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op	distribution, probablisted distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z KZ implementation. Timization.	ability mass mixture of  2 regression, regression.  2 2 2 2 2 The outcom
Descriptive statistic and density, mome and density and density, mome and density and dens	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. No distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  arse is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming	distribution, probablisted distributions,  Z,ZK correlation, linear is use of matrices in  Z Z Z KZ implementation. Timization.  KZ	ability mass mixture of  2 regression, regression.  2 2 2 2 2 The outcom
Descriptive statistics and density, mome and density a	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions are distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and on the coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Co	distribution, probablised distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z kZ implementation. 1 timization.  KZ mputation of efficie	ability mass mixture of  2 regression, regression.  2 2 2 2 2 Che outcom  2 ent solution.
Descriptive statisticand density, mome and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions are distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and on the coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Co	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z kZ implementation. 1 timization.  KZ mputation of efficiences	ability mass mixture of  2 regression, regression.  2 2 2 2 2 Che outcom  2 ent solution. 2
Descriptive statisticand density, mome and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions are distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and on the coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Co	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z kZ implementation. 1 timization.  KZ mputation of efficiences	ability mass mixture of  2 regression, regression.  2 2 2 2 2 Che outcom  2 ent solution. 2
Descriptive statisticand density, mome and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Note that the distributions are distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and on the coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Co	distribution, probablised distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z implementation. Timization.  KZ mputation of efficients  KZ tation using formal	ability mass mixture of  2 regression, regression.  2 2 2 2 2 Che outcom  2 ent solution.  2 I techniques
Descriptive statisticand density, mome and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Material distributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  Jem of linear programming with a parameter in objective function, on right sides and in the matrix of coefficients of linear constraints. Con Transportation Software Engineering  Oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.  Graph Theory	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z KZ implementation. Trimization.  KZ mputation of efficients  KZ tation using formal	ability mass mixture of  2 regression, regression.  2 2 2 2 2 7 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statisticand density, mome and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Modistributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  arse is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Co  Transportation Software Engineering  oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z KZ implementation. Trimization.  KZ mputation of efficients  KZ tation using formal	ability mass mixture of  2 regression, regression.  2 2 2 2 2 7 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statisticand density, mome and density and	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Modistributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Contrasportation Software Engineering  oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.  Graph Theory  Iterminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence are	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z implementation. 1 timization.  KZ mputation of efficients  KZ tation using formal  KZ imum spanning tree	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statisticand density, mome and density and	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Maistributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3  Mathematical Models in Economy  ares is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coefficients of linear constraints. Co  Transportation Software Engineering  oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.  Graph Theory  Iterminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence are for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z implementation. Timization.  KZ mputation of efficients  KZ tation using formal  KZ imum spanning trend optimization and	ability mass mixture of  2 regression, regression.  2 2 2 2 2 Che outcom  2 letechniques  2 ee, shortest d algorithms
Descriptive statisticand density, mome and density and	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Modistributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Contrasportation Software Engineering  oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.  Graph Theory  Iterminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence are	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z implementation. 1 timization.  KZ mputation of efficients  KZ tation using formal  KZ imum spanning tree	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statisticand density, mome and density and	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Maistributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3  Mathematical Models in Economy  ares is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coefficients of linear constraints. Co  Transportation Software Engineering  oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.  Graph Theory  Iterminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence are for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.	distribution, probablished distributions, IzzK correlation, linear ruse of matrices in Z Z Z Z Implementation. Timization. KZ mputation of efficient KZ tation using formal KZ imum spanning transport of the control optimization and KZ	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statisticand density, mome and density and	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Modistributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and not, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3  Mathematical Models in Economy  are is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coefficients of linear constraints. Concept and practical usuage.  Graph Theory  I terminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence and for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.  Introduction to Solid State Physics  ds. crystal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties	distribution, probablished distributions, IzzK correlation, linear ruse of matrices in Z Z Z Z Implementation. Timization. KZ mputation of efficient KZ tation using formal KZ imum spanning transport of the control optimization and KZ	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statistic and density, mome and density an	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Maistributions. Law of large numbers, central limit theorem.  Statistics roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  are is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  Jem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Constructions of the function of software Engineering  Oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.  Graph Theory  Iterminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal propertities graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence and for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.  Introduction to Solid State Physics  dis, crystal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties Magnetism.	distribution, probablished distributions, IzzK correlation, linear ruse of matrices in Z Z Z Z Implementation. Translation. KZ mputation of efficient KZ tation using formal KZ imum spanning translation and optimization and KZ of solids. Semicor KZ	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statistic and density, mome and density an	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Mistributions. Law of large numbers, central limit theorem.  Statistics roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 3  Mathematical Models in Economy  Inse is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  Idem of linear programming with a parameter in objective function, on right sides and in the matrix of coefficients of linear constraints. Constrained engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implement and practical usuage.  Graph Theory  Iterminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence and for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.  Introduction to Solid State Physics  ds, crystal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties Magnetism.  Foundation of MATLAB Programming	distribution, probablished distributions, IzzK correlation, linear ruse of matrices in Z Z Z Z Implementation. Translation. KZ mputation of efficient KZ tation using formal KZ imum spanning translation and optimization and KZ of solids. Semicor KZ	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statistic and density, mome and density an	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Maistributions. Law of large numbers, central limit theorem.  Statistics roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 2  Project 3  Mathematical Models in Economy  are is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Coefficients of linear constraints. Coefficients of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minian path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence are for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.  Introduction to Solid State Physics  ds, crystal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties Magnetism.  Foundation of MATLAB Programming  ple of algorithmization, flow charts, description of MATLAB environment and its settings, MATLAB help, mathematical operators, matricentry of properties of the program code debugging.	distribution, probablished distributions, Inseed distributions, IzZK correlation, linear ruse of matrices in ZZZ ZZ Implementation. Translation. KZ Imputation of efficient KZ Imputation using formal KZ Imputation and optimization and KZ Imputation and Imp	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statisticand density, mome and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Midstributions. Law of large numbers, central limit theorem.  Statistics  roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 1  Project 2  Project 3  Mathematical Models in Economy  area is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  are of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Constrained and practical usuage.  Graph Theory  Iterminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minimal path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence and practical usuage.  Graph Theory  Introduction to Solid State Physics  Introduction, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties Magnetism.  Foundation of MATLAB Programming  ple of algorithmization, flow charts, description of MATLAB Programming and program code debugging.  Transport Models and Transport Excesses	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z KZ implementation. Titimization.  KZ mputation of efficie  KZ imum spanning formal  KZ imum spanning trend optimization and optimization and the control of solids. Semicor  KZ ices and elements  Z,ZK	ability mass mixture of  2 regression, regression.  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Descriptive statisticand density, mome and density and densi	s. Basic probability concepts: elementary events and events, definitions and interpretation of probability. Random variable, probability ents, some discrete and continuous distributions. Random vectors: joint and marginal distributions, mean vector, covariance matrix. Maistributions. Law of large numbers, central limit theorem.  Statistics roperties of point estimators, methods of point estimation. Testing statistical hypothesis. Fit test, independence test. Regression and ont, coefficient of determination, general linear model, statistical inference in linear regression, analysis of variance, multiple regression, Project 1  Project 2  Project 2  Project 3  Mathematical Models in Economy  are is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained op Parametrical and Multicriterial Programming  lem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Coefficients of linear constraints. Coefficients of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, minian path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence are for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.  Introduction to Solid State Physics  ds, crystal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties Magnetism.  Foundation of MATLAB Programming  ple of algorithmization, flow charts, description of MATLAB environment and its settings, MATLAB help, mathematical operators, matricentry of properties of the program code debugging.	distribution, probablished distributions,  Z,ZK correlation, linear ruse of matrices in  Z Z Z KZ implementation. Timization.  KZ mputation of efficie  KZ imum spanning formal  KZ imum spanning trond optimization and to the control of the control	ability mass mixture of  2 regression, regression. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

12PKD			
	Rail Transport Designing	Z,ZK	3
Railway lines netw	ork. Vehicle and track relation. Traction. Track geometrical parameters. Clearance profile. Railway lines routing. Superstructure and sul	bstructure of the ra	ailway lines.
	Switches. Railway stations. City rail transport.		
12PPOK	Designing Roads, Highways and Motorways	KZ	3
	ownership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standard	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	y device. Crossing	s, junctions,
_	intersections.		
12X31	Project 1	Z	2
12X32	Project 2	Z	2
12X33	Project 3	Z	2
12Y1C1	Designing Roads in Civil 3D I	KZ	2
	voted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software. Students go through	•	•
particular linear b	building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calculation. The	course also includ	es a basic
	explanation of the traffic building design in the real-life profession.		
12Y1C2	Designing Roads in Civil 3D II	KZ	2
	voted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software. Students go through		
particular linear b	uilding, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calculation. The	previously acquire	d skills are
	improved and developed. Students learn to design intersections.		1
12Y1DS	Project Documentation in Practice	KZ	2
Project document	ation creating. Project documentation types. Support materials for project documentation creating. Building permit obtaining process.	Budget and pricing	g. Practical
	creation of some project documentation parts.		
12Y1HD	Traffic Noise	KZ	2
Acoustic introducti	on, basic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regulations	<ul> <li>S. Creation acousti</li> </ul>	ic climate in
area, principles	of urban acoustic, noise transmission, soundproofing. Types of noise sources in area. Determination of acoustic situation in the area	of interest. Method	dology of
	computing and measurement of transport noise. Acoustic studies, measuring protocol.		
12Y1KN	Combined Transportation	KZ	2
Combined transp	ort strategy and legislation. Load units. Means of transport in combined transport. Combined transport systems. Transshipping areas.	. Multimodal logisti	c centres.
12Y1PC	Pedestrian and Cycling Transport	KZ	2
Routes for pedestri	ans. Pedestrian crossings. Modifications for blind, dim-sighted and disabled people. Design of cycle routes network. Ways of cycle route	layout and design	parameters
for cyclists. Separ	ation of cyclists from other transport modes. Cycle tracks and its design - one way streets, reserved traffic lanes, bus stops, crossings	s with other transp	ort modes,
	crossroads. Traffic signs and road marking for cyclists.		
12Y1PD	Assessment of Transport Structures	KZ	2
Assessment of tran	, isport structures, the EIA process. Multicriteria assessment methods, risk analysis, SWOT analysis. Landscape character, possibilities of	fits protection and	assessment
transport structures	s on the landscape. Rating fragmentation and landscape connectivity in the preparation of linear structures. Practical examples of ass	essment of traffic	buildings on
	the environment.		
12Y1PU	Organization Disposition of Railway Stations	KZ	2
	on. Passenger transport equipment. Freight transport equipment. Branch lines and railway traffic inside industrial company areas. Zon	ie stations. Format	ion varde
_	rve stations. Technology of work in railway station with regard to its disposition. Railway station documentations in the Czech Republic		ion yarus.
		: railway network.	iioii yaius.
12Y1RZ	Railway Lines Reconstruction	KZ	2
12Y1RZ Principles of track n	Railway Lines Reconstruction naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. De	KZ egradation of track	2 geometrical
12Y1RZ Principles of track r	Railway Lines Reconstruction  naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Douses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super	KZ egradation of track rstructure and subs	2 geometrical structure.
12Y1RZ Principles of track r parameters - car 12Y1SU	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. De uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance	KZ egradation of track rstructure and subs	2 geometrical structure.
12Y1RZ Principles of track r parameters - car 12Y1SU Getting familiar v	Railway Lines Reconstruction naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develops	KZ egradation of track rstructure and subs KZ ment of road netwo	2 geometrical structure. 2 ork, short,
12Y1RZ Principles of track r parameters - car 12Y1SU Getting familiar v	Railway Lines Reconstruction  naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented developed the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair	KZ egradation of track rstructure and subs KZ ment of road netwo	2 geometrical structure. 2 ork, short,
12Y1RZ Principles of track r parameters - car 12Y1SU Getting familiar v medium and long-t	Railway Lines Reconstruction naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.	KZ egradation of track rstructure and subs KZ ment of road networ	geometrical structure.  2 ork, short, ussed in the
12Y1RZ Principles of track reparameters - cale 12Y1SU Getting familiar verification medium and long-terms.	Railway Lines Reconstruction naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented developer erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping	KZ egradation of track rstructure and subs KZ ment of road networ r methods are disco	2 geometrical structure. 2 ork, short, ussed in the
12Y1RZ Principles of track reparameters - cale 12Y1SU Getting familiar verification medium and long-terms of tracking familiar verification.	Railway Lines Reconstruction  naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  nsport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of water transport in the transport system of the Czech Republic and the EU.	KZ egradation of track rstructure and subsection KZ ment of road networr methods are disco	geometrical structure. 2 ork, short, ussed in the 2 sic systems
12Y1RZ Principles of track reparameters - cale 12Y1SU Getting familiar verification medium and long-terms of tracking familiar verification.	Railway Lines Reconstruction  naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and	KZ egradation of track rstructure and subsection KZ ment of road networr methods are disco	geometrical structure. 2 ork, short, ussed in the 2 sic systems
12Y1RZ Principles of track reparameters - call 12Y1SU Getting familiar verification medium and long-term of waterways in Europe 12Y1VC	Railway Lines Reconstruction  naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.	KZ egradation of track rstructure and subs KZ ment of road networ r methods are disco	geometrical structure.  2 ork, short, ussed in the  2 usic systems legal regime
12Y1RZ Principles of track reparameters - call 12Y1SU Getting familiar verification medium and long-term of waterways in Eu 12Y1ZU	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism	KZ egradation of track rstructure and subs KZ ment of road networ r methods are disco	geometrical structure. 2 ork, short, ussed in the 2 usic systems legal regime 2
12Y1RZ Principles of track reparameters - call 12Y1SU Getting familiar verification medium and long-term of waterways in Eu 12Y1ZU	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope the material of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial	KZ egradation of track rstructure and subs KZ ment of road networ r methods are disco	geometrical structure. 2 ork, short, ussed in the 2 usic systems legal regime 2
12Y1RZ Principles of track reparameters - call 12Y1SU Getting familiar verification medium and long-t 12Y1VC Basic modes of trace of waterways in Eu 12Y1ZU Survey on history	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.	KZ egradation of track rstructure and subs KZ ment of road networ r methods are disco	geometrical structure.  2 ork, short, ussed in the  2 sisic systems legal regime  2 ettlements.
12Y1RZ Principles of track reparameters - car 12Y1SU Getting familiar verification medium and long-term 12Y1VC Basic modes of trace of waterways in Eu 12Y1ZU Survey on history 12ZADI	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering	KZ egradation of track rstructure and subs KZ ment of road networ methods are disco	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.
12Y1RZ Principles of track reparameters - car 12Y1SU Getting familiar verification medium and long-term 12Y1VC Basic modes of trace of waterways in Eu 12Y1ZU Survey on history 12ZADI	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  setrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognoses.	KZ egradation of track rstructure and subs KZ ment of road networ methods are disco	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.
12Y1RZ Principles of track reparameters - car 12Y1SU Getting familiar verification medium and long-term factor medium factor med	Railway Lines Reconstruction  naintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance    Road Management and Maintenance	KZ egradation of track rstructure and subs KZ ment of road networ methods are disco	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.
12Y1RZ Principles of track in parameters - car 12Y1SU Getting familiar v medium and long-t 12Y1VC Basic modes of tra of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terres	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Duses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognositic and environment.  Database Systems	KZ egradation of track rstructure and subs KZ ment of road networ methods are disco	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.
12Y1RZ Principles of track in parameters - car 12Y1SU Getting familiar v medium and long-t 12Y1VC Basic modes of tra of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terres	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Deserged and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognostratific and environment.  Database Systems  of database systems, conceptual model, relational data model, the principles of normal forms, relational database design, security and	KZ egradation of track rstructure and subs KZ ment of road networ methods are disco	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terres	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Duses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  setrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognostraffic and environment.  Database Systems  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 a queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems.	KZ egradation of track rstructure and subs KZ ment of road networ methods are discor r methods are discor KZ water transport. Ba its operation. The I KZ arrangement of se	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.  3 air transport.
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terres 14DB Basic concepts of	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Duses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented developerer strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  setrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognostraffic and environment.  Database Systems  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 tental Information Systems	KZ egradation of track rstructure and subs KZ ment of road networ methods are discor r methods are discor KZ water transport. Ba its operation. The I  KZ arrangement of seconds. Z,ZK sis. Traffic safety. A  KZ d integrity of data, the WWW.  KZ	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.  3 air transport.
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terres 14DB Basic concepts of	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope term strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognorables and environment.  Database Systems  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 a Information Systems  ols of objects control (control and planning) including problems related to these toole use, theory of information and knowledge, know	KZ egradation of track rstructure and subs KZ ment of road networ methods are discor r methods are discor KZ water transport. Ba its operation. The I  KZ arrangement of seconds. Z,ZK sis. Traffic safety. A  KZ d integrity of data, the WWW.  KZ	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.  3 air transport.
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t  12Y1VC Basic modes of train of waterways in Eu  12Y1ZU Survey on history  12ZADI Traffic survey. Terres  14DB Basic concepts of 14ISYS State-of-the-art to	Railway Lines Reconstruction  maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance  with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vorope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  strial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognor Traffic and environment.  Database Systems  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 a Information Systems  ols of objects control (control and planning) including problems related to these toole use, theory of information and knowledge, know planning methodologies, transaction systems, theory of computer networks,	KZ egradation of track rstructure and subs KZ ment of road networ methods are discord r	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.  3 air transport.  2 database  2 systems, IS
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terret 14DB Basic concepts of 14ISYS State-of-the-art too	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope rerm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  estrial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognor Traffic and environment.  Database Systems  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 to Information Systems  ols of objects control (control and planning) including problems related to these toole use, theory of information and knowledge, know planning methodologies, transaction systems, theory of computer networks,	KZ egradation of track rstructure and subs KZ ment of road networ methods are discor r methods are discor KZ water transport. Ba its operation. The I KZ arrangement of se	geometrical structure.  2 ork, short, ussed in the  2 usic systems legal regime  2 ettlements.  3 usir transport.  2 database  2 systems, IS
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terret 14DB Basic concepts of 14ISYS State-of-the-art to 14KSP "CAD systems" ter	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  Introduction to Transportation Engineering  Statial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognor Traffic and environment.  Database Systems  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 Information Systems  olds of objects control (control and planning) including problems related to these toole use, theory of information and knowledge, know planning methodologies, transact	KZ egradation of track rstructure and subs KZ ment of road networ methods are discover r me	geometrical structure.  2 ork, short, ussed in the  2 usic systems legal regime  2 ettlements.  3 ur transport.  2 database  2 systems, IS
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terret 14DB Basic concepts of 14ISYS State-of-the-art to 14KSP "CAD systems" ter	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  Introduction to Transportation Engineering  Introduction to Transportation Engineering  Strial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognor Traffic and environment.  Database Systems  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 to Information Systems  ols of objects control (control and planning) including problems related to these toole use, theory of information and know	KZ egradation of track rstructure and subs KZ ment of road networ methods are discover r me	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.  3 asir transport.  2 database  2 systems, IS
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terret 14DB Basic concepts of 14ISYS State-of-the-art to 14KSP "CAD systems" ter and CA systems.	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  nsport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of v rope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  strial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognoratific and environment.  Database Systems  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 Information Systems  ols of objects control (control and planning) including problems related to these toole use, theory of information and knowledge, know planning methodologies, transaction systems, theory of computer networks, sema	KZ egradation of track rstructure and subs KZ ment of road networ methods are discover r me	geometrical structure.  2 ork, short, ussed in the  2 asic systems legal regime  2 ettlements.  3 asir transport.  2 database  2 systems, IS
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terret 14DB Basic concepts of 14ISYS State-of-the-art too 14KSP "CAD systems" ter and CA systems.	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented development strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  Insport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of vrope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning. Introduction to Transportation Engineering strial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognosing fraffic and environment.  Database Systems  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 the Information Systems  ols of objects control (control and planning) including problems related to these toole use, theory of information and knowledge, know planning methodologies, transaction systems, theory of computer networks,	KZ egradation of track rstructure and subs KZ ment of road networ methods are discover r me	geometrical structure.  2 ork, short, ussed in the  2 usic systems legal regime  2 ettlements.  3 usir transport.  2 database  2 systems, IS  2 applications invironment
12Y1RZ Principles of track in parameters - can 12Y1SU Getting familiar vice medium and long-t 12Y1VC Basic modes of train of waterways in Eu 12Y1ZU Survey on history 12ZADI Traffic survey. Terret 14DB Basic concepts of 14ISYS State-of-the-art too 14KSP "CAD systems" ter and CA systems.	Railway Lines Reconstruction maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail vehicles. Do uses and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railway super  Road Management and Maintenance with ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develope erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair classroom as well as investment activity in highway engineering.  Waterways and Shipping  nsport. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages of v rope, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways and in inland navigation, navigation rules of operation, navigation maps.  Principles of Urbanism  of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.  Introduction to Transportation Engineering  strial roads. Residential zone. Land - use planning. Railway transport. Public mass transport. Integrated traffic systems. Traffic prognoratific and environment.  Database Systems  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 Information Systems  ols of objects control (control and planning) including problems related to these toole use, theory of information and knowledge, know planning methodologies, transaction systems, theory of computer networks, sema	KZ egradation of track rstructure and subs KZ ment of road networ methods are discover r me	geometrical structure.  2 ork, short, ussed in the  2 usic systems legal regime  2 ettlements.  3 usir transport.  2 database  2 systems, IS  2 applications invironment

14SIAP	Networks and Protocols	KZ	2
	tion model, history and development of the Internet, principle of data transfer through computer networks (TCP/IP), performance of b		
RARP, TCP, UDP, Te	elnet, FTP, DNS, DHCP POP3, IMAP), data acquirement from the Internet sources, communicating ability via the Internet and fundamentary	entals of own web p	presentation
4.4110.T.T	design by the means of web sites.	1/7	
14UATT	Introduction to Automatization and Telecommunication Systems	KZ	2
	echnical cybernetics, automatization in transportation, human as the weakest element, signalling in transpotation, modelling and proj gical and infromation system in post, principle of telecommunication signal transmission, solving of telecommunication networks, mo		I
integrated teermole	networks and services, NGN networks.	dulating methods,	manimodiai
14UPRO	Introduction to Programming	KZ	2
	oment, methods of structured programming, high-level programming languages, basics of C programming languages (types, variable		
	functions), programming techniques, complexity.		
14WS1	Webdesign With Web Standards 1	KZ	2
HTTP, URL, markur	o languages HTML and XHTML, anchors, tables, images, lists, forms, features of CSS, rules of accessible web pages, usability of we	b pages, problems	of different
	browsers, one, two and three column pages, page validation, conditional comments, CSS hacks.		
14WS2	Webdesign With Web Standards 2	KZ	2
Advanced CSS ted	chniques. Multi-level menu. SEO - Search Engine Optimization. Web technologies: JavaScript, Flash, PHP, AJAX. AccessKey, Favicor API for maps or searching. Audit and page statistics. Use of useful scripts. Systems for content management.	n, rollovers, lightbo	ixes. Using
14X31		Z	2
14X31	Project 1 Project 2	Z	2
	•	Z	2
14X33	Project 3		
14Y1AP	Automatization in Mail ost shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information trans	KZ	2
	ost shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information trans nformation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e-com	-	- 1
application of now ii	technological principles of end telecommunication devices.	mamoution notwon	K II ILONIACCO,
14Y1AV	Animation and Visualization	KZ	2
	tions and modeling of NURBS, Patch objects, selection of objects (according to filter and properties). 3D Studio MAX systems and Spa		
and other effects	s, rendering filters, Motion blur, advanced animations, Motion panel. Modeling for morphing and animation, bone formation, animation	n using Inverse Kin	ematics.
14Y1BE	Barrierless Transport	KZ	2
	less accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Students	_	- 1
of barrierless enviro	nment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation systems	and transportation	technology.
4.4)/4.DM	Theoretical knowledge will be supplemented by practical examples.	1/7	
14Y1BM	Biometric Methods rms, authentication methods, principles and performance measurement of biometric systems, overview of biometric technologies, ha	KZ	2
	nethod, 2D and 3D face recognition, vein patterns on the wrist, ear biometrics, fingerprint recognition, skin spectroscopy, behavioral r		
. caa rooogac	in transport applications, safety and risks of biometric technologies.		. 5.0
14Y1GD	GIS and Maps Digitalization	KZ	2
	rces and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databases. In	nterlinking externa	l references
	with drawings containing maps.		
14Y1HW	Computer Hardware	KZ	2
Computer archite	cture, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate process of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate process of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate process of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate process of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate process of logical circuits design and their realization using FPGA.	parts designing - co	ontrollers,
404445	arithmetic and logical units, I/O subsystem.	1/7	
14Y1MP	Modeling Complex Assemblies and Models in Parametric Modeller	KZ	2
Assemblies prog	gramming - tools and methodology of working subassemblies and assemblies, sheet metal parts modelling, welded assemblies, pipel  Photorealistic output rendering - physical and material properties, lighting sources. MKP - visual example.	lines, and distributi	ion lines.
14Y1NP	Non-parametric 3D Modelling	KZ	2
	arametricmodeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, object		
	connected with external database. Basic definition of work with lights, materials and reflexes. Models presentation.	adia orodiion, non	· ······ · ·
14Y1OL	Linux Operating System	KZ	2
	Linux system installation. X-window system. Rights - Users and Groups, ACL rights. Filesystems and file attributes. Programs and pro		
Basic console comn	mands. Configuration files. Managing SW system. Programs in graphic mode - tools for text, graphics, sound, video, communication. Ser	rvices managemen	t. Principles
	of OS secure configuration. Remote administration.		
14Y1OP	Operating System	KZ	2
	tallation GNU/Linux OS. X-window system. Rights management - users and groups, ACL rights. Filesystems and attributes. Programs		
runlevels. Basic c	console programs / commands. Config files. SW management, package systems. Programs in graphic shell - text, spreadsheet, graph	nic editors, sound,	video and
14V1D2	communication. Services management. Safe and secure configuration of OS. Remote administration.	V7	2
14Y1P2	Computer Aid of Transportation Projecting 2  pplication for transportation projecting aid. AutoCAD environment possibilities of basic tasks automatizing (programming, scripting, dat	KZ	2 nced blocks
-	ites, relation to databases). Work in projecting group, external references. Basic tasks for cummunication projecting (clotoidic transition		
(	section). Basics of 3D modelling.	.,	3
14Y1PA	3D Modeling in AutoCAD	KZ	2
	arametric modeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, object		
	connected with external database. Basic definition of work with lights, materials and reflexes. Models presentation.		
14Y1PG	Computer Graphics	KZ	2
Basic formats of g	graphic and possibilities of their editing and mutual conversion. Use of individual types according to character of work. Work with editing		n the user
4045	level scope) using layers, DPI, colors. Basics of digital photography, scanning and computer technology like monitors and graphic		
14Y1PI	Corporate Information System	KZ	2
	n-knowledge, components of information system, syntatic and semantic sense of data, structure of corporate information system, pa uction, storage, etc.), corporate information politic and information control, risks of information system operation, legal environment of		-
(personalistic, prodi	uction, storage, etc.), corporate information politic and information control, risks of information system operation, legal environment of state information system, information system security, data protection, safety politics.	miormation syster	n operation,

14Y1VII   CProgramming Language Perposestor, beased of the C Brangage (dates see, certain comments, hardon, ponited, operation), recording, certaining, certain			
Implementation of obstact data bytes (FRO. LEO), italy, incorparating tachniques (corting, searching, accustion), using bibase operations.  14Y1VM   Development of Applications for Mobile Devices Object tolerated programming. Javas programming impragage (prints), and incorporate in PIPE language (prints), and incorporate in PIPE language (prints), and incorporate in PIPE language (prints).  14Y1VM   Development of Applications for Mobile Devices Object tolerated programming. Javas programming impragage, devoluted and entire years. Auditotic development application - volgates, continues, beneficial development application, services. OLI.  14Y1VII   Volume   Vol	14Y1PJ	C Programming Language KZ	
14Y1VM Development of Applications for White Insuration systems, and inclinates, Analyses of Insulated sorting and demonstration of southors. Your own application recogning in the Insuration of State of Applications for Mobile Devices  14Y1VM Development of Applications for Mobile Devices  14Y1VM White Insuration systems are application and provided the Insuration of State of Insuration of State of Insuration State of Insuration State of Insuration Insuratio	C programming land		and unions
seabelities of surpleing language PHP. Overview of PHP Impages yorks, and functions. Analysis of inferhed scripts and demonstration of solutions. Value consuperations in PHP Impages yorks, and functions for Mobile Devices.  14Y11VI   Secretary of PHP Impages yorks, and functions for Mobile Devices.	14V1TI		2
14Y1VM Development of Applications for Mobile Devices	I I		
Development of Applications for Mobile Devices Object of onese of programming, Java programming language, development environment, programs, programming language, development environment, programs, programming language, development environment, programming language, development, pro	occionitios of comp		rogramme
Object contented programming, away programming language, development environment, operating system Android, development explication - widgets, containers, investors, more permissions, services, GUI.  14Y11VI   Workbodisign   Workbo	14Y1VM	<u> </u>	2
utable sign 1  14Y1VI   Webbesign 2  14Y1VI   Webbesign 3  14VI   Webbesign 3	ı		
useres will learn the basics of communication HTTP LIRE, and addressing, markup languages HTML and XHTML, HTML tags, rules of web booses, creating on to throw column jourt pages, also validation, conditional comments. The provided summers and adsectors the issue of web booses, creating on to throw column jourt pages, also validation, conditional controls. The provided is an advanced techniques CSS, responsive webdasign, CSS fronteness, content ranargement systems, Javas-Script, (Joury, SEO, web serve installation + configuration directives. Topics will be practiced or practical examples.  14Y12M  Fundamentals of parametric directions, can adequate modeling   KZ   2 assets of work all products and parts creation. Select drawing by help of generator feelations, parametric directions, can be provided and parts creation. Selection desired by the products and parts creation. Selection desired by the products and parts creation. Selection desired parts creation in the products and parts creation. Selection desired parts creation to the products and parts creation. Selection desired parts creation to the collection of the products and parts creation. Selection desired parts creation to the products are parts and the products and parts creation. The products are products and parts creation and the products are products and parts creation of the products and parts creation and parts creation. Selection desired in the products and parts creation. Selection desired on the products and parts creation. Selection desired parts creation parts creation and parts creation. Selection desired parts are producted and parts creation. Selection desired parts are producted and parts creation of the products and parts creation. Selection desired parts are producted and parts creation of the products and parts creation of the products and parts creation of the products and par		permissions, services, GUI.	
and selectors, the issue of web browsers, creating one to three column isyout pages, sites validation, conditional comments. Topics will be practiced exemples.  14Y17M Fundamentals of parametric and adaptive modeling General products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation. Select disease, programment of the products and parts creation and parts creation. Fundamentals of Electrotechnic terms, circuit quantities. Periodic courses characteristics. Electric croculs demention, uncoded valued other, current objects and basic cross dementions. Selected circuits with the products and parts creation of selective products and parts creation and products and parts creation of superposition in direct current circuits.  14ZINF Fundamentals of Fundamentals of Informatics of Informatics and parts creation. Purplementals of Parameteris and upon control of adaptive models from 2D selections. Informatics of the products and parts creation. Selected making by help of products and parts creation of selective products. With MES-circuit-basic parts and parts creation. Purplementals of Parameteris and parts creation. Purplementals of Parameteris and parts creation of adaptive models from 2D selections. Informatics of parameteris and parts creation. Purplementals of Parameteris and parts creation of adaptive models from 2D selections. Informatics of parts and parts creation. Purplementals of Parameteris and parts creation. Purplemental and oppositions. Purplemental and oppositions. Purplemental and parts creation. Purplemental and parts creation. Purpl	14Y1W1	Webdesign 1 KZ	2
Methodesign 2   Wichola (1972)   Wicho	Students will learn t	the basics of communication HTTP, URL and addressing, markup languages HTML and XHTML, HTML tags, rules of web accessibility and usability, CS	S propertie
utulents will learn advanced techniques CSS, responses webdesign, CSS forotrands, content management systems, Juvas-Cirti, (Joury, SEO, web server installation * configurate directions of practical examples.**  14Y12M   Fundamentals of parametric and adaptive modeling active products and parts creation. Steetch drawing by help of genetic relations, parameters camerations.  14ZAET   Fundamentals of Electrotechnic terms, circular quantities. Periodic courses characteristics. Electric circular semination, unloaded value divider, current divider. Transfiguration start rights unto development creations to the products and parts certain analysis elementar remotics method of consecutive vention, unloaded value divider, current divider. Transfiguration start rights unto development crucius with a help of circular analysis elementar remotics method of consecutive vention, unloaded value divider, current divider. Transfiguration start rights unto other circular circulars.  14ZINF   Transfiguration and principle of superposition in direct current circulars.  14ZINF   Transfiguration start rights and parts covering the products and parts covering and principle of superposition in direct current circulars.  14ZINF   Transfiguration start rights and parts covering the products and parts covering to the products and parts coveri	and selectors,		
Adv12M Fundamentals of partners. Fundamentals control in a comparison of adaptive modeling RZ 2 sists of work at products and parts creation. Stetch drawing by help of goometic relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and export from and sections of the control of the contro			
14/12M   Fundamentals of parametric and adaptive modeling states of work at products and parts creation. Sketch drivingly by they of general relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and expect to the following the products and parts creation. Sketch and several products and parts creation. Sketch and several products and parts creation. Sketch and several products and parts creation of adaptive models from 2D sketches. Import and expect to the following the products of the products and parts creation in the products of the products and parts creation in the products of the products and parts creation in the products of the products and parts creation in the products of the products and parts creation in the products of the products and parts creation and parts of the products and parts creation in the products of the products of the products and parts creation and parts of the products and parts creation and parts of the products and parts of the	students will learn		onfiguratio
sales of work at products and parts creation. State in drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and export from and as accelerations from and the sale in the s	4.47/4.71/4		_
Trans and to another systems. Fundamentals of assemblies creation.  Fundamentals of Electrotochnics terms, circuit quantities. Periodic courses characteristics. Electric circuits celements and basic circuit members. Assignating of bipoles and discontinuor to direct current circuits with a heje of circuit annabias elementar methods disconded college divider, current divider. Transfiguration start-riplang and principle of superposition in direct current circuits with a heje of circuit annabias elementar methods. Assignation of direct current circuits with a heje of circuit annabias elementar methods in annotated of consecutive equation, unlicated value divider. Transfiguration start-riplang and principle of superposition in direct current circuits.  14.ZINF Fundamentals of Informatics KZ 2  14.ZINF Fundamentals of Informatics Informatic			
4.2.	asies of work at pr		t and expe
asic electroschnic ierms, circuit quantities. Periodic courses characteristics. Electric circuits elements and basic circuit members. Assignating of bipoles and basic circuit elements (and basic circuit service). The providence of course of course to the providence of circuit analysis elemental membors and prioricuits with a help of circuit analysis elemental membors. Assignating of bipoles and control course of circuits.  14.2/INF   Fundamentals of Informatics   KZ   2   14.2/INF   Fundamentals of Informatics   KZ   2   14.2/INF   Fundamentals of providence of control courses of sylves and advanced features, computer functions and information transmission. Number systems incl. anthrends graphs, calculations, and their proprieties. Flow charts for algorithms drivening, and providence of control of the providence of the providenc	147AFT	<u>,                                      </u>	2
and principle of superposition in direct ourrent circuits.  Fundamentals of Informatics Fundamentals of Parametric Ordinations, functions and procedures. Work with MS-Excel-table graphs, calculations, functions  14ZM Fundamentals of Parametric Programming Fundamentals Surcurses and Style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elemental Surcurses and Style. Selection of conversation to original relations. Academic toxy principles and reading comprehension. Principles of Hebroic.  15,21Th Foreign Language - French 1 Foreign Language - French 1 Foreign Language - French 1 Fundamental Students of Compositions. Presentations of own findings in both oral and written forematical texts and their features; practice of oral and written presentation.  15,21Th Foreign Language - French 1 Foreign Language	ı	l	
142 N    Introduction to faculty network, MS-Word and Open Office, use of syles and advanced features, computer functions and information transmission. Number systems incl. attinuations algorithms and their proprieties. Flow charts for algorithms drawing, Mathematic and topic ordering algorithms incl. functions and procedures. Work with MS-Excel - table graphs, calculations, burctions.  14ZM   Fundamentals of Parametric Programming   KZ   2  14ZM   Fundamentals of Parametric Programming   KZ   2  15JZ1A   To Products and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and experiments of the products and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and experiments of the products and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and experiments are successful as a skylestic forms. Oral and written presentation of original research, Academic text principles and reading comprehension. Principles of networks.  15JZ1R   Foreign Language - English 1  Foreign Language - English 2  3  Grammar structure and stylistics. Conversational and spocialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary, Basic kinds of compositions. Presentations of own findings in both or	olution to direct cu	rrent circuits with a help of circuit analysis elementar methods: method of consecutive reduction, unloaded voltage divider, current divider. Transfiguration st	ar-triplang
introduction to faculty network, MS-Word and Open Office, use of styles and advanced features, computer functions and information transmission. Number systems inct, arithmetic localizations, Algorithms and their proprieties. Flow charts for algorithms drawing, Alathamatic and logic ordoring algorithms inct, functions and procedures. Work with MS-Excel - table graphs, calculations, functions.  14ZM   Fundamentals of Parametric Programming   KZ   2   2   2   2   2   2   2   2   2		and principle of superposition in direct current circuits.	
Inclusions Algorithms and their proprieties. Flow charts for algorithms drawing, Mathematic and logic ordering algorithms incl. functions and procedures. Work with MS-Excel - table graphs, calculations, functions.    14ZM			
142M			
14.2M   Fundamentals of Parametric Programming	alculations. Algorit		cel - table
sisted of work at products and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2D sketches. Import and expertence of the provided of th	4.4714		_
Institution   From and to another systems. Fundamentals of assemblies creation.			
15J21A   Foreign Language - English 1   Z   3   3   3   3   3   3   3   3   3	asics of work at pr		t and expe
rammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  15JZ1F Foreign Language - French 1  Foreign Language - French 1  7 3  7 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills, widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1R Foreign Language - German 1  15JZ1R Foreign Language - German 1  15JZ1R Foreign Language - Russian 1  5 Foreign Language - Spanish 1  5 Foreign Language -	15.IZ1A		3
stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  Foreign Language - French 1  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral and written presentation.  15JZ1N  Foreign Language - German 1  Foreign Language - German 1  Foreign Language - Russian 1  Substantial texts and their features: practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral and written presentation on findings in both oral and written forms. Technical texts and their features: practice of oral and written presentation on findings in both oral and written forms. Technical texts and their features: practice of oral and written presentation on oral material texts and their features: practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral			_
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study, Focus on improvement in perceptive and communicative skills; widening the vocabulary, Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1N Foreign Language - German 1  To Preign Language - German 1  To Preign Language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1R Foreign Language - Russian 1  Foreign Language - Russian 1  To Preign Language - Spanish 1  To Russian 1  To Preign Language - Spanish 1  To Russian 1  To Russian 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features: practice of oral and written presentation.  15JZ2A Foreign Language - Spanish 1  Foreign Language - Spanish 1  Foreign Language - English 2  Foreign Language - Foreign Language russian 2  Foreign Language - Foreign Language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both ora			
Improvement in perceptive and communicative skills; widening the vocabulary, Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1N	15JZ1F	Foreign Language - French 1 Z	3
texts and their featuries; practice of oral and written presentation.  Foreign Language - German 1  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1R   Foreign Language - Russian 1   Z   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  Foreign Language - Spanish 1   Z   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of thetoric.  15JZ2F Foreign Language - French 2  Foreign Language - French 2  Foreign Language -	Grammar structu	ure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study.	Focus on
Foreign Language - German 1 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1R   Foreign Language - Russian 1 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1S   Foreign Language - Spanish 1 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2A   Foreign Language - English 2  Tammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementas stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  15JZ2P   Foreign Language - French 2   Z,ZK   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the voca	improvement in p		Technical
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study, Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1R   Foreign Language - Russian 1   Z   3   3   Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1S   Foreign Language - Spanish 1   Z   3   Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2A   Foreign Language - English 2   Z,ZK   3   Tammarical structures and style. Selection of conversation of original research. Academic text principles and reading comprehension. Principles of retoric.  15JZ2F   Foreign Language - French 2   Z,ZK   3   Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written			
improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1R   Foreign Language - Russian 1  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1S   Foreign Language - Spanish 1  15JZ2A   Foreign Language - English 2  15JZ2A   Foreign Language - Foreign Language - Spanish 1  15JZ2A   Foreign Language - Foreign Language - Spanish 1  15JZ2A   Foreign Language - Foreign Language - Spanish 1  15JZ2A   Foreign Language - Foreign Language - Spanish 1  15JZ2A   Foreign Language - Foreign Language - Spanish 1  15JZ2A   Foreign Language - Foreign Language - Spanish 1  15JZ2B   Foreign Language - Foreign Language - Spanish 1  15JZ2B   Foreign Language - German 2  15JZ2B   Foreign Language - Foreign Language - Spanish 2  15JZ2B   Foreign Language - German 2  15JZ2B   Foreign Language - Oral and written presentations of own findings in both oral and written forms. Technical texts and their feat			_
texts and their features; practice of oral and written presentation.  15JZ1R   Foreign Language - Russian 1    15JZ1S   Foreign Language - Russian 1    15JZ1S   Foreign Language - Russian 1    15JZ1S   Foreign Language - Russian 1    15JZ2N   Foreign Language - Russian 1    15JZ2P   Foreign Language - Russian 2    15JZ2N   Foreign Language - Russian 3    15JZ2N			
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1S	improvement in p		roomiloai
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills, widening the vocabulary. Basic kinds of compositions. Presentations of winfindings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ1S   Foreign Language - Spanish 1   Z   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary and sale and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2A   Foreign Language - English 2   Z,ZK   3 arammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  15JZ2F   Foreign Language - French 2   Z,ZK   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and written features in texts and their features; practice of oral and written presentation.  15JZ2N   Foreign Language - German 2   Z,ZK   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R   Foreign Language - Russian 2   Z,ZK	15JZ1R	Foreign Language - Russian 1 Z	3
texts and their features; practice of oral and written presentation.  15JZ1S	Grammar structu		Focus on
Foreign Language - Spanish 1  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2A  Foreign Language - English 2  Foreign Language - English 2  Foreign Language - French 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations.  15JZ2N  Foreign Language - German 2  Z,ZK  3  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S  Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational	improvement in p		Technical
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary, Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2A Foreign Language - English 2 Z,ZK 3 rammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of netoric.  15JZ2F Foreign Language - French 2 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N Foreign Language - German 2 Foreign Language - German 2 Foreign Language - Russian 2 Foreign Language - Spanish 3 Foreign Language - Foreign La			
improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  7. Z/ZK 3  7. Tammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  7. Z/ZK 3  7. Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  7. July Foreign Language - German 2  7. Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  7. July Foreign Language - Russian 2  7. July Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  7. July Grammar structure and stylistics. Conversational and specialised topi			
texts and their features; practice of oral and written presentation.  15JZ2A Foreign Language - English 2 Z,ZK 3 rammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of thetoric.  15JZ2F Foreign Language - French 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N Foreign Language - German 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R Foreign Language - Russian 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S Foreign Language - Spanish 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fiel			
Foreign Language - English 2  rammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  15JZ2F Foreign Language - French 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N Foreign Language - German 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R Foreign Language - Russian 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ28 Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic ki	improvement in p		recnnicai
rammatical structures and style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and communicative skills. Elementa stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  15JZ2F Foreign Language - French 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N Foreign Language - German 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R Foreign Language - Russian 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S Foreign Language - Spanish 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of	15 172 /		2
stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles of rhetoric.  15JZ2F Foreign Language - French 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N Foreign Language - German 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R Foreign Language - Russian 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S Foreign Language - Spanish 2 Z,ZK 3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A Foreign Language -			
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N  Foreign Language - German 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  Foreign Language - Russian 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S  Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  Foreign Language - English 3			2.0
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N   Foreign Language - German 2   Z,ZK   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R   Foreign Language - Russian 2   Z,ZK   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S   Foreign Language - Spanish 2   Z,ZK   3 Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations.  15JZ3A   Foreign Language - English 3   Z   3 Grammar structure and	15JZ2F		3
improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2N			_
Foreign Language - German 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R  Foreign Language - Russian 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S  Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A  Foreign Language - English 3	improvement in p	perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms.	Technical
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R  Foreign Language - Russian 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S  Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentations.  15JZ3A  Foreign Language - English 3  Foreign Language - English 3  Foreign Language group level and with regard to the Faculty's fields of study pilot. Focus on improvement and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus on improvement in perceptive and communicative skills; widening the vocabulary.			
improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2R  Foreign Language - Russian 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S  Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A  Foreign Language - English 3  Z  3  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus on improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus on improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus on improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus on improvement in perceptive and stylistics.			
texts and their features; practice of oral and written presentation.  15JZ2R Foreign Language - Russian 2 Foreign Language or Russian 2 Foreign Language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S Foreign Language - Spanish 2 Foreign Language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A Foreign Language - English 3 Z 3 arammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics.			
Foreign Language - Russian 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S  Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A  Foreign Language - English 3  Z  3  Tanguage - English 3  Toreign Language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics.	improvement in p		rechnical
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S Foreign Language - Spanish 2 Z,ZK 3  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A Foreign Language - English 3 Z 3  Tammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or improvement in perceptive and stylistics.	15 IZOD		2
improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ2S Foreign Language - Spanish 2 Z,ZK 3  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A Foreign Language - English 3 Z 3  Trammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or			_
texts and their features; practice of oral and written presentation.  15JZ2S Foreign Language - Spanish 2 Z,ZK 3  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A Foreign Language - English 3 Z 3 arammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or			
Foreign Language - Spanish 2  Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A  Foreign Language - English 3  Z  3  rammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or	,		
Grammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study. Focus on improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A  Foreign Language - English 3  Z  3  Trammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus or	15JZ2S	<u> </u>	3
improvement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written forms. Technical texts and their features; practice of oral and written presentation.  15JZ3A Foreign Language - English 3  Foreign Language group level and with regard to the Faculty's fields of study pilot. Focus or study pilot. Focus or study pilot.			_
15JZ3A Foreign Language - English 3 Z 3 strammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus of			
rammar structure and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's fields of study pilot. Focus of			
provement in perceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral and written form. Technical tex			
and their features; terminology.	mprovement in per		chnical text

15JZ3F	Foreign Language - French 3	Z	3
Grammar and styli	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of $k$		
-	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v		_
	features. Practice of oral and written presentation.		
15JZ3N	Foreign Language - German 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 la	anguage structure	knowled
and perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v	with (professional)	text and
	features. Practice of oral and written presentation.		
15JZ3R	Foreign Language - Russian 3	Z	3
-	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language level and study focus at the Faculty. Improvement of language level and study focus at the Faculty. Improvement of language level and study focus at the Faculty. Improvement of language level and study focus at the Faculty. Improvement of language level and study focus at the Faculty.		-
ind perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v features. Practice of oral and written presentation.	with (professional)	text and i
15JZ3S	Foreign Language - Spanish 3	Z	3
	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of $k$		_
	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v		
	features. Practice of oral and written presentation.	,	
15JZ4A	Foreign Language - English 4	Z,ZK	3
rammar structure	and stylistics. Conversational and specialised topics selected according to the language group level and with regard to the Faculty's	fields of study - pi	ot. Focus
nprovement in per	ceptive and communicative skills; widening the vocabulary. Basic kinds of compositions. Presentations of own findings in both oral ar and their features; terminology.	nd written form. Te	chnical te
15JZ4F	Foreign Language - French 4	Z,ZK	3
-	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		_
nd perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v features. Practice of oral and written presentation.	with (professional)	text and
15JZ4N	Foreign Language - German 4	Z,ZK	3
-	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		
nd perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v	with (professional)	text and
	features. Practice of oral and written presentation.		T -
15JZ4R	Foreign Language - Russian 4	Z,ZK	3
-	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of lad communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work was a communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work was a communicative skills, vocabulary development.		
ind perceptive and	features. Practice of oral and written presentation.	with (professional)	text and
15JZ4S	Foreign Language - Spanish 4	Z,ZK	3
	istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of $k$		_
	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v		
	features. Practice of oral and written presentation.	. ,	
15X31	Project 1		_
	1 10/600 1	Z	2
15X32	,	Z 	2
	Project 2	Z	2
15X33	Project 2 Project 3	Z Z	
15X33 15Y1BO	Project 2	Z Z KZ	2 2 2
15X33 15Y1BO	Project 2 Project 3 Work Safety and Health Protection in Transportation	Z Z KZ	2 2 2
15X33 15Y1BO	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. H	Z Z KZ	2 2 2
15X33 15Y1BO Fundamental legis	Project 2 Project 3 Work Safety and Health Protection in Transportation  lative, 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.	Z Z KZ ealth protection p	2 2 2 rogramme
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society	Z Z KZ ealth protection p KZ Stations, bridges,	2 2 2 rogramme 2 industrial
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d	Project 2 Project 3 Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  lefinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway	Z Z KZ ealth protection p KZ Stations, bridges,	2 2 2 rogramme 2 industrial 2
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn raily	Project 2 Project 3  Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repu	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric trace	2 2 2 rogramme 2 industrial 2 stion, Worl
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn raily	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repulyay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection.	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric trace	2 2 2 rogramme 2 industrial 2 stion, Worl
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv ar II railways, railv	Project 2 Project 3  Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuivay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuly development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines o	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system,	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuly development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Li	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines o KZ ttle Entente, its pr	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system,	Project 2 Project 3  Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuly development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lier Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines o KZ ttle Entente, its pr	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv /ar II railways, railv /ersailles system, goals. Europe afte	Project 2 Project 3  Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuly development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lier Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and it New quality of French-German relationship - a driving power of starting European integration.	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its press consequences of	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system, goals. Europe after	Project 2 Project 3  Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuly development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lier Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its prosecute consequences of KZ KZ	2 2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH ersailles system, goals. Europe after 15Y1FD France - geograf	Project 2 Project 3  Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuly development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lier Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and it New quality of French-German relationship - a driving power of starting European integration.	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its pr ts consequences of KZ KZ	2 2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system, goals. Europe after 15Y1FD France - geograp	Project 2 Project 3  Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society  lefinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  lays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Republic very development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lieter Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  Only and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air traffich society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its pr ts consequences of KZ KZ	2 2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system, goals. Europe after 15Y1FD France - geograp Frei	Project 2 Project 3  Work Safety and Health Protection in Transportation  lative, 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.  History of Art and Society  lefinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  lays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Republic and the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lieter Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  Dohy and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air traf	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its pris consequences of KZ fic, specialised tech gastronomy. KZ	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO undamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv ar II railways, railv 15Y1EH ersailles system, goals. Europe after 15Y1FD France - geograp Frei 15Y1HD istory of city mass	Project 2 Project 3  Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repulvay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Liester Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  only and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air traffich society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French History of City Mass Transport	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its pr ts consequences of KZ ffic, specialised te ch gastronomy. KZ and developments	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system, goals. Europe after 15Y1FD France - geograp Frei 15Y1HD istory of city mass	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuivay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lieter Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  shy and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air traffich society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French History of City Mass Transport  stransport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trends as	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its pr ts consequences of KZ ffic, specialised te ch gastronomy. KZ and developments	2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system, goals. Europe after 15Y1FD France - geograp Free 15Y1HD istory of city mass cleara	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuivay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lies ar Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and it New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  by and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air transport and culture. Current political system. System of education, studying in France. Selected authors of French literature. French society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French society and culture. Current political system. System of education, studying in France of transport networks in the world, current trends and transport in the world, development of tram, bus and	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its pressores of the consequences	2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system, goals. Europe after 15Y1FD France - geograp Free 15Y1HD istory of city mass cleara 15Y1HE Basic knowledge	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuivay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context  formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Liether Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  by and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air transport and culture. Current political system. System of education, studying in France. Selected authors of French literature. French society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French stransport in the world, development of tram, bus and trolle	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its presence of KZ fic, specialised tech gastronomy. KZ and developments olic and Slovakia. KZ factors on health of	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
15X33 15Y1BO fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv 15Y1EH fersailles system, goals. Europe after 15Y1FD France - geograp Free 15Y1HD istory of city mass cleara 15Y1HE Basic knowledge reation and prote	Project 2 Project 3  Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society  efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway  vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuly development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Liester Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  by and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air traffich society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French History of City Mass Transport  History of City Mass Transport networks in the world, current trends a transport in the world, development of tram, bus and trolley-bus operation systems in the Czech Reput Work Hygiene and Ergonomics in Traffic  of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its presence of KZ fic, specialised tech gastronomy. KZ and developments olic and Slovakia. KZ factors on health obssibilities and ski	2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv /ar II railways, railv /ersailles system, goals. Europe afte 15Y1FD France - geograp Free 15Y1HD distory of city mass cleara 15Y1HE Basic knowledge creation and prote	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repress and the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lier Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  French Area Studies and Transportation  French Area Studies and Transport Road traffic, motorways, railway traffic, TGV, air tratach society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French History of City Mass Transport  In the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trends and successive many programs. History of transport in the world, current trends and the systems. History of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Reput  Work Hygiene and Ergonomics in Traffic  of occupational hygiene and ergonomics, and their application in transport	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric tracons, railway lines of KZ ttle Entente, its protection p KZ fic, specialised tech gastronomy. KZ and developments olic and Slovakia. KZ factors on health obssibilities and ski	2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv /ar II railways, railv /ersailles system, goals. Europe afte 15Y1FD France - geograp Free 15Y1HD distory of city mass cleara 15Y1HE Basic knowledge creation and prote	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repusay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connection railway accidents, railway junctions. Excursions and projections.  European Integration within Historical Context formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lier Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  Only and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air trainch society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French History of City Mass Transport  Is transport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trends a transport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the Czech Republic nearly systems. History of transport networks in the Czech Republic health. Mutual links: man-nenchine-environment. Adaptation of technology to practical examples fr	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its presence of KZ fic, specialised tech gastronomy. KZ and developments olic and Slovakia. KZ factors on health obssibilities and ski	2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv /ar II railways, railv /ersailles system, goals. Europe afte 15Y1FD France - geograp Free 15Y1HD distory of city mass cleara 15Y1HE Basic knowledge creation and prote	Project 2 Project 3 Work Safety and Health Protection in Transportation Iative, 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.  History of Art and Society Insurance, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway Project Railway, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development of tram, bus and the land of 19th century, regional railways epoch, railways of the "First Repuvay development of tram, bus and trailways programment and projections.  French Area Studies and Transportation  French Area Studies and Transport and traffic, motorways, railway traffic, TGV, air transport and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traff	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its presence of KZ fic, specialised tech gastronomy. KZ and developments olic and Slovakia. KZ factors on health obssibilities and ski	2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv /ar II railways, railv /ersailles system, goals. Europe afte 15Y1FD France - geograp Free 15Y1HD distory of city mass cleara 15Y1HE Basic knowledge creation and prote 15Y1HL deginnings of flying World airports. Fa	Project 2 Project 3 Work Safety and Health Protection in Transportation lative, 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.  History of Art and Society lefinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway lefinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway lefinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway lefinitions, railways, railways protections.  European Integration within Historical Context formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Lie ar Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and in New quality of French-German relationship - a driving power of starting European integration.  French Area Studies and Transportation  by and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air transport and culture. Current political system. System of education, studying in France. Selected authors of French literature. French Society and culture. Current political system. System of education, studying in France. Selected authors of French literature. French Society and culture. System of education, studying in France. Selected authors of French literature. French Society and culture. System of education, studying in France. Selected authors of French literature. French History of	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its presence of KZ fic, specialised tech gastronomy. KZ and developments olic and Slovakia. KZ factors on health of possibilities and ski KZ irports in the Czec faviation. Golden	2 2 2 2 2 2 2 2 2 2 2 3 2 3 3 3 4 2 4 2
15X33 15Y1BO Fundamental legis 15Y1DU History of art - d 15Y1DZ Horse-drawn railv far II railways, railv fersailles system, goals. Europe after 15Y1FD France - geograp Free 15Y1HD istory of city mass cleara 15Y1HE Basic knowledge treation and prote 15Y1HL teginnings of flying World airports. Fa	Project 2 Project 3 Work Safety and Health Protection in Transportation Iative, 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.  History of Art and Society Insurance, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.  History of Railway Project Railway, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repuvay development of tram, bus and the land of 19th century, regional railways epoch, railways of the "First Repuvay development of tram, bus and trailways programment and projections.  French Area Studies and Transportation  French Area Studies and Transport and traffic, motorways, railway traffic, TGV, air transport and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traff	Z Z KZ ealth protection p KZ Stations, bridges, KZ ublic", electric traceons, railway lines of KZ ttle Entente, its presence of KZ fic, specialised tech gastronomy. KZ and developments olic and Slovakia. KZ factors on health of possibilities and ski KZ irports in the Czec faviation. Golden	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

16UDDM			
	Introduction to Transportation and Manipulation Technics	ZK	2
Means of transporta	ation and transportation systems. Principles, functions and arrangement of means of transportation. Motors and their characteristics. Water	er transportation.	Manipulatin
10)/04	technics. Principles of lifting machines and conveyors. Legislature.		
16X31	Project 1	Z	2
16X32	Project 2	Z	2
16X33	Project 3	Z	2
16Y1EN	Energy Requirements of Vehicles	KZ	2
Dynamics and the	driving inertial of the vehicles. Types of energy - kinetic, static, heat, chemical and others. Ways of energy change into kinetic energy.	Combustion eng	ine, electri
	drive, steam engine, air engine. Energy accumulation means, accumulator, flywheel, fuel cell. Energy recuperation. WTW analy		
16Y1IS	Interactive simulators and simulations	KZ	2
	ry and application of computing equipment. Creating computing models. Mechanical and dynamic systems and their mathematical models.		methods.
Simul	lation of vehicle dynamics, on-land carriage in particular. Virtual reality systems. Practical exercise with simulation software and intera-	ctive simulators.	
16Y1KS	Quality and Reliability of Vehicles	KZ	2
Quality and reliab	oility theory in design, development, production and operation of vehicles. Definition and possible approach to quality and reliability. Ke	y legislation. FME	EA (Failure
Mode and Effects	Analysis), QFD (Quality Function Deployment), DFx (Design for Assamly, Manufacturying, Quality, Services) and other methods us	sed in industrial a	pplications
	Knowledge-based systems of quality and reliability, data collection.		1
16Y1PV	Operation, Construction and Maintenance of Vehicles	KZ	2
Methods of vehicle	e production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measureme	nt. Transmission i	mechanisn
	General principles of engine diagnostics.		1
16Y1RE	Control and Electronic Vehicle Systems	KZ	2
	ots of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, disadvantages, disadv		
and hybrid drive	e control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic control,	safety, communic	ation and
	comfort systems.		
16Y1TJ	Technological Quality Aspects	KZ	2
ertification and ac	creditation. Quality management. Standards of Quality Management and its application. Quality system creation. Tools and methods of quality is a standard of the control of		t. Conform
10)(1)(T	verification. Environmental certification. Workplace certification. QMS integration. Classification, certification of products and products are products and products are products.		
16Y1VT	Development in Railroad Vehicles	KZ	2
Railroad venicles	s traction. Railroad vehicle parametres regulation. Control and driving of railroad vehicles. Importance in heavy duty and personal tran	sportation. Critica	al situation
10)//70	assesment. New materials in design. International standardization.		
16Y1ZG	Introduction into Applied Computer Graphics	KZ	2
Computer graphics	s, division and applications with emphasis on transport, including development and research. Colours, colour perception, colour scher	nes, models, prin	ciples of 2
and 3D generation	on, elementary algorithms for graphic data workout. Visualisation principles and tasks, technics, graphics and visualisation HW basics	. Introduction to 2	D and 3D
	graphics software.		
16Y1ZL	Vehicle Testing, Legislation and Construction	KZ	
/ehicle bus and mo		NΔ	2
oo.o, bas and mic	otorbike costruction, aggregate computing, driving resistance, build and parameters of traction, constructional arrangement of personal carries of traction and the carries of traction are carried to the carries of traction and the carries of traction are carried to the carries of traction and the carries of traction are carried to the carries of traction and the carries of traction are carried to the carries of traction and the carried to the carries of traction and the carries of traction are carried to the ca		1
	otorbike costruction, aggregate computing, driving resistance, build and parameters of traction, constructional arrangement of personal castation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode	ars, trucks, buses	1
		ars, trucks, buses	1
legis	slation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode	ars, trucks, buses lling in testing.	, motorbike
legis	slation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)	ars, trucks, buses lling in testing.	, motorbike
legis	slation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.	ars, trucks, buses Iling in testing. Z	, motorbike
legis	slation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law	ars, trucks, buses Illing in testing.  Z  tent.	, motorbike 2
17BPLE 17DAS 17E	slation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa	ars, trucks, buses Iling in testing.  Z  tent.  Z,ZK	2 1 3
17BPLE 17DAS 17E	station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics	ars, trucks, buses Iling in testing.  Z  tent.  Z,ZK	, motorbike 2 1 3
17BPLE 17DAS 17E	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consumers	ars, trucks, buses Iling in testing.  Z  tent.  Z,ZK	, motorbike 2 1 3
17BPLE 17DAS 17E Microeconomic a	station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ	, motorbike 2 1 3 rs. Market
17BPLE 17DAS 17E Microeconomic a	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ	, motorbike 2 1 3 rs. Market
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, teleco 17ERP	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport	zers, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta	motorbike 2  1 3 rs. Market  2  2  2  3 3 3 3 3
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, teleco 17ERP	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of Company Economy and Management	zers, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, sustants, sustant	motorbike 2  1 3 rs. Market  2  2  2  3 3 3 3 3
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, teleco 17ERP	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the company Economy and Management  neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance	zers, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, sustants, sustant	motorbike 2 1 3 rs. Market 2 ainability. 3
17BPLE  17DAS  17E  Microeconomic a  17EDOT  Transport, telect  17ERP  Company and its i	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consums structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the communications appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, busine	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK	motorbike 2  1 3 rs. Market 2 ainability. 3 investmer
17BPLE  17DAS  17E  Microeconomic a  17EDOT  Transport, telect  17ERP  Company and its i  17TDL  assic terms in transic	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the communications appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, busines.  Transport Technology and Logistics	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK ners and produce  KZ modes, ITS, susta  Z,ZK ial management, ss plan.  Z,ZK anning in pasange	motorbike 2  1 3 rs. Market  2 ainability. 3 investmer  3 er and freig
17BPLE  17DAS  17E  Microeconomic a  17EDOT  Transport, telect  17ERP  Company and its i  17TDL  assic terms in transic	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the communications appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business of transport Technology and Logistics  Sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plansport technology and logistics.	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK ners and produce  KZ modes, ITS, susta  Z,ZK ial management, ss plan.  Z,ZK anning in pasange	motorbike 2  1 3 rs. Market  2 ainability. 3 investmer  3 er and freig
17BPLE  17DAS  17E  Microeconomic a  17EDOT  Transport, telect  17ERP  Company and its i  17TDL  tassic terms in transi	Sachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, particular steps of transports. Economics and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consums structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the economics and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business transport Technology and Logistics  Sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport planning of transport planning of transport of view of operator and client. Organisation of public city transport planning of transport planning of view of operator and client.	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK ners and produce  KZ modes, ITS, susta  Z,ZK ial management, ss plan.  Z,ZK anning in pasange	motorbike 2  1 3 rs. Market  2 ainability. 3 investmer  3 er and freig
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, telect 17ERP Company and its in 17TDL asic terms in transansport. Organisa	station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pathological factors from the proint of view of operator and client. Organisation of public city transport means.  Economics  Economics  Economics  Economy, Transport, Telecommunications, public choice.  Economy, Transport, Telecommunications  Company Economy and Management  neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business  Transport Technology and Logistics  sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport means.	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to   Z,ZK	motorbike  2  1  3 rs. Market  2  ainability.  3 investmer  3 er and freigtechnologi
17BPLE  17DAS  17E  Microeconomic a  17EDOT  Transport, telect  17ERP  Company and its in  17TDL  assic terms in transansport. Organisa	Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication Law  Transportation and communication law- railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consums structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the proparation of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business of transport Technology and Logistics  sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport of traffic in each transport means.  Graph Theory and its Applications in Transport	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to   Z,ZK	motorbike  2  1  3 rs. Market  2  ainability.  3 investmer  3 er and freigtechnologi
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, teleco 17ERP Company and its ii 17TDL asic terms in trans ansport. Organisa 17TGA Basic terms of 17X31	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consums structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the economics and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business appraisal, basics of management, organizational structures, human resources management, marketing, continuity, funding appraisal, basics of management, organization of problems of operator and client. Organization of public city transport means.  Graph	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the color of th	motorbike  2  1  3 rs. Market  2  ainability.  3 investmer  3 ar and freig technologi  4 ciplines.  2
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, teleco 17ERP Company and its i 17TDL asic terms in transeansport. Organisa 17TGA Basic terms of 17X31 17X32	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of the economic development, legislation, European union, regulation, liberalisation, transport of the economic development, legislation, European union, regulation, liberalisation, transport of the economic decision making of consum structures, public choice.  Economy, Transport, Telecommunications  Company Economy and Management  neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business and profit profi	ars, trucks, buses Illing in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of the control o	motorbike  2  1  3 rs. Market  2  2ainability.  3 investmen  3 er and freig technologie  4 ciplines.  2 2
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, teleco 17ERP Company and its i 17TDL casic terms in transport. Organisa 17TGA Basic terms of 17X31 17X32 17X33	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport of Company Economy and Management  neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business of transport Technology and Logistics  Fort technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plastion of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport transport means.  Graph Theory and its Applications in Transport f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Project 1  Project 2  Project 3	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of the co	motorbike  2  1  3 rs. Market  2  2ainability.  3 investmen  3 er and freig technologie  4 ciplines.  2  2  2
17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, teleco 17ERP Company and its i 17TDL dasic terms in transcansport. Organisa 17TGA Basic terms of 17X31 17X32 17X33 17Y1AF	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport in the properties of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business transport Technology and Logistics  Transport Technology and Logistics  sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plastion of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport technology and Logistics and their application using various transport means.  Graph Theory and its Applications in Transport  f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Project 1  Project 2  Project 3  Alternative Forms of Transportation Project Financing	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of	motorbike  2  1  3 rs. Market  2  ainability.  3 investmen  3 er and freig technologi  4  ciplines.  2  2  2  2
legis 17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, telect 17ERP Company and its i 17TDL Basic terms in transport. Organisa 17TGA Basic terms of 17X31 17X32 17X33 17Y1AF There will be speci	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport relations, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport reighbourhood, structure of assets and libilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business transport Technology and Logistics  Fransport Technology and Logistics  sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport and their application using various transport means.  Graph Theory and its Applications in Transport  f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Project 1  Project 2  Project 3  Alternative Forms of Transportation Project Financing  fied such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come fr	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ters and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of	motorbike  2  1  3 rs. Market  2  2  2  2  2  final debt
legis 17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, telect 17ERP Company and its i 17TDL Basic terms in transport. Organisa 17TGA Basic terms of 17X31 17X32 17X33 17Y1AF There will be speci	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport  Company Economy and Management  neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, financ  appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, busines  Transport Technology and Logistics  sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport transport means.  Graph Theory and its Applications in Transport  f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or  Project 1  Project 2  Project 3  Alternative Forms of Transportation Project Financing  fied such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come from its plant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an alternation.	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ters and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of	motorbike  2  1  3 rs. Market  2  2  2  2  2  final debt
legis 17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, telect 17ERP Company and its i 17TDL Basic terms in transport. Organisa 17TGA Basic terms of 17X31 17X32 17X33 17Y1AF There will be specis not a direct partic	Station in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode  Bachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport in eighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, business transport Technology and Logistics.  Fransport Technology and Logistics  sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Timetabling. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport means.  Graph Theory and its Applications in Transport  figraph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Project 1  Project 2  Project 3  Alternative Forms of Transportation Project Financing  ifed such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come from it sipant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an alternopiect.	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of	motorbike  2  1  3 rs. Market  2 ainability.  3 investmen  4 ciplines.  2  2  2  final debte ansportation
legis 17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, telect 17ERP Company and its a 17TDL asic terms in transport. Organisa 17TGA Basic terms of 17X31 17X32 17X33 17Y1AF There will be specisted on a direct partice	Sachelor Thesis (for Branch LED) Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport in Company Economy and Management neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, busine.  Transport Technology and Logistics sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport planning various transport means.  Graph Theory and its Applications in Transport of graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Project 1  Project 2  Project 3  Alternative Forms of Transportation Project Financing fled such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come from incipant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an alternative public Sector Economy	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  ners and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of	motorbike  2  1  3 rs. Market  2  2  2  2  4  ciplines.  2  2  2  final debt ansportati
legis 17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, telect 17ERP Company and its i 17TDL asic terms in trans ansport. Organisa 17TGA Basic terms of 17X31 17X32 17X33 17Y1AF There will be specient a direct particular	Sachelor Thesis (for Branch LED)  Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication for oral bachelor degree graduation.  Transportation and Communication Law  Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics  and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications  communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport or Company Economy and Management  neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, busine:  Transport Technology and Logistics  Sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Pleation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport means.  Graph Theory and its Applications in Transport  f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Project 1  Project 2  Project 3  Alternative Forms of Transportation Project Financing  fied such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come from incipant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an altern project.  Public Sector Economy  notal theory of public sector, public choice theory, externalites, dec	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  tents and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of the control o	motorbike  2  1  3 rs. Market  2  2  2  2  4  ciplines.  2  2  2  final debt ansportati  2  MCA, CEA
legis 17BPLE 17DAS 17E Microeconomic a 17EDOT Transport, telect 17ERP Company and its i 17TDL asic terms in trans ansport. Organisa 17TGA Basic terms of 17X31 17X32 17X33 17Y1AF There will be species not a direct partice	Sachelor Thesis (for Branch LED) Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.  Transportation and Communication Law Transportation and communication law - railway, road transport, ropeway, water road, air transport, telecommunication, post, pa  Economics and macroeconomic interpretation of economic relations. Method and subject of the economics. Economic decision making of consum structures. Labour and capital, efficiency, ownership, public choice.  Economy, Transport, Telecommunications communications, demand, supply, indicators, economic development, legislation, European union, regulation, liberalisation, transport in Company Economy and Management neighbourhood, structure of assets and liabilities, depreciation, costs, revenues and profit, break-even point, costing, inventory, finance appraisal, basics of management, organizational structures, human resources management, marketing, company strategy, busine.  Transport Technology and Logistics sport technology and logistics. Particular steps of transport planning. Quantification of carriage relations. Line planning. Plation of traffic in each transport means. Technological factors from the point of view of operator and client. Organisation of public city transport planning various transport means.  Graph Theory and its Applications in Transport of graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in or Project 1  Project 2  Project 3  Alternative Forms of Transportation Project Financing fled such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come from incipant of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an alternative public Sector Economy	ars, trucks, buses lling in testing.  Z  tent.  Z,ZK  tents and produce  KZ  modes, ITS, susta  Z,ZK  ial management, ss plan.  Z,ZK  anning in pasange ansport. Logistic to the control of the control o	motorbike  2  1  3 rs. Market  2  2  2  2  4  ciplines.  2  2  2  final debt ansportati  2  MCA, CEA

air cargo. Information systems in air transport. Global distribution systems.

17Y1ND	Maritime Transportation	KZ	2
	ance of the maritime transportation, theoretical discipline in maritime transportation, seafaring vessels, maritime ports and their utilizations are also as the seafar and their utilizations are also as the		
naritime ports, trai	nsport corridors and link by maritime, river and rail transport I and II, global maritime corridors, logistics of maritime transportation, man	ıtıme transportatio	on and sma
17Y1OF	containers, ITS in maritime transport.  Personal Finance	KZ	2
	Personal Finance   Personal Fi		1
	(ouaget, infancing of basic living needs), debt (loans and credits, payment instruments, interest and lees, debt trap), infancing of housefinancing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability and		-
	(retirement savings and investments (investment nonzon, return, risk, investment strategy), insurance (insurance types, suitability and	,,, 500011	
17Y1PM	Personnel Management	KZ	2
	rces, work group, man as personality, planning, choice, evaluation and education of human sources, work adaptation, teamwork, inter	cultural communic	cation.
17Y1ST	Titan Simulation	KZ	2
Titan is a mana	gement game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produ	ct. Students set a	price and
etermine the qua	ntity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequences	of their decisions	s by the for
	of financial corporate reports and they use this information for other business decisions.		1
18KIAD	Kinematics and Dynamics	Z,ZK	2
-	e, motion along a curve. Kinematics of rigid plane, kinematics of rigid body. Point mass kinematics, system of point masses. Point mass	-	-
masses, equation	on of motion. Method of Newton. Princle of D'Alembert. Free and forced vibration with one degree of freedom. Viscous damping. Impa	ct theory. Introduc	tion to the
18MRI1	solution of vibration with multiple degrees of freedom.  Materials 1	Z,ZK	3
-	INIALETIALS   Basics of thermodynamics of metals and their alloys. Balanced binary diagrams. Alloys of iron with carbon. Deterioration of solid solu		1
o. your on dolule.	steel and cast irons. Physical features. Mechanical features. Dephectostopic testing. Corosion.	ono. ricating pro	Joodoning UI
18MRI2	Materials 2	KZ	2
-	ntal concepts, notions. The main materials groups. Semiconductors. Polymers. Special types of steel. Properties and application of the		
18PZP	Elasticity and Strength	Z,ZK	3
	ression. Bending of beam. Shear stress in bending of beam. Design and analysis of cross section of beam. Design of riveted, bolted a	,	
	Analysis of deflection curve of beams. Torsion of circular cross sections. Combined loading. Stability.		
18ST	Statics	Z,ZK	3
	of forces. Calculation of reactions of mass objects and compound systems. Assessment of internal forces on statically determinate b	· ·	
rinciple of virtual	works. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss construction	n, method of joints	and metho
10775	of sections. Geometry of cross sections. Plane fiber polygons and catenary cables.	1.7=	T -
18TTED	Creation of Technical Documentation	KZ	2
echnical standard	ls, international standardization, types of technical drawings, representation of technical objects, technical diagrams and charts, dimensi	onal and geometri	cal accurac
19721	arrangement of drawing sheets, types of schemes and their creation.	7	2
18X31	Project 1	Z 	2
18X32	Project 2		2
18X33	Project 3	Z	2
18Y1AM	Anatomy, Mobility and Safety of Man  Appropriate Latructure and growth of hone Articular inject. Perpedalling of hone tippus. Appropriate latructure of muscles. Placed circulation	KZ	2
•	Anatomical structure and growth of bones. Articular joint. Remodelling of bone tissue. Anatomical structure of muscles. Blood circulation of muscular-skeletal system. Injury of human organs and musculo-skeletal system during traffic accidents. Mobility of ill and injured r		
and bioinecilatiics	joint prostheses. Protective means and traffic safety regulations.	iun anu mo liedli	ioni. i iuiila
18Y1D1	Dynamics of Routes and Vehicles 1	KZ	2
	yriamics of routes and verticles in verticle		1
, arrany	Vibroisolation and absorbers of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.	3	
18Y1EM	Experimental Methods in Mechanics	KZ	2
	role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive		II .
experimental pro	ocedures and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement. Fa	tigue and lifetime	prediction.
	Instrumented hardness testing. Introduction to electron microscopy. Errors in measurement.		
18Y1MT	Engineering Materials	KZ	2
•	ew of main classes of materials used in technical design. In addition to main classes of materials, i. e. metals, ceramics, polymers and	•	ntion is pai
	logical materials and to biomimetics. Integral approach to material selection process is also demonstrated based on so called Ashby's		T -
18Y1PS	Computer Simulations in Mechanics	KZ	2
•	erview of tools for stress analysis of structures. Numerical methods in mechanics, finite element method. Geometric model developme	•	ū
om omer CAE Sy	restems. Assignment of material properties. The types of elements and their use. Discretization of solid model. Boundary conditions and tasks of structural and modal analysis. Introduction to complex nonlinear problems.	application of the	e ioau. Bas
18Y1SN	Statically Nondeterminated Structures	KZ	2
	the beam element, virtual work. Strength method. Frame analysis by strength method. Deformation method. Frame analysis by deforn		
	lastic Winkler's foundation. Calculation beam on elastic foundation. Basement of the mathematical elasticity. Calculation of walls. Calc		
	shells. Examples of calculations.	- [	,
18Y1UK	Introduction of Rail Vehicles	KZ	2
	tics and parameters rail transport systems - railway and urban transport. Basis driving mechanics rail vehicles - equation of motion tra		I
ack resistance. To	otal running resistance. Acceleration force. Analyzing driving cycle rail vehicle. Speed-power diagrams and characteristics rail vehicle -	hydromechanic, h	ydrodynam
	and electric drive. Design concept rail vehicles and drive of wheel set.		1
20SSA	Systems Analysis	Z,ZK	3
	ation. Typical tasks of systems analysis: on the interface, routes in system, decomposition and integration, on systems feedback. Cap		-
Systems identification	t behaviour, aim behaviour, the genetic code, architecture and identity of systems. Fundamentals of technical cybernetics, stability and		
Systems identifica Task about		Z,ZK	3
Systems identifica Task about 20UIS	Introduction to ITS	A CALCADO POR CO.	intormatio
Systems identifica Task about 20UIS ntelligent Transpo	ort Systems (ITS), their objectives and vision. ITS in the world, in Europe and in the Czech Republic. Architecture of ITS and the role of		
Systems identifica Task about 20UIS ntelligent Transpo and navigation sy	ort Systems (ITS), their objectives and vision. ITS in the world, in Europe and in the Czech Republic. Architecture of ITS and the role of stems. ITS in road, rail and combine transport. Design of ITS, organization, preparation and implementation of the project. Current project.	ojects in the Czec	h Republic.
Systems identifica Task about 20UIS Intelligent Transpo	ort Systems (ITS), their objectives and vision. ITS in the world, in Europe and in the Czech Republic. Architecture of ITS and the role of		

amplifiers, basic logarithms and an amplifiers and a second secon	Project 3  Applied Electronics  emiconductor components, their principles, characteristics and typical connection diagrams. Semiconductor PN junction diodes, transis ogic gates. Functions of basic electronic circuits and methods for their designs (rectifiers, voltage regulator with Zener diode, transistor a	Z KZ	2
Basic electronic s amplifiers, basic lo 20Y1EA State of the atmosp	emiconductor components, their principles, characteristics and typical connection diagrams. Semiconductor PN junction diodes, transis		2
20Y1EA State of the atmosp	igic gates. Functions of basic electronic circuits and methods for their designs (rectifiers, voltage regulator with Zener diode, transistor a	tors, thyristor, o	_
State of the atmosp	amplifier as an inverting and noninverting amplifier).	s an amplifier, o	operational
	Environmental Aspects of Transport	KZ	2
Air quality main	here, weather observation network, weather in transportation, road meteorology. Weather forecasting, data assimilation, probabilistic for		
Aii quaiity, main	pollutants and their effects, atmospheric chemistry, traffic emissions. Greenhouse gasses, carbon cycle, a role of energy and transports	ation in climate	change.
20Y1EK	Qualification in Electrical Engineering	KZ	2
	e with measurements in laboratories, electrical equipment, power supply, electrical installation of low voltage, electric shock hazard, syn		
voltage, maximum	allowed currents, electrical equipment protection against short circuit and overload protection, control and revision, first aid, legislation,	standards and	regulations
20)/41/	in relation to health and safety and electrical engineering.		
20Y1K	Cybernetics	KZ	2
Fundamentals of Inf	formation theory, dynamic systems, the principle of feedback, logical systems. Finite automata as a special case of dynamical systems. Re	etweer	n language:
20)/41 N	and automata.		
20Y1LN	Location and Navigation  examples of road networks, localization on the network. Routing algorithms, their properties and implementation. Description and examp	KZ	for finding
Description and e	transport connections, routing algorithms, their properties and implementation.	ies oi dalasets	ior imaing
20Y1NS		KZ	2
	Neural Networks		
פווטטווול טולמט סווו	and function of human brain and its main functional blocks and building elements - neurons. Models of neurons, modelling their network of artificial neural networks.	to and the DaSi	c paradigiTi
20Y1OI		KZ	2
	Fare Collection and Information Systems  stems in public transport and their components (on-board units, validators, turnstiles,). Information systems and their components for		
•	stems in public transport and their components (on-board units, validators, turnstries,). miormation systems and their components for nels) and operators (cycles, location or current delay of vehicles,). The issue of tariff systems. Other examples of clearance systems	•	ιου, παμυ,
20Y1PK	Product Quality Management Processes	KZ	2
	Froduct Quality Management Frocesses  of organization management. Management systems and international standards; quality management systems. Quality products, proces		_
	tems management, management principles. Principles of process management, monitoring and measurement systems management. Unifo		
or startaards for syst	for systems management. Process management principles. Metrology and testing. Product certification.	Jim namework	or staridard
20Y1PO	Weather, Air Quality and Transportation	KZ	2
1	here, weather observation network, weather in transportation, road meteorology. Weather forecasting, data assimilation, probabilistic for		I
	pollutants and their effects, atmospheric chemistry, traffic emissions. Greenhouse gasses, carbon cycle, a role of energy and transport		
20Y1SC	Sensors and Actuators	KZ	2
	s and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sensors of me		1
	state (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase elements		.oagouc
20Y1TD	Telematics Databases	KZ	2
2011112	Issue of telematics databases, work with OpenStreetMap layer, use of Linux OS and PostgreSQL with PostGIS extension, real traffic		_
21BPLE	Bachelor Thesis (for Branch LED)	Z	2
ZIDI LL	Expert assistance during the processing of bachelor thesis and preparation for oral bachelor degree graduation.	_	_
21DPL	Airports - Design and Operation	KZ	1
	tions for development planing runway systems and terminal facilities. Strength of pavements, approximate analysis of RWY distance. In		
mileductory contain	activities. Certification of international airports - standard checking. Irregular events.	room planin	.g opolatoi
21EKL	Air Transport Economy	Z,ZK	3
1	urse is to introduce students to the basic issues of economics and then to follow up on more complex problems of air transport. Student		1
	nd and supply in air transport and the specific problems related to these topics. At the same time, they will gain a comprehensive under		
	different types as well as airline revenues and yields.	J	
21LA1	English in Aviation 1	Z	2
,	Terminology used in civil aviation in the general context and emphasiye on the ability to receive information only in English.	_	_
21LA2	English in Aviation 2	Z	2
	area of aircraft construction, principles of flight, aircraft engines, instruments and systems. The subjects English Language and English ir		
o,	semester are supposed to be of perfect proficiency. The method of teaching is the same as in the previous semester.		
21LIC	Human Factors	KZ	2
	• & amp; limitations, capability & amp; competence, accident statistics, flight safety, basics of flight physiology, man & amp; environment, b		1
•	nealth & Description and the preservation, intoxication, incapacitation, basics of flight psychology, human information processing, memory		
	& amp; model of human error, body rhythms & amp; sleep, stress, fatigue, working methods.		
21LL1	Aircraft 1	KZ	3
	nd conceptual design types - definitions and basic knowledge of the problem. Development of requirements, aircraft definitions and categ	gorisation. Aircr	aft loadings
	Systems of primary and secondary airframe structure. Airframe and propulsion unit. Lectures are devoted to aeroplane topics.		
21LL2	Aircraft 2	Z,ZK	5
	onsibility, responsibilities of operator and professional supervising; legislation in area of airworthiness; international and national standa	rds; static solidi	ity of aircraf
	structures; aeroelasticity; inherent and operational reliability of aircraft structure; fatigue strength; aircraft structure lifetime presumpt	ion.	
	Flight Operation & Dequirements and Legislation 1	Z	1
	Flight Operation & Requirements and Legislation 1	I 1-I 9 Rauirem	ent of ICAC
Manufacturers resp	Fright Operation & Requirements and Legislation 1 tion requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 1-9. Aviation Requirements of Czech Republic	Li Lo. requiron	ICITI OI IOAC
Manufacturers resp  21LPS1 Introduction to aviat			ient of load
Manufacturers resp	tion requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 1-9. Aviation Requirements of Czech Republic	ZK	1
Manufacturers resp  21LPS1 Introduction to aviat  21LPS2	tion requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 1-9. Aviation Requirements of Czech Republic Doc. 8168 analysis and exposition, introduction to new legislation based on European Community Directives and Regulations.	ZK	1
Manufacturers resp  21LPS1 Introduction to aviat  21LPS2	tion requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 1-9. Aviation Requirements of Czech Republic  Doc. 8168 analysis and exposition, introduction to new legislation based on European Community Directives and Regulations.  Flight Operation & Requirements and Legislation 2	ZK	1
Manufacturers resp  21LPS1 Introduction to aviat  21LPS2	tion requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 1-9. Aviation Requirements of Czech Republic  Doc. 8168 analysis and exposition, introduction to new legislation based on European Community Directives and Regulations.  Flight Operation & Requirements and Legislation 2  ation of graduated experts in aviation requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 11-18. Aviati	ZK	1
21LPS1 Introduction to aviate 21LPS2 Continuing in education 21LRY	tion requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 1-9. Aviation Requirements of Czech Republic  Doc. 8168 analysis and exposition, introduction to new legislation based on European Community Directives and Regulations.  Flight Operation & Requirements and Legislation 2  ation of graduated experts in aviation requirements. Ministry of Transport and Civil Aviation Authority action. ICAO Annexes 11-18. Aviation Republic L11-L18. Rquirement of ICAO Doc. 4444 analysis and exposition, introduction to EASA legislation.	ZK ion Requiremen Z,ZK	1 nts of Czech

21LTN	Air Navigation	Z,ZK	2
Eartn - its snape, parar	eters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigati services routes and their design.	on satellite syster	ns. Air tranic
21LTTE	Aerodromes	Z,ZK	4
	oint and temperature, TORA, TODA, ASDA, LDA. Taxiway and apron. Clearway. Stopway. Obstacle limitation surfaces. Runway		
·	Environmental conditions. Public traffic.	,	Ü
21OBP	Air Transport Business	Z,ZK	3
Aviation business and tr	ansport operations is a core subject for understanding operational relationships in air transport. It focuses on the process and fu		ments as we
	as the economic aspects and infrastructure of air transport.		
21PJE	Aircraft Instruments	KZ	2
Overview of aircraft in	strumentation and its principles and construction, aircraft electrical systems, engine measuring and monitoring systems, air data	a computer, icing	monitoring
	copic indicators, inertial and radio navigation means, communication means, data recorders, complex flight and navigation data	processing syste	
21PPL	Flight Planning and Performance	Z,ZK	3
	of aircraft, determination of centre of gravity, loadsheet,trimsheet, aircraft weighing, overloading of aircraft, basic characteristic s		
ake off and landing per	ormance, drift down, MEL, ETOPS', flight planning and monitoring, routing, FL and speeds selection, charts, ICAO ATC FPL, a	erodrom operation	n minimums
0.4.0.11	fuel plan, operational flight plan.	147	1 0
21RIL	Air Traffic Control	KZ	2
	eir distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for aircraft fly		
the form, content. Sepa	ration of aircraft. Reports of air traffic services, the form, content. Harmonization and integration of ATC. CFMU and its subsyste FUA. RVSM, RNP. New trends in the area of ATC.	ms. Flexible use	oi airspace -
21X31	·	Z	2
	Project 1	Z	
21X32	Project 2		2
21X33	Project 3	Z	2
21Y1FN	Factors Affecting the Rate of Accidents in Aviation	KZ	2
	of international and national organizations in civil aviation. The scope of the investigation organizations within the state and interest of the Population (FC). Regulation (FCI) Human factor, Hillington of interest to be considered in the Population (FCI) Regulation (FCI).		
and interpretation of i	CAO Annexes 13 and 19. Analysis and interpretation of the Regulation (EC), Regulation (EU). Human factor. Utilization of inforn reports.	nation from the in	vestigation
21Y1LR	Radio Technology in Aviation	KZ	2
I	wave spectrum. Analog and digital modulations. Noises. Filters. Resonance circuits. Electromagnetic field. Electromagnetic wa	I	1
Liectife signals and the	in aviation, radiation and reception of electromagnetic field. Antennas in aviation, receivers and transmitters.	ve propagation. v	vave ranges
21Y1MZ	Managerial Ethics	KZ	2
	managerial ethics. Basics of etiquette and rules of social contacts. Social events. Etiquette of working contacts. The art of presenta		I
no badio torrimology o	image. Diplomatic protocol. Managerial ethics. Business ethics.	anon ana nogona	
21Y1OL	Security of Air Transport	KZ	2
	I aviation. Definitions and regulations. History of acts of unlawful interference. Terrorism in aviation. National security program. C		_
The development of on	at airports - operational procedures. Modern means of protection and control.	manageme.	
21Y1RZ	Human Resources Management	KZ	2
l I	n resources in the organization and related disciplines file. Substance, importance and challenges of human resources manage	I	I
-	esource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation and ren		
	dismissal and redundancies of employees. Education of employees. Planning career management.		
21Y1TH	Aircraft Technical Handling	KZ	2
Aircraft towing and p	ushing tractors. GPU. Air conditioning and heating units. Aircraft fuel equipment. De-acing and anti-icing units. Loading and unlo	bading units. Equi	pment for
	gers onboarding and offboarding. Operational processes of aircraft technical handling and regulations. Modernization and techn		
passan	gers of boarding and on boarding. Operational processes of anotal technical handling and regulations. Modernization and techni-	nical progress.	
passan 21Y1UT	Airports Maintenance	ical progress.	2
21Y1UT		KZ	1
21Y1UT Summer airport mainter	Airports Maintenance	KZ	1
21Y1UT	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airc	KZ	1
21Y1UT Summer airport mainter 21Y1ZA The history, developmer	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airc Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual ele	KZ craft. De-icing / an	ti-icing liquid
21Y1UT Summer airport mainter 21Y1ZA The history, developmer	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airc Operating procedures, limitations, practices.  Basics of Aerobatics	KZ craft. De-icing / an KZ ements, competition	ti-icing liquid
21Y1UT Summer airport mainter 21Y1ZA The history, developmer acccccccccccccccccccccccccccccccccccc	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircong of aircong procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performance.  Introduction to Air Transport	KZ craft. De-icing / an KZ creents, competition	ti-icing liquid
21Y1UT Summer airport mainter 21Y1ZA The history, developmer acccccccccccccccccccccccccccccccccccc	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircongrammer. Summer maintenance equipment. De-icing / anti-icing of aircongrammer. Depricting procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performance in the procedure of the procedure in the pr	KZ craft. De-icing / an KZ creents, competition	ti-icing liquid
21Y1UT Summer airport mainter 21Y1ZA The history, developmer ac 21ZLD Air transport as a comp	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircongramment. De-i	KZ craft. De-icing / an KZ ements, competition rmance. KZ haracteristics of a	ti-icing liquid 2 nn aerobatics 2 air transport.
21Y1UT Summer airport mainter  21Y1ZA The history, developmer at 21ZLD Air transport as a comp	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircongrammer. Department of procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performance of transport connected international status of civil aviation. International organizations in Europe and worldwide. Concentration of periodic air transport. Technical operations of aeroplanes.  Principles of Flight 1	KZ craft. De-icing / an KZ cments, competition rmance. KZ haracteristics of a	ti-icing liquid 2 on aerobatics 2 air transport.
21Y1UT Summer airport mainter 21Y1ZA The history, developmer at 21ZLD Air transport as a comp	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircongrammer. Departing procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performation of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of periodic perio	KZ craft. De-icing / an  KZ craments, competition cramence.  KZ characteristics of a	ti-icing liquid 2 on aerobatics 2 air transport. 3 ring, angle of
21Y1UT Summer airport mainter 21Y1ZA The history, developmer at 21ZLD Air transport as a comp	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircomplex for the procedures of t	KZ craft. De-icing / an  KZ craments, competition cramence.  KZ characteristics of a	ti-icing liquid 2 on aerobatics 2 air transport. 3 ring, angle of
21Y1UT Summer airport mainter  21Y1ZA The history, developmer at 21ZLD Air transport as a composite to a compos	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircontent of procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performation of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of Flight 1  ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and president 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 lift and drag increase.	KZ craft. De-icing / an  KZ craments, competition rmance.  KZ haracteristics of a  KZ essures around wolding, interference	2 on aerobatics 2 air transport. 3 ring, angle ce, devices for
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a composite transport as a compos	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airco Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual ele robatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on perfo Introduction to Air Transport onent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Ci Commercial air transport. Technical operations of aeroplanes.  Principles of Flight 1 ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and pre 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 lift and drag increase.  Principles of Flight 2	KZ craft. De-icing / an  KZ cments, competition rmance.  KZ characteristics of a  KZ essures around w drag, interference	ti-icing liquid
21Y1UT Summer airport mainter  21Y1ZA The history, developmer at 21ZLD Air transport as a composite transport as a composite transport at a compos	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airco Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual ele robatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on perfo Introduction to Air Transport onent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Ci Commercial air transport. Technical operations of aeroplanes.  Principles of Flight 1 ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and pre 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 lift and drag increase.  Principles of Flight 2 is, propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, prope	KZ craft. De-icing / an  KZ crements, competition rmance.  KZ characteristics of a  KZ essures around w drag, interference  Z,ZK ller operation mode	ti-icing liquid
21Y1UT Summer airport mainter  21Y1ZA The history, developmer at 21ZLD Air transport as a composite a	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircomposition of the properties o	KZ craft. De-icing / an  KZ crements, competition rmance.  KZ characteristics of a  KZ essures around w drag, interference  Z,ZK ller operation mode	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle of e, devices for 4 des, propelle
21Y1UT Summer airport mainter  21Y1ZA The history, developmer at 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, relatatack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyros	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airco Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual ele robatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performation of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of Flight 1  ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and presing 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 lift and drag increase.  Principles of Flight 2  In propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, propecopic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive load controllability, transsonic speeds.	KZ craft. De-icing / an  KZ cments, competition rmance.  KZ characteristics of a  KZ essures around w drag, interference  Z,ZK ller operation mod d, manoeuvres, s	ti-icing liquic  2 on aerobatics  2 air transport.  3 ring, angle o e, devices fo  4 des, propelle tability and
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, rela attack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyros	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircontens of Aerobatics  Basics of Aerobatics  and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of principles of Flight 1  ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and prein 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 lift and drag increase.  Principles of Flight 2  it, propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, prope copic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive load controllability, transsonic speeds.  ATM Systems	KZ craft. De-icing / and KZ craments, competition remance. KZ characteristics of a KZ cassures around will drag, interference Z,ZK coller operation model, manoeuvres, s ZK	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle o e, devices fo  4 des, propelle tability and
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, rela attack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyros	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airc Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Cincommercial air transport. Technical operations of aeroplanes.  Principles of Flight 1  ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and prein 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 lift and drag increase.  Principles of Flight 2  International operations of fixed and variable pitch propeller, prope copic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive load controllability, transsonic speeds.  ATM Systems  es classical and modern facilities, systems and technologies designated for ATS. Student obtains knowledge of technical principals.	KZ craft. De-icing / and KZ craments, competition remance. KZ characteristics of a KZ cassures around will drag, interference Z,ZK coller operation model, manoeuvres, s ZK	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle of e, devices for des, propelle tability and
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, rela attack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyros  21ZT The course introduc	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircomposition of the properties o	KZ craft. De-icing / and KZ craft. De-icing / and KZ craments, competition cramence. KZ characteristics of a KZ cassures around will drag, interference Z,ZK competition C,ZK co	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle of e, devices for des, propelle tability and  2 as far as
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, rela attack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyros  21ZT The course introduct  22UN	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airc Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of complex transport system. International organizations in Europe and worldwide. Concentration of complex transport system. International organizations in Europe and worldwide. Concentration of complex transport systems and technologies of Flight 1  ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and present air flow, lift and drag increase.  Principles of Flight 2  in propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, prope copic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive load controllability, transports speeds.  ATM Systems  as classical and modern facilities, systems and technologies designated for ATS. Student obtains knowledge of technical princip communication, navigation and surveillance aviation systems are concerned.  Traffic Accidents Introduction	KZ craft. De-icing / and KZ craft. De-icing / and KZ craments, competition cramence. KZ characteristics of a KZ cessures around will drag, interference Z,ZK competition Z,ZK competition	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle of e, devices for tability and  2 as far as
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, rela attack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyros  21ZT The course introduct  22UN	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airc Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elerobatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Concentration of Elight 1  Introduction to Air Transport  Introduction to Air Transport  International organizations in Europe and worldwide. Concentration of Elight 1  International organizations in Europe and worldwide. Concentration of Elight 1  Introduction to Air Transport  Introduction to Air Transport  Introduction to Air Transport  Introduction of Elight 1  Introduction of Elight 1  Introduction, Iff and drag organizations in Europe and worldwide. Concentration of Elight 2  Introduction of Flight 2  Introduction of Elight 2  Introduction of Eli	KZ craft. De-icing / and KZ craft. De-icing / and KZ craments, competition cramence. KZ characteristics of a KZ cessures around will drag, interference Z,ZK competition Z,ZK competition	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle of e, devices for tability and  2 as far as
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, rela attack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyros  21ZT The course introduct  22UN  Traffic accident as a physical	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircoperating procedures, limitations, practices.  Basics of Aerobatics than derobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elementations programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Commercial air transport. Technical operations of aeroplanes.  Principles of Flight 1  ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and prein 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 lift and drag increase.  Principles of Flight 2  In propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, prope copic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive loa controllability, transsonic speeds.  ATM Systems  as classical and modern facilities, systems and technologies designated for ATS. Student obtains knowledge of technical princip communication, navigation and surveillance aviation systems are concerned.  Traffic Accidents Introduction  sical process, systematic submission, vehicle x human x infrastructure interaction, accidents statistics, aircraft accidents, accidents, other aspects, accidental prevention.	KZ craft. De-icing / and KZ craft. De-icing /	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle of e, devices for tability and  2 as far as  2 accidents on
21Y1UT Summer airport mainter  21Y1ZA The history, developmer at 21ZLD Air transport as a compart as a compar	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of airc Operating procedures, limitations, practices.  Basics of Aerobatics and aerobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual ele robatics programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on perfo Introduction to Air Transport onent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Ci Commercial air transport. Technical operations of aeroplanes.  Principles of Flight 1 ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and pre 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 lift and drag increase.  Principles of Flight 2 is, propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, prope copic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive loa controllability, transsonic speeds.  ATM Systems as classical and modern facilities, systems and technologies designated for ATS. Student obtains knowledge of technical princip communication, navigation and surveillance aviation systems are concerned.  Traffic Accidents Introduction sical process, systematic submission, vehicle x human x infrastructure interaction, accidents statistics, aircraft accidents, accidents waterways, road traffic accidents, other aspects, accidental prevention.	KZ craft. De-icing / and KZ craft. De-icing /	ti-icing liquic  2 on aerobatics  2 air transport.  3 ring, angle or e, devices for  4 des, propelle tability and  2 as far as  2 accidents or
21Y1UT Summer airport mainter  21Y1ZA The history, developmer ac 21ZLD Air transport as a comp  21ZLE1 Aerodynamic drag, relate attack, reactions of wing  21ZLE2 Ways of producing thrus airstream effect, gyrosteristream effett, gyrosteristream effett, gyrosteristream effett, gyrosteristream effett, gyrosteristream effett, gyrosteristream ef	Airports Maintenance ance. Summer maintenance equipment. Winter airport maintenance. Winter maintenance equipment. De-icing / anti-icing of aircoperating procedures, limitations, practices.  Basics of Aerobatics than derobatics in present, aerodynamics and mechanics of flight during marginal flight modes, piloting technique of individual elementations programs, preparation for practicing aerobatics and safety training, competitive psychology and concentration on performent of complex transport system. International status of civil aviation. International organizations in Europe and worldwide. Commercial air transport. Technical operations of aeroplanes.  Principles of Flight 1  ion between drag and speed, streamline, boundary layer, continuity equation, Bernoulli's equation, lift and drag, air flow and prein 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 lift and drag increase.  Principles of Flight 2  In propeller, jet propulsion, thrust and momentum, propulsion efficiency, aerodynamics of fixed and variable pitch propeller, prope copic effect, balance of forces in horizontal flight, glide and landing, performances, take off and climb, acceleration, positive loa controllability, transsonic speeds.  ATM Systems  as classical and modern facilities, systems and technologies designated for ATS. Student obtains knowledge of technical princip communication, navigation and surveillance aviation systems are concerned.  Traffic Accidents Introduction  sical process, systematic submission, vehicle x human x infrastructure interaction, accidents statistics, aircraft accidents, accidents, other aspects, accidental prevention.	KZ craft. De-icing / and KZ craft. De-icing /	ti-icing liquid  2 on aerobatics  2 air transport.  3 ring, angle of e, devices fo  4 des, propelle tability and  2 as far as  2 accidents on

22Y1SZ	Forensic Expertise	KZ	2
	of forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, forensic le Obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evidence	•	
	forensic report, elements. Finding, expert testimony / report.		
23X31	Project 1	Z	2
23X32	Project 2	Z	2
23X33	Project 3	Z	2
23Y1DZ	Data and Their Processing for Engineering Fields Needs	KZ	2
Courses of risk, ba	sic terms, data collection, data sets, data random uncertainty and data epistemic uncertainty, data processing, hazard, risk, value so heuristic methods, hazard determination and risk determination, methods for variants' creation, decision support systems		mpirical and
23Y1KO	Quantum Physics and Optoelectronics	KZ	2
	Ground of quantum physics. Application of quantum physics in practice. Optoelectronics. Production of optoelectronics compor	nents.	·
23Y1OK	Protection of Critical Objects and Infrastructures	KZ	2
Types of technologic	cal systems, critical item, risks and their courses, criticality, vulnerability, connectivity, dependability, resilience, failure, protection, safe infrastructures.	ty of critical objec	ts and critical
23Y1VS	Negotiation and Cooperation	KZ	2
Code of conduct for	r negotiation. The influence of personality traits on the negotiations. Negotiation and commanding. Teamwork. Variants teams. Inform	al and formal role	in the team.
Principles of negotia	ation, the essence of negotiation, the differences in negotiation in business and in crisis situations, the principle of "win both", specific	cations and biddir	ng, the role of
	trust.		
TV-1	Physical Education	Z	1
TV-2	Physical Education	Z	1

For updated information see <a href="http://bilakniha.cvut.cz/en/FF.html">http://bilakniha.cvut.cz/en/FF.html</a> Generated: day 2024-03-29, time 02:08.