## Study plan

## Name of study plan: 2.bl.bak.prez.Al 09/10za átek

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch: Program of study: Welcome page Type of study: unknown full-time

Required credits: 120 Elective courses credits: 0 Sum of credits in the plan: 120

Note on the plan:

Name of the block: Compulsory courses Minimal number of credits of the block: 80

The role of the block: Z

Code of the group: 5S.BP-AI06/07

Name of the group: 5.s.bak.prez.Al od06/07

Requirement credits in the group: In this group you have to gain 24 credits

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

Credits in the group: 24 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
20BSS	Safety and Reliability of Systems	ZK	3	2+0		Z
11MST	Mathematical Statistics	Z,ZK	2	1+1		Z
11MZD	Measurement and Data Processing	KZ	2	1+1		Z
13PE	Operational Economy	Z,ZK	3	2+1		Z
14SSS	Networks and Network Operating Systems	KZ	2	1+1		Z
20SANL	Systems Analysis	Z,ZK	4	2+1		Z
14TLK	Telecommunications	Z,ZK	4	2+1		Z
17ZTD	Introduction to Theory of Transport	Z,ZK	4	2+1		Z

## Characteristics of the courses of this group of Study Plan: Code=5S.BP-Al06/07 Name=5.s.bak.prez.Al od06/07

20BSS	Safety and Reliability of Systems	ZK	3
Basic theory of relia	oility and safety with special regard to information and automation equipments used in transportation safety systems. The aspec	ts of reliability and	safety systems
analysis and synthe	is are taken into account. A special interest is given to problems of human subject - artificial system (namely of the transportation	on nature) interact	tion reliability.
11MST	Mathematical Statistics	Z,ZK	2
Point estimation, pro	perties of point estimators (consistency, unbiasedness, efficiency), methods of point estimation (method of moments, maximum lik	kelihood metod). B	ayes estimators.
Testing of statistical	ppothesis, critical values, choice of hypothesis and level of significance, observed level of significance (P-value). Goodness of fit te	est, independence	test. Regression
and correlation, line	ar regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear regression	on, analysis of vai	riance, multiple
regression, the use	of matrices in regression.		
11MZD	Measurement and Data Processing	KZ	2
General principles of	detectors with special attention to traffic. Different technologies, data analysis, data preprocessing, analytical methods (decision ti	rees, clustering or	soft computing).
13PE	Operational Economy	Z,ZK	3
14SSS	Networks and Network Operating Systems	KZ	2
Acquaintance with o	perating and possibilities of computer networks and their services utilize is the subject target. Network topology, IP addressing, WAN	networks, conne	ction information
(ping, trace route). I	etailed familiarity with selected WIN NT, Novell, and Unix network environment in the second semester part. Introduction to serv	er and workstatio	ns installation,
	etailed familiarity with selected WIN NT, Novell, and Unix network environment in the second semester part. Introduction to servention, folder structure creation, disc mapping, users protection, folders security, network printing, network security.	er and workstatio	ns installation,
		ver and workstatio	ns installation,
users and groups cr 20SANL	eation, folder structure creation, disc mapping, users protection, folders security, network printing, network security.	Z,ZK	4

14TLK Telecommunications Z,ZK 4
Telecommunication bases as cross-section branch create the subject's contents. During introduction, basic legislative conditions forming telecommunication market consistent with the

EU rules (selected parts of legislative and sub legislative standards, regulation and regulation frame) and existing and perspective telecommunication services characteristics are lectured. In the second part, transmission and connecting system and terminal devices basic principles (analogue and digital systems, used modulations in view of PCM modulation and modulation predicative methods) and solution of modern connecting systems are explained. In the third part, network management principles from view of operational organization

are briefly described.

17ZTD Introduction to Theory of Transport Z,ZK 4

Code of the group: 6S.BP-AI05/06

Name of the group: 6.s.bak.prez.Al od05/06

Requirement credits in the group: In this group you have to gain 24 credits

Requirement courses in the group: In this group you have to complete at least 7 courses

Credits in the group: 24 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
14DAPS	Database and Presentation Systems	KZ	2	1+1		Z
13EFI	Enterprise Economics	Z,ZK	3	2+1		Z
14IFS	Information Systems	ZK	4	2+0		Z
11MSAP	Modeling of Systems and Processes	Z,ZK	4	2+1		Z
200PM	Optimization and Modeling	Z,ZK	3	2+1		Z
14TKMS	Telecommunication Systems	Z,ZK	4	3+1		Z
20ZT	Railway Interlocking	KZ	4	2+1		Z

Characteristics of the courses of this group of Study Plan: Code=6S.BP-Al05/06 Name=6.s.bak.prez.Al od05/06

14DAPS	Database and Presentation Systems	KZ	2		
Database systems. E-R data model, relational data model, relational databases. Creation of a simple database application in the MS ACCESS environment. Creation of presentations					
by help of the PowerPoint environment - static snaps, simple animations, linking with other applications.					

13EFI	Enterprise Economics	Z,ZK	3
14IFS	Information Systems	ZK	4

The subject is specialized in theoretic and practical design resources and principles and information systems (IS) creation and realization. Students get knowledge of various information systems terminology, classification and characterization (process, transaction, knowledge, metainformation, etc.), IS projecting procedures, data/information computer proceeding technology by help of data structures, database systems and models. They obtain view of IS and information technologies technical infrastructure trends, understand IS architecture principles and purposes, human role in IS and possibilities of IS evaluation. In brief, they acquaint themselves with creation principles, architecture and standards of the state information system.

11MSAP	Modeling of Systems and Processes

The course introduces mathematical methods and algorithms providing an essential tool for system analysis. Methods and algorithms represent context in which the systems are modelled and evaluated in continuous and discrete time domain. The Laplace transform, z-transform, and the recursive algorithms are introduced in order to understand solution of

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120OPM	Optimization and Modeling	Z.ZK	1 3

differential and difference equations, which are developed for system description. The course focuses on practical use of technical computing environment MATLAB.

The concept of decision making. Linear and non-linear optimization, Structural, dynamic and stochastic programming. Definition of optimization task, problems arising within the bodies of economics and technology that results in the task of linear programming, classical transportation problem, geometric interpretation of the tasks of linear programming, simplex method, their concept and techniques. Complex decision making based on the metodologies of the theory of games, decision making in the situation of uncertainty and risk, basic methods of the multicriteral decision making.

14TKMS	Telecommunication Systems	Z,ZK	4
20ZT	Railway Interlocking	KZ	4
Monolitic end composite	e materials. Development of composite materials. Particular, fibre end laminar composite. Mechanics of composite materials.		•

Code of the group: 7S.BP-AI06/07

Name of the group: 7.s.bak.prez.Al od06/07

Requirement credits in the group: In this group you have to gain 18 credits

Requirement courses in the group: In this group you have to complete at least 6 courses

Credits in the group: 18

Note on the group.

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	
14IP1	Tutorial in Informatics 1	Z	2	0+2		Z	
14RD	Robotics in Transportation	ZK	3	2+0		Z	
20RSSD	Road Transportation Control Systems	Z,ZK	3	2+1		Z	

20SRDP	Vehicular Control Systems	ZK	3	2+0	Z
17TEC	Technology of Transport	Z,ZK	4	2+1	Z
20ZS	Railway Interlocking Systems	ZK	3	2+0	Z

Characteristics of the courses of this group of Study Plan: Code=7S.BP-AI06/07 Name=7.s.bak.prez.AI od06/07

Tutorial in Informatics 1

The course involves introductory theoretical part (basic terminology from information technologies, information theory, computer terminology, data damage protection, theft and destruction, protection of computer network, security and legal problems relevant to information technologies, copyright and data protection law, computer criminality) and practical part according to the specialization.

14RD Robotics in Transportation

The subject is focused on elementary components and their relations in robotics systems. Lessons starts with discussion of terms robot, industrial robot and follows acros terms of robot progress generations, mobile robots, robot kinematics, sensors, actuators, tactile recognition, transmissions, control systems, the role of arificial intellingence in robotics, robot

20RSSD Road Transportation Control Systems Z,ZK

The content of the subject is the complex of the traffic knot, line or area control. In the introduction to this problem the basic conceptions from the branch are being introduced. The princip of control by means of light signalisation equipments, princip of signal picture proposal basic transport characteristic are being discussed. The technical means of knot control and the corresponding software, princips and properties of traffic detectors and models of transport flow, methods of line control of transport flow, specifications of areas control, central control, safety systems, modes of preferences in public transport and statistic component of transport (parking and parking systems etc) are always being gone through. The conception of the telematics is being introduced, its content and the spedific problems of traffic control in tunnels and their environment also discussed.

20SRDP Vehicular Control Systems

The aim of the course is to introduce fundamental principles of feedback control and to demonstrate their applications in different transport systems. Students are acquainted with fundamental concepts of linear control theory and discrete control. The fundamentals of nonlinear, adaptive and optimal control and their applications in transportation are also explained.

Technology of Transport

3

Course deals with foundations of technology and management of transportation proceses. It is concerning mainly in way and organization transfer of persons and goods on the defined transport network by moving of transport means through the transport ways. It connects on knowledges of transport and handling tools from tke first period of study.<br&gt;&lt;br&gt;\r\nStudy is concerning on these questions from technology of single sorts of transportation:\r\n&lt;ul&gt;\r\n&lt;li&gt;most important terms of transfer process, particularities, and using indicators, \r\n< li&gt; making and using of basing technologic plans and tools, \r\n&lt; li&gt; combination and integration of sorts of transportation into transport systems,\r\n<li&gt;using knowledges of system analyses and kybernetics in management of transportation process\r\n&lt;/ul&gt;

20ZS Railway Interlocking Systems ZK

Code of the group: 8S.BP.AI06/07

Name of the group: 8.s.bak.prez.Al od06/07

Requirement credits in the group: In this group you have to gain 14 credits

Requirement courses in the group: In this group you have to complete at least 4 courses

Credits in the group: 14 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
14ISVD	Information Systems in Transportation	ZK	4	2+0		Z
14IP2	Tutorial in Informatics 2	KZ	2	0+2		Z
17LGS	Logistics	Z,ZK	4	2+1		Z
20TM	Telematics	Z,ZK	4	2+1		Z

Characteristics of the courses of this group of Study Plan: Code=8S.BP.AI06/07 Name=8.s.bak.prez.AI od06/07

Information Systems in Transportation The subject's contents: information transmission processes, transmission security and reliability problems. Information protection, access control, authentification. Specification of

database and expert systems in transportation and telecommunication. Problems of user comfort in relation to interaction human-machine security and reliability, optionally with functional properties of complex social and technical systems.

Tutorial in Informatics 2

Knowledge systems. Expert systems and programmes based on knowledge, their architecture, knowledge representation, basic derivation and implementation methods. Interface for knowledge systems creation andt their design principles. Certainty and uncertainty in knowledge systems and different approaches to them. Common model of balances combination, fuzzy logics. Knowledge base design methods. Database and knowledge systems and their rules.

17LGS Z,ZK

As an integrated managerial system of circular and transfer flows, logistics form new ways of partnership between production and business organization on one hand, and material and information carriers on the other hand. This subject is focused on:<br&gt;\r\n&lt;ul&gt;\r\n&lt;li&gt;Concept of logistics, its development and principles\r\n&lt;li&gt;Logistics systems units, logistics chain\r\n<li&gt;Logistics coupling, logistics methods and technologies, decision making in the logistics managerial systems\r\n&lt;li&gt;Marketing as a basic tool in the logistics managerial systems, marketing survey, marketing offer, marketing evaluation techniques and completion marketing planning\r\n<li&gt;Status of transportation in the logistics system\r\n<li&gt;Information flows in the logistics chain\r\n&lt;/ul&gt;

20TM

Z,ZK

The subject Transport Telematics defines the basic principles of telematics in both theoretical and applicational areas. The user requirements are taking into account in telematics system decomposition into the subsystems, modules, functions and processes. By chaining of strong processes the telematics applications are defined. The system parameters for different telematics applications are determined e.g. on computer centers, telecommunication environment, etc. The main goal of subject Transport Telematics is to present the design methodology of telematics systems in such way that the user requirements are fullfiled and the solution in close to optimality.

Name of the block: Semestrální projekt

Minimal number of credits of the block: 20

The role of the block: ZP

Code of the group: P-BAK.5.SEM.

Name of the group: Projekty 5.s.bak.AI,DS,ME od 05/06

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 at least 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
11X15	Project 5	Z	2	0+2		ZP
12X15	Project 5	Z	2	0+2		ZP
13X15	Project 5	Z	2	0+2		ZP
14X15	Project 5	Z	2	0+2		ZP
15X15	Project 5	Z	2	0+2		ZP
22X15		Z	2	0+2		ZP
17X15	Project 5	Z	2	0+2		ZP
18X15	Project 5	Z	2	0+2		ZP
20X15	Project 5	Z	2	0+2		ZP
21X15	Project 5	Z	2	0+2		ZP
16X15	Project 5	Z	2	0+2		ZP

Characteristics of the courses of this group of Study Plan: Code=P-BAK.5.SEM, Name=Projekty 5.s.bak.Al.DS.ME od 05/06

11X15	Project 5	Z	2
12X15	Project 5	Z	2
13X15	Project 5	Z	2
14X15	Project 5	Z	2
15X15	Project 5	Z	2
22X15		Z	2
17X15	Project 5	Z	2
18X15	Project 5	Z	2
20X15	Project 5	Z	2
21X15	Project 5	Z	2
16X15	Project 5	Z	2

Code of the group: P-BAK.6.SEM.

Name of the group: Projekty 6.s.bak.AI,DS,ME od 05/06

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 at least 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
13X16	Project 6	Z	2	0+2		ZP
14X16	Project 6	Z	2	0+2		ZP
15X16	Project 6	Z	2	0+2		ZP
16X16	Project 6	Z	2	0+2		ZP
17X16	Project 6	Z	2	0+2		ZP
22X16	Project 6	Z	2	0+2		ZP
20X16	Project 6	Z	2	0+2		ZP
21X16	Project 6	Z	2	0+2		ZP
11X16	Project 6	Z	2	0+2		ZP

12X16	Project 6	Z	2	0+2	ZP
18X16	Project 6	Z	2	0+2	ZP

Characteristics of the courses of this group of Study Plan: Code=P-BAK.6.SEM. Name=Projekty 6.s.bak.AI,DS,ME od 05/06

13X16	Project 6	Z	2
14X16	Project 6	Z	2
15X16	Project 6	Z	2
16X16	Project 6	Z	2
17X16	Project 6	Z	2
22X16	Project 6	Z	2
20X16	Project 6	Z	2
21X16	Project 6	Z	2
11X16	Project 6	Z	2
12X16	Project 6	Z	2
18X16	Project 6	Z	2

Code of the group: P-BAK.7.SEM.

Name of the group: Projekty 7.s.bak.AI,DS,ME od 06/07

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 at least 1 course

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
11X17	Project 7	Z	6	0+6		ZP
12X17	Project 7	Z	6	0+6		ZP
13X17	Project 7	Z	6	0+6		ZP
14X17	Project 7	Z	6	0+6		ZP
15X17	Project 7	Z	6	0+6		ZP
22X17		Z	6	0+6		ZP
17X17	Project 7	Z	6	0+6		ZP
18X17	Project 7	Z	6	0+6		ZP
20X17	Project 7	Z	6	0+6		ZP
21X17	Project 7	Z	6	0+6		ZP
16X17	Project 7	Z	6	0+6		ZP

Characteristics of the courses of this group of Study Plan: Code=P-BAK.7.SEM. Name=Projekty 7.s.bak.AI,DS,ME od 06/07

11X17	Project 7	Z	6
12X17	Project 7	Z	6
13X17	Project 7	Z	6
14X17	Project 7	Z	6
15X17	Project 7	Z	6
22X17		Z	6
17X17	Project 7	Z	6
18X17	Project 7	Z	6
20X17	Project 7	Z	6
21X17	Project 7	Z	6
16X17	Project 7	Z	6

Code of the group: P-BAK.8.SEM

Name of the group: Projekty 8.s.bak.AI,DS,ME od 06/07

Requirement credits in the group: In this group you have to gain 10 credits

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

Credits in the group: 10 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
11X18	Project 8	Z	10	0+10		ZP
12X18	Project 8	Z	10	0+10		ZP
13X18	Project 8	Z	10	0+10		ZP
14X18	Project 8	Z	10	0+10		ZP
15X18	Project 8	Z	10	0+10		ZP
22X18	Project 8	Z	10	0+10		ZP
17X18	Project 8	Z	10	0+10		ZP
18X18	Project 8	Z	10	0+10		ZP
20X18	Project 8	Z	10	0+10		ZP
21X18	Project 8	Z	10	0+10		ZP
16X18	Project 8	Z	10	0+10		ZP

Characteristics of the courses of this group of Study Plan: Code=P-BAK.8.SEM Name=Projekty 8.s.bak.AI,DS,ME od 06/07

11X18	Project 8	Z	10
12X18	Project 8	Z	10
13X18	Project 8	Z	10
14X18	Project 8	Z	10
15X18	Project 8	Z	10
22X18	Project 8	Z	10
17X18	Project 8	Z	10
18X18	Project 8	Z	10
20X18	Project 8	Z	10
21X18	Project 8	Z	10
16X18	Project 8	Z	10

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 12

The role of the block: S

Code of the group: VP-B-AI,DS,ME PREZ.

Name of the group: VP-bak.prez.AI,ME,DS od 05/06

Requirement credits in the group: In this group you have to gain 12 credits

Requirement courses in the group: In this group you have to complete at least 6 courses

Credits in the group: 12

Note on the group:

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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
16Y1AV	Automobile Aerodynamics	KZ	2	2+0		S
17Y1AF	Alternative Forms of Transportation Project Financing	KZ	2	2+0	Z	S
18Y1AN	Traffic Accidents Analysis	KZ	2	2+0	Z	S
22Y1A1	Traffic Accidents Analysis 1	KZ	2	2+0	Z	S
22Y1A2	Traffic Accidents Analysis 2	KZ	2	2+0	L	S
18Y1AM	Anatomy, Mobility and Safety of Man Jitka Jírová	KZ	2	2P+0C	Z	S
14Y1AV	Animation and Visualization	KZ	2	2P+0C	L	S
14Y1AP	Automatization in Mail	KZ	2	2+0	Z	S
17Y1BB	Banks and Banking	KZ	2	2+0	Z	S
14Y1BE	Barrierless Transport	KZ	2	2P+0C	L	S
21Y1BLD	Safety in Aviation	KZ	2	2+0		S
15Y1BO	Work Safety and Health Protection in Transportation Petr Musil, Eva Rezlerová	KZ	2	2P+0C	L	S
13Y1BC	Bourse, Stock, Investment Comanies	KZ	2	2+0		S
17Y1BC	Bourse, Stock and Investment Companies	KZ	2	2+0		S

15Y1DU	History of Art and Society	KZ	2	2+0	Z	S
15Y1DZ	History of Railway	KZ	2	2P+0C	L	S
17Y1DN	Eva Rezlerová, Martin Jacura  Transportation of Dangerous Goods	KZ	2	2+0	Z	S
17Y1DG	Transport Geography	KZ	2	2+0	Z	S
12Y1DO	Transport Services of Settlements and Regions	KZ	2	2+0	Z	S
17Y1DP	Transportation Policy and Strategy	KZ	2	2+0	L	S
15Y1DP	Transportation Psychology	KZ	2	2+0		S
17Y1DZ	Transported Commodities Cognization	KZ	2	2+0	L	S
18Y1D1	Dynamics of Routes and Vehicles 1	KZ	2	2+0	Z	S
13Y1EA	Economic - Energetic Analysis of Land Transport	KZ	2	2+0	Z	S
13Y1EP	Economics and Management of Postal Services	KZ	2	2+0	L	S
13Y1EV	Public Sector Economy	KZ	2	2+0	Z	S
15Y1EH	European Integration within Historical Context	KZ	2	2P+0C	Z	S
18Y1EV	Experimental Methods and Numerical Modelling	KZ	2	2+0	L	S
18Y1EZ	Experimental Methods and Testing of Constructions	KZ	2	2+0	Z	S
18Y1EM1	Experimental Methods 1	KZ	2	2+0		S
18Y1EM2	Experimental Methods 2	KZ	2	2+0		s
15Y1FD	French Area Studies and Transportation	KZ	2	2P+0C	L	S
15Y1FJ	French as a foreign language	KZ	2	2+0		S
20Y1GI	Geographical Information Systems	KZ	2	2+0	L	S
14Y1GD	GIS and Maps Digitalization	KZ	2	2+0	Z	S
14Y1HW	Computer Hardware	KZ	2	2P+0C	L	S
17Y1HO	Heuristic Methods in Optimization Problems	KZ	2	2+0		S
15Y1HL	History of Civil Aviation Eva Rezlerová, Vladimír Plos	KZ	2	2P+0C	L,Z	S
15Y1HD	History of City Mass Transport Eva Rezlerová, Milan Dont	KZ	2	2P+0C	Z	S
12Y1HD	Traffic Noise Libor Ládyš, Dagmar Ko árková	KZ	2	2P+0C	L	S
12Y1HZ	Assesment of Impact of Investment Constructions on the Environment	KZ	2	2+0	Z	S
13Y1HG	Economic Geography	KZ	2	2+0	L	S
15Y1HE	Work Hygiene and Ergonomics in Traffic Petr Musil. Eva Rezlerová	KZ	2	2P+0C	Z	S
20Y1IC	Human Machine Interaction	KZ	2	2+0	L	S
15Y1IM	Intercultural management	KZ	2	2+0		S
16Y1KJ	Railroad Vehicles	KZ	2	2+0	L	S
12Y1KN	Combined Transportation Petr Nejedlý	KZ	2	2P+0C	Z	S
16Y1KA	Vehicle and Motorcycle Design	KZ	2	2+0	Z	S
16Y1KP	Car Body Design with Respect to Passive Safety of Vehicles	KZ	2	2+0	L	S
14Y1K2	Computer Aided Design 2 (AutoCAD, 3D, Map)	KZ	2	2+0	Z	S
13Y1KM	Crisis Management in Transportation	KZ	2	2+0	Z	S
12Y1KB	Quality and Safety of Roads	KZ	2	2+0		S
20Y1K	Cybernetics	KZ	2	2+0	Z	S
16Y1LZ	Vehicle Testing and Legislation	KZ	2	2+0	L	S
21Y1LM	Aviation Meteorology	KZ	2	2+0	L	S
21Y1LR	Radio Technology in Aviation	KZ	2	2+0	L	S
21Y1LP	Traffic and Requirements in Aviation	KZ	2	2+0		S
21Y1L	Airports - Design and Operation	KZ	2	2+0	L	s
21Y1LC	Human Factor	KZ	2	2+0	Z	S
11Y1LP	Linear Programming	KZ	2	2+0	L	S
15Y1LU	Logics of Engineer's Judgement	KZ	2	2+0	Z	S
17Y1LL	Logistics of Passenger and Freight Air Transport Petra Skolilová Petra Skolilová (Gar.)	KZ	2	2P+0C	L	S
13Y1MZ	Management of the Environment	KZ	2	2+0		S

13Y1MR	Managerial Decision-making	KZ	2	2+0	Z	S
12Y1MA	Marketing	KZ	2	2+0		S
13Y1MS	Marketing Strategies	KZ	2	2+0		S
11Y1MM	Mathematical Models in Economy	KZ	2	2P+0C	Z	S
16Y1MV	Material Application in Industry	KZ	2	2+0		S
18Y1MT	Engineering Materials	KZ	2	2P+0C	L	S
18Y1MK	Jaroslav Valach Finite Element Method and Its Application	KZ	2	2+0	Z	S
20Y1MK	Quality Tools in the Development Phase	KZ	2	2+0		S
11Y1MS	Systems Modelling From Data	KZ	2	2+0		S
17Y1ND	Maritime Transportation	KZ	2	2+0	Z	S
14Y1ND	Databases Design and Programming	KZ	2	2+0	L	S
14Y1NH	Databases Design and Programming	KZ	2	2+0	L	S
20Y1NE	Designing and Evalution of Experiments in the Procedures and the Quality Operation of Vehicles	KZ	2	2+0		S
16Y1NV		KZ	2	2+0		S
14Y1NP	Configuration and Calculation of Vehicle Structures Non-parametric 3D Modelling	KZ	2	2+0	Z	S
20Y1NS	Neural Networks	KZ	2	2+0	Z	S
18Y1NM	Numerical Modelling	KZ	2	2+0	Z	S
20Y1OI	Fare Collection and Information Systems	KZ	2	2P+0C	L	S
	Milan Sliacky, Patrik Horaž ovský Milan Sliacky (Gar.)					
14Y1OL	Linux Operating System	KZ	2	2+0	Z	S
14Y10S	Operating Systems	KZ	2	2+0	Z	S
11Y10S	Image systems	KZ	2	2+0	*	S
15Y1OC	Crucial Moments of Czechs	KZ	2	2+0		S
11Y1PV	Parametrical and Multicriterial Programming Olga Vraštilová	KZ	2	2P+0C	Z	S
16Y1PB	Vehicle Passive Safety	KZ	2	2+0		S
13Y1PM	Personal Management	KZ	2	2+0	L	S
13Y1PM2	Personal Management 2	KZ	2	2+0		S
12Y1PC	Pedestrian and Cycling Transport  Denis Liutov	KZ	2	2P+0C	L	S
12Y1PN	Planning and design roads	KZ	2	2+0		S
14Y1PG	Computer Graphics	KZ	2	2P+0C	L	S
11Y1PE	Computer Controlled Experiments	KZ	2	2+0	L	S
18Y1PA	Computer Simulations and Road Traffic Accident Analysis	KZ	2	2+0	L	S
13Y1PD	The Participation of Transport in Tourist Trade Management	KZ	2	2+0	L	S
16Y1PD	Traction Elements of Vehicles	KZ	2	2+0	Z	S
14Y1PM	Advanced Methods of Parametric Programming	KZ	2	2+0	L	S
21Y1PU	Aircraft Maintenance Technology	KZ	2	2+0	L	S
12Y1PD	Assessment of Transport Structures	KZ	2	2P+0C	Z	S
18Y1PN	Prevention of Road Traffic Accidents	KZ	2	2+0	L .	S
22Y1PN	Prevention of Road Traffic Accidents	KZ	2	2+0	L	S
14Y1PJ	C Programming Language	KZ	2	2P+0C	Z	S
14Y1PVJ	Programming in Java	KZ	2	2+0	7	S
12Y1PJ	Road Planning in Civil 3D	KZ KZ	2	2P+0C	Z	S
12Y1PT	Road Planning in Civil 3D - Project  Designing Roads in Civil 3D I	KZ	2	2+0		S
12Y1C1	Tomáš Honc	KZ	2	2P+0C	L	S
12Y1C2	Designing Roads in Civil 3D II Tomáš Honc	KZ	2	2P+0C	Z	S
12Y1PM	Road Planning in MX Road Environment	KZ	2	2+0	Z	S
12Y1PP	Road Planning in MX Road Environment - Project Processing	KZ	2	2+0	L	S
18Y1PK	Projection of Structures	KZ	2	2+0	Z	S
18Y1P1	Design of Structures 1	KZ	2	2+0	L	S
12Y1PZ	Railway Lines Design	KZ	2	2+0		S
16Y1PV	Operation, Construction and Maintenance of Vehicles	KZ	2	2P+0C	L	S

12Y1PU	Organization Disposition of Railway Stations	KZ	2	2P+0C	L	S
16Y1PR	Industrial Design	KZ	2	2+0		S
15Y1PF	French as a foreign language, Improvers level	KZ	2	2+0		S
12Y1RS	Reconstruction and Maintenance of Roads	KZ	2	2+0	L	S
12Y1RZ	Railway Lines Reconstruction	KZ	2	2+0	Z	S
15Y1RE	Oral Communication	KZ	2	2+0		S
16Y1RE	Control and Electronic Vehicle Systems  Josef Mik, P emysl Toman	KZ	2	2P+0C	Z	S
16Y1RV	Railroad Vehicles Driving	KZ	2	2+0	L	S
21Y1RL	Air Traffic Control	KZ	2	2+0	L	S
12Y1SF	Road Software	KZ	2	2+0		S
20Y1SC	Sensors and Actuators	KZ	2	2P+0C	L	S
15Y1SN	Sociology of Violence	KZ	2	2+0		S
11Y1SI	Transportation Software Engineering	KZ	2	2P+0C	Z	S
12Y1SU	Martin P ni ka  Road Management and Maintenance	KZ	2	2P+0C	L	S
18Y1SN	Dagmar Ko árková, Otakar Vacín Statically Nondeterminated Structures	KZ	2	2+0	Z	S
14Y1SP	•	KZ	2	2+0		S
13Y1TC	Strategic Planning for E-Business Tochniques of Travel Services	KZ KZ	2	2+0	Z	S
16Y1TJ	Techniques of Travel Services Technological Quality Aspects	KZ KZ	2	2+0	Z	S
20Y1TE		KZ	2	2+0	L	
14Y1TD	Technology of Electronic Systems	KZ	2	2+0	L	S S
	Design Theory Graph Theory			-		
11Y1TG	Lucie Kárná Lucie Kárná Lucie Kárná (Gar.)	KZ	2	2P+0C	L	S
18Y1TK	Theory of Structures	KZ	2	2+0	L	S
16Y1TR	Theory of Railroad Vehicle Driving	KZ	2	2+0	Z	S
16Y1TZ	Transporting Devices	KZ	2	2+0	L	S
14Y1TI	Creating Interactive Internet Applications	KZ	2	2P+0C	L	S
14Y1TF	Technical Documentation	KZ	2	2+0		S
21Y1ULE	Aircraft Maintenance	KZ	2	2+0		S
18Y1UK	Introduction of Rail Vehicles Josef Kolá, Jitka ezní ková	KZ	2	2P+0C	L	S
22Y1UN	Traffic Accidents Introduction	KZ	2	2+0		S
14Y1VB	Visual Basic	KZ	2	2+0	L	S
12Y1VC	Waterways and Shipping	KZ	2	2P+0C	Z	S
12Y1VD	Water Transport and Transportation	KZ	2	2+0	L	S
18Y1VF	Numerical and Experimental Modelling in Transportation	KZ	2	2+0	L	S
14Y1VM	<b>Development of Applications for Mobile Devices</b>	KZ	2	2P+0C	Z	S
15Y1VV	Origins and Development of Cars	KZ	2	2+0	L	S
21Y1ZT	ATM Systems	KZ	2	2+0	Z	S
17Y1ZC	Transportation in Tourism	KZ	2	2+0	L	S
14Y1ZA	Basics of Animation and Visualization	KZ	2	2+0	Z	S
20Y1ZG	<b>Fundamentals of Applied Computer Graphics</b>	KZ	2	2+0	L	S
16Y1ZG	Introduction into Applied Computer Graphics	KZ	2	2P+0C	L	S
18Y1ZD	Basics of Two-Dimensional Design	KZ	2	2+0	Z	S
11Y1ZF	Introduction to Solid State Physics	KZ	2	2+0	Z	S
14Y1ZM	Fundamentals of parametric and adaptive modeling	KZ	2	2P+0C	L	S
16Y1ZR	Principles of Transportation Machinery Control	KZ	2	2+0	L	S
18Y1ZT	Basics of Three-Dimensional Design	KZ	2	2+0	L	S
12Y1ZU	Principles of Urbanism Karel Hájek	KZ	2	2P+0C	Z	S
15Y1ZD	Radiation in Traffic	KZ	2	2+0	Z	S
16Y1ZL	Vehicle Testing, Legislation and Construction  Josef Mik, Zuzana Radová	KZ	2	2P+0C	Z	S
12Y1ZV	Rail Vehicles	KZ	2	2+0		S

Characteristics of the courses of this group of Study Plan: Code=VP-B-AI,DS,ME PREZ. Name=VP-bak.prez.AI,ME,DS od 05/06

16Y1AV 17Y1AF	Automobile Agradumanias	KZ	2
17 1 1701	Automobile Aerodynamics  Alternative Forms of Transportation Project Financing	KZ KZ	2
There will be specifed	ancemative Forms of mansportation Froject Financing such forms of financing in transportation, where the public sector body perform the final debtor, i. e. debtor payments come fr	1	_
•	at of the transaction and it is not the counterparty of the financial institute which provides the funding. Issue of securities as an	_	
18Y1AN	Traffic Accidents Analysis	KZ	2
-	ccident as a physical process with its own regularities, quantities and applications. Basic types of accidents in terms of analytic id-holding. Tyre adhesion. Conditions of car collisions. Analysis of wheel traces. Basic analysis of road traffic accident proces		-
22Y1A1	Traffic Accidents Analysis 1	KZ	2
	e road traffic accident as a physical process with its own regularities, quantities and their applications. Basic types of accident		
	ents for analysis. Vehicle road-holding. Tyre adhesion. Conditions of car collision. Analysis of wheel traces. Basic analysis of gt; \r\n\r\nThis subject will be continued in the summer term by the "Prevention of road traffic accidents".	road traffic accide	nt processes in
22Y1A2	Traffic Accidents Analysis 2	KZ	2
	e road traffic accident as a physical process with its own regularities, quantities and their applications. Basic types of accider	1	1
	ents for analysis. Vehicle road-holding. Tyre adhesion. Conditions of car collision. Analysis of wheel traces. Basic analysis of		
•	gt; \r\n\r\nThis subject will be continued in the summer term by the "Prevention of road traffic accidents".		1
18Y1AM	Anatomy, Mobility and Safety of Man	KZ	2
	omical structure and growth of bones. Articular joint. Remodelling of bone tissue. Anatomical structure of muscles. Blood circula uscular-skeletal system. Injury of human organs and musculo-skeletal system during traffic accidents. Mobility of ill and injur		-
	tive means and traffic safety regulations.	ed man and ms u	eaunent. Human
14Y1AV	Animation and Visualization	KZ	2
Advanced modification	s and modeling of NURBS, Patch objects, selection of objects (according to filter and properties). 3D Studio MAX systems and	Space Warp obje	cts. Atmospheric
and other effects, rend	ering filters, Motion blur, advanced animations, Motion panel. Modeling for morphing and animation, bone formation, animation	on using Inverse K	inematics.
14Y1AP	Automatization in Mail	KZ	2
• • • • • • • • • • • • • • • • • • • •	oment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information transports and some projection to a particular and NCN a communication to the projection of the projectio	•	•
• •	nation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e- of end telecommunication devices.	Communication ne	etwork interfaces
17Y1BB	Banks and Banking	KZ	2
	tem. Balance sheet, income statement, bank's capital and its functions. Banking risks. Banking products. Interest types, pay-c	I	_
products. Banking dep	sit products. Banking payment-clearing products. Financial intermediation, open-end and closed-end funds, collective invest	ment schemes. C	entral bank and
	and supervision. International banking.		1
14Y1BE	Barrierless Transport	KZ	2
	accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Stude ent roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation syst	-	-
	will be supplemented by practical examples.		audi toomiology
21Y1BLD	Safety in Aviation	KZ	2
15Y1BO	Work Safety and Health Protection in Transportation	KZ	2
Fundamental legislativ	e, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation	n. Health protectio	n programmes,
	ne and foreign business trips, statistics, working practice.		
13Y1BC	Bourse, Stock, Investment Comanies	KZ	2
17Y1BC	Bourse, Stock and Investment Companies	KZ	2
15Y1DU	History of Art and Society  s, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic	KZ Stations bridge	2 industrial
buildings. Design of tra		. Otations, bridges	s, industrial
15Y1DZ	History of Railway	KZ	2
Horse-drawn railways,	steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First R	epublic", electric t	raction, World
= = =	development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train conf	nections, railway li	nes construction
tallman accidence talling	ay junctions. Excursions and projections.		
			2
17Y1DN	Transportation of Dangerous Goods	KZ	2 ety requirements
17Y1DN Classification, filling, pa	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean	ns and drivers; safe	ety requirements
17Y1DN Classification, filling, pa 17Y1DG	Transportation of Dangerous Goods	s and drivers; safe	ety requirements.
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography	s and drivers; safe	ety requirements
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and co 12Y1DO	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography all relations between economical development and the transport system. Arrangement of transport infrastructure as a result of	s and drivers; safe KZ  If long-term relation	ety requirements
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and con 12Y1DO 17Y1DP	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy	s and drivers; safe  KZ  If long-term relation  KZ  KZ	ety requirements.  2 nship. Railway,  2 2
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and coi 12Y1DO 17Y1DP Current state of transport	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result of transport stransportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, transport infrastructure, mobile technical platforms, transport law, transport financing, transport infrastructure, mobile technical platforms.	s and drivers; safe  KZ  If long-term relation  KZ  KZ	ety requirements 2 nship. Railway, 2 2 2
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and col 12Y1DO 17Y1DP Current state of transpi safety and security, so	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisial development and research - all in the context of EU.	s and drivers; safe  KZ  If long-term relation  KZ  KZ  KZ  ansport territory se	ty requirements.  2 nship. Railway,  2 2 rvices, transport
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and coi 12Y1DO 17Y1DP Current state of transpi safety and security, soi 15Y1DP	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisil development and research - all in the context of EU.  Transportation Psychology	s and drivers; safe  KZ  If long-term relation  KZ  KZ  KZ  Ansport territory see	ety requirements  2 nship. Railway,  2 ervices, transpor
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and col 12Y1DO 17Y1DP Current state of transpi safety and security, soc 15Y1DP 17Y1DZ	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on binded transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy retation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, trail development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization	s and drivers; safe  KZ  If long-term relation  KZ  KZ  Assport territory see	ety requirements  2 nship. Railway,  2 ervices, transport  2 2
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and col 12Y1DO 17Y1DP Current state of transpi safety and security, soi 15Y1DP 17Y1DZ Useful features. Quality	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisil development and research - all in the context of EU.  Transportation Psychology	s and drivers; safe  KZ  If long-term relation  KZ  KZ  Assport territory see	ety requirements  2 nship. Railway,  2 ervices, transpor
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and col 12Y1DO 17Y1DP Current state of transpi safety and security, so 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy retation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, trail development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention described in the context of the transport.	s and drivers; safe  KZ  If long-term relation  KZ  KZ  Assport territory see	ety requirements  2 nship. Railway,  2 ervices, transpor
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and col 12Y1DO 17Y1DP Current state of transpi safety and security, so 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy relation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisal development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure	s and drivers; safe  KZ  If long-term relation  KZ  KZ  ansport territory services KZ  KZ  uring the carriage	ety requirements  2 Inship. Railway,  2 Ervices, transpor  2 2 Optimization
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and col 12Y1DO 17Y1DP Current state of transpi safety and security, soi 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of Vibroisolation and absorptions	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result of indicate transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisal development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure of the structure dynamics.	s and drivers; safe KZ If long-term relation KZ KZ Ansport territory see KZ Uring the carriage KZ E vibration and alle	ety requirements  2 Inship. Railway,  2 2 Prices, transport  2 2 Optimization  2 owable criteria.
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and cor 12Y1DO 17Y1DP Current state of transpr safety and security, sor 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of Vibroisolation and absor 13Y1EA	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisal development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.  Economic - Energetic Analysis of Land Transport	s and drivers; safe KZ If long-term relation KZ KZ Ansport territory see KZ Uring the carriage KZ E vibration and allo	ty requirements 2 nship. Railway, 2 2 ervices, transpor 2 2 Optimization 2 owable criteria.
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and cor 12Y1DO 17Y1DP Current state of transpersafety and security, soc 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of Vibroisolation and absoc 13Y1EA Vehicle traction system	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography a relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisal development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.  Economic - Energetic Analysis of Land Transport structure energetic conceptions, technics, traction-energetic properties, laws of vehicle motion, assessment of energy demands, traction-energetic conceptions, technics.	s and drivers; safe KZ If long-term relation KZ KZ Ansport territory see KZ Uring the carriage KZ Vibration and allow KZ KZ Cal, economical ar	ty requirements 2 nship. Railway,  2 2 ervices, transpor  2 Optimization  2 wable criteria.
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and co 12Y1DO 17Y1DP Current state of transposafety and security, so 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of Vibroisolation and abso 13Y1EA Vehicle traction system 13Y1EP	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisal development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure ribers of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.  Economic - Energetic Analysis of Land Transport s, traction-energetic properties, laws of vehicle motion, assessment of energy demands, traction-energetic conceptions, technic Economics and Management of Postal Services	s and drivers; safe KZ If long-term relation KZ KZ Ansport territory see KZ Uring the carriage KZ V V V V V V V V V V V V V V V V V V V	ty requirements.  2 Inship. Railway,  2 2 Privices, transport  2 Optimization  2 Owable criteria.  2 Id social aspects.
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and cor 12Y1DO 17Y1DP Current state of transposafety and security, soc 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of Vibroisolation and absoc 13Y1EA Vehicle traction system 13Y1EP Special character of po	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography a relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy relation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, trail development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure or dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.  Economic - Energetic Analysis of Land Transport structure dynamics.  Economics and Management of Postal Services stal service and its impact on economic activity and company management. The position of the state as a regulator of liberal	s and drivers; safe KZ If long-term relation KZ KZ Ansport territory see KZ VZ VIII KZ	ty requirements 2 nship. Railway,  2 2 ervices, transpor  2 Optimization  2 wable criteria.  2 d social aspects 2 ervice.
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and cor 12Y1DO 17Y1DP Current state of transposafety and security, sor 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of Vibroisolation and absorb 13Y1EA Vehicle traction system 13Y1EP Special character of po	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography al relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy ortation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisal development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure ribers of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.  Economic - Energetic Analysis of Land Transport s, traction-energetic properties, laws of vehicle motion, assessment of energy demands, traction-energetic conceptions, technic Economics and Management of Postal Services	s and drivers; safe KZ If long-term relation KZ KZ Ansport territory see KZ VI	ty requirements.  2 Inship. Railway,  2 2 Privices, transport  2 Optimization  2 Inship. Railway,  2 Inshi
17Y1DN Classification, filling, pa 17Y1DG Transport and reciproc road, water, air and cor 12Y1DO 17Y1DP Current state of transposafety and security, sor 15Y1DP 17Y1DZ Useful features. Quality of the choice and effect 18Y1D1 Theory and analysis of Vibroisolation and absorb 13Y1EA Vehicle traction system 13Y1EP Special character of po 13Y1EV Summary of basic eco	Transportation of Dangerous Goods cking, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport mean Transport Geography a relations between economical development and the transport system. Arrangement of transport infrastructure as a result on bined transportation, cooperation betwen them; services offered.  Transport Services of Settlements and Regions Transportation Policy and Strategy relation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, traisal development and research - all in the context of EU.  Transportation Psychology Transported Commodities Cognization Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention dive transport means utility.  Dynamics of Routes and Vehicles 1 vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.  Economic - Energetic Analysis of Land Transport structure dynamics.  Economics and Management of Postal Services stal service and its impact on economic activity and company management. The position of the state as a regulator of liberal Public Sector Economy	s and drivers; safe KZ If long-term relation KZ KZ ANSPORT TERRITORY SEE KZ Uring the carriage KZ E vibration and allow KZ Cal, economical ar KZ Lisation of postal see in transportation	ety requirements 2 nship. Railway, 2 2 ervices, transpor 2 Optimization 2 d social aspects 2 ervice. 2 on and their

15Y1EH	European Integration within Historical Context	KZ	2
1	lation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism		
1 - '	er's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and German relationship - a driving power of starting European integration.	a its consequence	es for Europe.
18Y1EV	Experimental Methods and Numerical Modelling	KZ	2
_	asured in structural mechanics and dynamics. Principles of strain gauge measurement. Theory of photoelasticimetry, experimen	1	_
Basic principles of num	erical methods in structural mechanics and dynamics. Finite element method in statics and dynamics. Geometry development	t, discretization to	elements, types
	Boundary conditions. Material models. Solution of problems.	,	
18Y1EZ	Experimental Methods and Testing of Constructions	KZ	2
18Y1EM1	Experimental Methods 1	KZ	2
18Y1EM2	Experimental Methods 2	KZ	2
15Y1FD	French Area Studies and Transportation	KZ	2
" " " "	d regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air tr ture. Current political system. System of education, studying in France. Selected authors of French literature. French gastrono		terminology.
15Y1FJ	French as a foreign language	KZ	2
20Y1GI	Geographical Information Systems	KZ	2
!	hical information systems, creating real-world model, data models, storage of geographical data, methods of data entry, digit	1	1
1	ns, raster and vector representation, spatial algorithms and operations, and general transport roles in GIS.	, 3 - 3 - 1	
14Y1GD	GIS and Maps Digitalization	KZ	2
1	and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of database	es. Interlinking ext	ternal references
with drawings containing			
14Y1HW	Computer Hardware	KZ	2
arithmetic and logical u	basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate inits. I/O subsystem.	s parts designing	- controllers,
17Y1HO	Heuristic Methods in Optimization Problems	KZ	2
	ew of heuristic methods, exact approaches for solving the Traveling Salesman Problem (TSP), Lagrangean approach, assign	I	1
vehicle routing problem	(VRP) - derivation from the TSP, classical heuristics solving the VRP, local search methods, Tabu Search method, genetic al	gorithms in location	on problems and
its enhancements.			
15Y1HL	History of Civil Aviation	KZ	2
1	evelopment of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development	-	
	s aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic era civil aviation. Airline companies. Supersonic flying.	or aviation. Goide	en era or civil
15Y1HD	History of City Mass Transport	KZ	2
1	nsport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trer	1	1
clearance systems. His	tory of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Republic and S	lovakia.	
12Y1HD	Traffic Noise	KZ	2
	pasic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regula		
1 '	n acoustic, noise transmission, soundproofing. Types of noise sources in area. Determination of acoustic situation in the area rement of transport noise. Acoustic studies, measuring protocol.	of interest. Metho	odology of
12Y1HZ	Assesment of Impact of Investment Constructions on the Environment	KZ	2
	the consequences of assumed intentions, projects, plans and political interests with regard to the environment; negative and		
	mpact Assessment) process.		
13Y1HG	Economic Geography	KZ	2
-	omic geography. Economy and territorial relations. Rules of functioning and development of socio-economic spheres as the s	standpoint of unde	erstanding the
world economy.	TW 111 : 15 : 7 %	1/7	
15Y1HE	Work Hygiene and Ergonomics in Traffic	KZ	2
_	cupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of thes n of working conditions that do not damage public health. Mutual links: man-machine-environment. Adaptation of technology t		
•	n the field of transportation; relevant legislature.	o poosiooo a	
20Y1IC	Human Machine Interaction	KZ	2
Interaction of human-sy	ystem. Methods and procedures for detecting decrease in attention. Used software and hardware tools. Bio-feedback, EEG m	leasurements.	'
15Y1IM	Intercultural management	KZ	2
16Y1KJ	Railroad Vehicles	KZ	2
1	ecent construction of railroad, city and intercity public vehicles, future and present situation, speed as a solution, maglev. From p	· ·	
	world. Division and ways of drive, efficient electronics, changers, railroad traction, energetic calculation. Railroad safety signa ce (interference). Testing.	ııııng systems, rail	road vehicle and
12Y1KN	Combined Transportation	KZ	2
	Combined Transportation ategy and legislation. Load units. Means of transport in combined transport. Combined transport systems. Transshipping area	1	1
16Y1KA	Vehicle and Motorcycle Design	KZ	2
-	king on vehicle concept type and character, description of project procedure. Vehicle construction and its computer back up.		_
	Legislative preconditions of vehicle projection, legislation. Preconditions of the construction of motorcycles, passenger vehicle		
16Y1KP	Car Body Design with Respect to Passive Safety of Vehicles	KZ	2
	principles of car body design with respect to passive safety, deformation zones' properties within accidents and legislative. Ca	-	
_	tion of apportionable body parts and their juncture, variation of forces in operation mode, bending and torsion, body dynamics, p techanics of injury, injury mechanisms and injury seriousness.	micipies of contro	neu ueloi mation,
14Y1K2	Computer Aided Design 2 (AutoCAD, 3D, Map)	KZ	2
	er setting creation, object sets creation, digitalization and filtering of map backgrounds, data work linked with external databas	1	
Possibilities of raster ba			
13Y1KM	Crisis Management in Transportation	KZ	2
	port. Risk of extraordinary events in relation to transport. Measures in the case of the state economic mobilisation in the sphere of	-	
	ites for crisis solution in transportation. Technical means for liquidation of the consequences of extraordinary events in transportation.		
12Y1KB	Quality and Safety of Roads	KZ	2

		T	
20Y1K	Cybernetics	KZ	2
and automata.	ormation theory, dynamic systems, the principle of feedback, logical systems. Finite automata as a special case of dynamical syst	ems. Relations bei	ween language
16Y1LZ	Vehicle Testing and Legislation	KZ	2
-	tional legislation concerning technical roadworthiness of vehicles. Procedures of homologation. Types of testing according to the	1	. –
type, homologation a	and operating life). Types of testing according to function (brakes, noise, exhalation, passive safety, driving properties, power). T	ypes of testing acc	cording to
compatibility (compo	onents, sets, units). Testing methodologies and ways of evaluation.		<del>,</del>
21Y1LM	Aviation Meteorology	KZ	2
	here. Vertical stratification. Pressures QNH, QFE, QFF, QME. Instability. Atmospherical fronts. Atmospherical precipitation, origin		
	nd. Cyclone and anticyclone. Gradient wind. Geostrofical and geocyclostrophical wind. Visibilities in air transport. Dangerous met Circulation.Intertropical front. Meteorological information.	eorological aspect	s. Meteorologic
21Y1LR	Radio Technology in Aviation	KZ	2
	the wave spectrum. Analog and digital modulations. Noises. Filters. Resonance circuits. Electromagnetic field. Electromagnetic	1	I
in aviation, radiation	and reception of electromagnetic field. Antennas in aviation, receivers and transmitters.		
21Y1LP	Traffic and Requirements in Aviation	KZ	2
21Y1L	Airports - Design and Operation	KZ	2
=	ons for development of planning of runway systems and terminal facilities. Road construction, approximate analysis of RWY dista	nce. Investment pla	anning - operat
	on of international airports - standard checking. Unexpected events and their handling.	1/7	
21Y1LC	Human Factor & Duman Factor   Human Factor   Huma	KZ	2
	alth & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information processing,		
	nan error, biorhythms & sleep, stress, fatigue, working methods.	, , , , , , ,	J, ,
11Y1LP	Linear Programming	KZ	2
	mization problem of linear programming, application of the linear programming on economic and technical problems, normal tra	affic problems and	traffic problem
	ometrical interpretation of linear programming problems, simplex method, duality principle.		
15Y1LU	Logics of Engineer's Judgement	KZ	2
•	engineer's judgement, its propositional and predicative logical base. Solutions of logical tasks through the methods of truthfulne hod. Logical basis for network design for the solution of technical tasks.	ess and semantic a	inalysis charts.
17Y1LL	Logistics of Passenger and Freight Air Transport	KZ	2
	senger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial	1	1
-	n systems in air transport. Global distribution systems.	a a library process	paccongolo al
13Y1MZ	Management of the Environment	KZ	2
13Y1MR	Managerial Decision-making	KZ	2
Solution of decision-	-making issues. Basic concepts of decision-making theory, rational logistics for solution of decision-making issues in organisati	ons - from identific	ation of
٠.	blems to assesment of different variants. Procedures of multi-criteria decision-making, choice of decision-making methods und	er risk and uncerta	ainty. Choice of
	ecision-making procedure.	1/7	
12Y1MA	Marketing Marketing Strategies	KZ	2
13Y1MS 11Y1MM	Marketing Strategies	KZ KZ	2
	Mathematical Models in Economy rise is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their pro-	1	I
-	ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained optimization.	gram implomentati	on. The edition
16Y1MV	Material Application in Industry	KZ	2
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	and composites,	attention is paid
	lls and to biomimetics. Integral approach to material selection process is also demonstrated based on so called Ashby's selection		T
18Y1MK	Finite Element Method and Its Application	KZ	2
	s of solid mechanics used in finite element method. Types of finite elements and their applicability in different problems. Shape to solid medical Regulatory conditions and loads. Methods for activing large systems of algebraic equations. Propressesses		
20Y1MK	neshing of solid models. Boundary conditions and loads. Methods for solving large systems of algebraic equations. Preprocesso	KZ	2
11Y1MS	Quality Tools in the Development Phase	KZ	2
17Y1ND	Systems Modelling From Data	KZ	2
	Maritime Transportation nce of the maritime transportation, theoretical discipline in maritime transportation, seafaring vessels, maritime ports and their u	1	I
	sport corridors and link by maritime, river and rail transport I and II, global maritime corridors, logistics of maritime transportation		-
containers, ITS in ma		•	
14Y1ND	Databases Design and Programming	KZ	2
	ning of DB application, i.e. database design, basic graphical interface creation, and programming of requested application behavior	aviour. Introduction	to DB engine
	amming in Visual Basic for Application language, DAO object models, and their use for programme-controlled database.		
14Y1NH	Databases Design and Programming	KZ	2
	rse will deepen their knowledge and skills in database design and learn the procedural extension of SQL, PL/SQL, which makes	s it possible to ens	ure data integr
Students in this cour	alabase engine.	1	2
Students in this cour on the level of the da		ବା K /	
Students in this cour on the level of the da 20Y1NE	Designing and Evalution of Experiments in the Procedures and the Quality Operation of Vehicles		2
Students in this cour on the level of the da 20Y1NE 16Y1NV	Designing and Evalution of Experiments in the Procedures and the Quality Operation of Vehicles Configuration and Calculation of Vehicle Structures	KZ	2
Students in this cour on the level of the da 20Y1NE 16Y1NV 14Y1NP	Designing and Evalution of Experiments in the Procedures and the Quality Operation of Vehicles Configuration and Calculation of Vehicle Structures Non-parametric 3D Modelling	KZ KZ	2
Students in this cour on the level of the da 20Y1NE 16Y1NV 14Y1NP Work in 3D non-para	Designing and Evalution of Experiments in the Procedures and the Quality Operation of Vehicles Configuration and Calculation of Vehicle Structures	KZ KZ	2
Students in this cour on the level of the da 20Y1NE 16Y1NV 14Y1NP Work in 3D non-para	Designing and Evalution of Experiments in the Procedures and the Quality Operation of Vehicles Configuration and Calculation of Vehicle Structures Non-parametric 3D Modelling ametricmodeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, objects	KZ KZ	2
Students in this cour on the level of the da 20Y1NE 16Y1NV 14Y1NP Work in 3D non-para connected with exter	Designing and Evalution of Experiments in the Procedures and the Quality Operation of Vehicles Configuration and Calculation of Vehicle Structures Non-parametric 3D Modelling ametricmodeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, objectinal database. Basic definition of work with lights, materials and reflexes. Models presentation.	KZ KZ ect data creation, w	2 vork with data

18Y1NM	Numerical Modelling	KZ	2
	ement Method computational software in general. Philosophy behind the ANSYS software package. Development of the mod	1	
· ·	h basic geometrical primitives. Import and cleanup of geometry imported from other CAE systems. Definition of material prop		
<del>-</del>	nite element model (mesh generation). Loading and boundary conditions. Selected basic problems (statical analysis, mode sl ar problems (contact analysis, plasticity).	napes and frequer	ncy analysis).
20Y1OI	Fare Collection and Information Systems	KZ	2
	s in public transport and their components (on-board units, validators, turnstiles,). Information systems and their component	1	
panels) and operator	rs (cycles, location or current delay of vehicles,). The issue of tariff systems. Other examples of clearance systems (parking	i).	
14Y1OL	Linux Operating System	KZ	2
	ix system installation. X-window system. Rights - Users and Groups, ACL rights. Filesystems and file attributes. Programs and	•	
	ds. Configuration files. Managing SW system. Programs in graphic mode - tools for text, graphics, sound, video, communication. tion. Remote administration.	Services manage	ement. Frinciples
14Y1OS	Operating Systems	KZ	2
Operating systems, their	ir function and architecture, process and memory management, virtual memory, threads, interprocess communication, synchro	nization, file syste	ems, architecture
	/in and Linux, start of PC and operating systems, networking, safety in OS, terminals in MS Win and Linux, batch files. Domai	ns and workgroup	os in MS Win,
	configuration of networks, Windows registry, remote desktop.	1/7	2
11Y10S	Image systems Crucial Mamorto of Czoobo	KZ KZ	2
15Y1OC The contemporary view	Crucial Moments of Czechs		_
	mation and strengthening of the P emysl state. The lands of the Czech Crown as a part of the Habsburgh monarchy. Political	•	
and formation of Czech	oslovakia. Disputes over the sense of Czech history. Changes of the power structure of Europe in the 20th century regarding	the position of ou	ır lands.
11Y1PV	Parametrical and Multicriterial Programming	KZ	2
· · · · · · · · · · · · · · · · · · ·	of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints	·	
16Y1PB	Vehicle Passive Safety	KZ	2
13Y1PM	Personal Management  ership issue from the viewpoint of an employee as well as a manager. The accent at the experience of basic situations through	KZ	2 na Svetamic
	al management, the assessment as a process, SWOT analysis, basic principles of personal management, theory and practice of	_	-
styles.			
13Y1PM2	Personal Management 2	KZ	2
12Y1PC	Pedestrian and Cycling Transport	KZ	2
	Pedestrian crossings. Modifications for blind, dim-sighted and disabled people. Design of cycle routes network. Ways of cycle routes from other transport modes. Cycle tracks and its design, one way streets reserved traffic larges, but stone grassing.	-	
'	of cyclists from other transport modes. Cycle tracks and its design - one way streets, reserved traffic lanes, bus stops, crossir s and road marking for cyclists.	igs with other trai	isport modes,
12Y1PN	Planning and design roads	KZ	2
14Y1PG	Computer Graphics	KZ	2
Basic formats of graphi	c and possibilities of their editing and mutual conversion. Use of individual types according to character of work. Work with ed	liting programs (w	ithin the user
	rs, DPI, colors. Basics of digital photography, scanning and computer technology like monitors and graphics cards.		
11Y1PE	Computer Controlled Experiments	KZ	2
'	priment consisting of designing, measurement method selection according to required results accuracy and available measure ameters, data acquisition and results calculation. Evaluation of measurement method accuracy and result uncertainty.	ament devices, se	election of
18Y1PA	Computer Simulations and Road Traffic Accident Analysis	KZ	2
	ents by means of PC-Crash and Impulz Expert 2000 applications. Introduction to principles and mathematic models used in basi	ic tasks solutions	
*	ment simulation. Kinematic versus dynamic models. Basics of software use for analysis of road tolls and their reconstruction, n	nodel solutions of	particular tasks,
problems of boundary of		1/7	2
13Y1PD	The Participation of Transport in Tourist Trade Management typology, market, marketing mix, transport service providers, contract cooperation, reservation systems, transport valuables,	KZ standard air carri	ers low cost air
1	ad, water, rail transport.	Staridard all Carri	1013, 10W 003t all
16Y1PD	Traction Elements of Vehicles	KZ	2
	s of combustion engines. Principal characteristics of blade jet engines. Traction characteristics of surface devices output transfer	∍r. Mechanical trai	nfer of output.
<u> </u>	tput, hydrostatic, hydrodynamic with different coupling settings. Dieselelectric tranfer of output.		
14Y1PM	Advanced Methods of Parametric Programming  ng - tools and methodology of working subassemblies and assemblies, sheet metal parts modelling, welded assemblies, pipe	KZ	2 ution lines
· -	ndering - physical and material properties, lighting sources. MKP - visual example.	illies, and distribu	mon intes.
21Y1PU	Aircraft Maintenance Technology	KZ	2
	enance technology, legislation, aircraft release into operation, safety, equipment.		
12Y1PD	Assessment of Transport Structures	KZ	2
1	rt structures, the EIA process. Multicriteria assessment methods, risk analysis, SWOT analysis. Landscape character, possibilitie	-	
the environment.	the landscape. Rating fragmentation and landscape connectivity in the preparation of linear structures. Practical examples of	assessment of tra	affic buildings on
18Y1PN	Prevention of Road Traffic Accidents	KZ	2
	uses with focus on education. Typical examples of unsuitable street pattern creating places of frequent road accidents. Car de	l .	_
possibilities to reduce the	he risk of accidents. Influence of speed. Pedestrians. Visibility.		
22Y1PN	Prevention of Road Traffic Accidents	KZ	2
	ut systematic accident causes with emphasis on education, about typical examples of unsuitable street pattern creating places Id accidents and about possibilities to reduce the risk of accidents.\r\nThis course is an optional continuation of the subject "A	=	
1	es-analysis-prevention. That's why students who have completed the "Analysis of road accidents" in the winter term will be er	-	
14Y1PJ	C Programming Language	KZ	2
	ge. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation,	1	
<u> </u>	stract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise oprerators.		
14Y1PVJ	Programming in Java	KZ	2
12Y1PJ	Road Planning in Civil 3D	KZ	2
Dasic course for Autode	esk Civil 3D. Work with fundamental commands, prezentation of differences between Civil and Autocad. Depiciton of terrain m	ouei, pairi, korido	or, Crossections.

Advanced course for work with Autodesk Civil 3D - Project Advanced course for work with Autodesk Civil 3D. Enhancement of laying - out skills, count of cubage, latiny - out pipe lines in project, vizual schneme, methods of terrain analyses. Team work on project.  12Y1C1 Designing Roads in Civil 3D I 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 a particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calcule explanation of the traffic building design in the real-life profession.  12Y1C2 Designing Roads in Civil 3D II 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 a particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calcules.	KZ lization. Work with terrain	2
schneme, methods of terrain analyses. Team work on project.  12Y1C1 Designing Roads in Civil 3D I  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 of particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calcule explanation of the traffic building design in the real-life profession.  12Y1C2 Designing Roads in Civil 3D II  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 of the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software.	lization. Work with terrain	I
12Y1C1 Designing Roads in Civil 3D I 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 a particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calcule explanation of the traffic building design in the real-life profession.  12Y1C2 Designing Roads in Civil 3D II 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 of the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software.		and with its
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 of particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calcule explanation of the traffic building design in the real-life profession.  12Y1C2  Designing Roads in Civil 3D II  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 of the course is devoted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software.	KZ	2
particular linear building, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calcul explanation of the traffic building design in the real-life profession.  12Y1C2 Designing Roads in Civil 3D II  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 of the section of the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software.		_
12Y1C2 Designing Roads in Civil 3D II 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 of the course is devoted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software.	ation. The course also inc	cludes a basic
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		
	KZ	2
particular linear building, from the initial situation, over the forigitudinal section, to the model and work sections and the cubic capacity calcul-		-
improved and developed. Students learn to design intersections.	ation. The previously acq	ulled Skills are
12Y1PM Road Planning in MX Road Environment	KZ	2
Basic course of MX environment. Review of MX environment further to AutoCAD. Introduction to work with projects, standard procedures at	design conduit. Model dra	awing, changes
in database, triangulation, routing, design methods, grade line design, bottom layers and plain design, cross-sections editor.		,
12Y1PP Road Planning in MX Road Environment - Project Processing	KZ	2
Design and analysis of cross-roads. MXRenew - design model preparation, data conversion (dwg, dxf, dgn). Loading of points ASCII file. Use performance jobs in designer teams, processing of project documentation.	e of VBA techniques. Wor	rk on particular
18Y1PK Projection of Structures	KZ	2
Regulations and laws in project planning. Basic construction material and elements used in systems of structures. Loading of structures. Sta		
Construction systems. Concrete, steel and wooden constructions. Ground and foundation. Civil engineering and engineering structures. Trans		
analysis. of structures using computers.		,
18Y1P1 Design of Structures 1	KZ	2
Deformations of beam elements, virtual work. Strength method. Frame analysis by strength method. Deformation method. Frame analysis by Beam on elastic Winkler's foundation. Calculation of beam on elastic foundation. Basics of the mathematical elasticity. Wall as a structural el		
Statical function of shells. Examples of calculations.	ement. Flate as a structu	iiai iiieiiibei.
12Y1PZ Railway Lines Design	KZ	2
Lines' and stations' designing. Introduction to basic standards and regulations. Geometrical setting of track, longitudinal sections, cross se	I	_
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	measurement. Transmiss	ion mechanism.
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 a Reserve stations. Technology of work in railway station with regard to its disposition. Railway station documentations in the Czech Republic r		nation yards.
16Y1PR Industrial Design	KZ	2
15Y1PF French as a foreign language, Improvers level	KZ	2
12Y1RS Reconstruction and Maintenance of Roads	KZ	2
Sorting of roads, maintenance and reconstruction. Soil as building material. Construction of asphalt and concrete surface, its breakdowns. R	l	1
panels. Video recording.		
12Y1RZ Railway Lines Reconstruction	KZ	2
Dringiples of treak maintainange technology Treak maintainange maghinang apparatusature and ask attention building as a bird.	-	-
Principles of track maintainance technology. Track maintainance machinery, superstructure and substructure building machinery and special rail	vay superstructure and st	
parameters - causes and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of rails	K7	
parameters - causes and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of rails 15Y1RE Oral Communication	KZ	2
parameters - causes and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of raily 15Y1RE Oral Communication 16Y1RE Control and Electronic Vehicle Systems	KZ	2 2
parameters - causes and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of rails 15Y1RE Oral Communication	KZ ges, disadvantages, functi	2 2 ion. Conventiona
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parameters - causes and elimination principles. Track sections and station tracks exclusion planning. Reconstruction timetable design of railw 15Y1RE Oral Communication  16Y1RE Control and Electronic Vehicle Systems  Elementary concepts of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantage and hybrid drive control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic comfort systems.  16Y1RV Railroad Vehicles Driving  Electric circuits in railroad vehicles. Railroad vehicle parametres regulation. Servicing and operation of the railroad vehicles. Rail traction tect Searching and solving faults.  21Y1RL Air Traffic Control  Air traffic services and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for form, content. Separation of aircraft. Reports of air traffic services, form, content. Harmonization and integration of ATC. CFMU and its subsystations. Reports of air traffic services, form, content. Harmonization and integration of ATC. CFMU and its subsystations. Reports of air traffic services, form, content. Harmonization and integration of ATC. CFMU and its subsystations. Reports of air traffic services, form, content. Harmonization and integration of ATC. CFMU and its subsystations. Reports of air traffic services, form, content. Harmonization and integration of ATC. CFMU and its subsystations. Reports of air traffic services, form, content. Harmonization and integration of ATC. CFMU and its subsystations. Reports of aircraft. Reports of aircraft reports of aircraft. Reports of aircraft reports of aircraft reports of aircraft. Reports of aircraft reports of	KZ ges, disadvantages, functic c control, safety, communi KZ hnology. Solution of emerical KZ or aircraft flying through systems. Flexible use of air KZ s. Sensors of mechanical, KZ KZ nd implementation using for KZ d development of road news and repair methods are	2 2 ion. Conventional ication and  2 gency situations  2 pace. Flight plan rspace - FUA.  2 electro-magnetic  2 cormal techniques  2 etwork, short, e discussed in the
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13Y1TC	Techniques of Travel Services	KZ	2
· ·	and importance of tourism, outline of services in tourism with detailed analysis of transport services and means of transporta	ation (air transport	, waterway and
sea, road and railway to			
16Y1TJ	Technological Quality Aspects	KZ	2
	tation. Quality management. Standards of Quality Management and its application. Quality system creation. Tools and methods	of quality improver	ment. Conformity
	ntal certification. Workplace certification. QMS integration. Classification, certification of products and producers.	1/7	
20Y1TE	Technology of Electronic Systems	KZ	2 orieties of basis
	isic technology of integrated circuits. Synthesis of integrated circuits. Higher levels of technology components. Measurement,	-	
aspects of electronic sy		diagnostics, reliai	mity. Operational
14Y1TD	Design Theory	KZ	2
	ving aspects of design are treated: what are the characteristics of design problems; what is the structure of the design proces	1	
used in design; which n	neans of reasoning are used in design; what are the psychological structures used by designers; what is the role of external r	representations; a	nd what is the
nature and meaning of	creativity in design? The theoretical background is based on two predominant notions of design: that of rational problem solv	ing and reflection	in action. Also,
current trends in desigr	n theory (design as a social activity, design rationale, learning to design, computer support, and research by design) are treat	ed in the course.	
11Y1TG	Graph Theory	KZ	2
· ·	minology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees,		_
	path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existen-	ce and optimizatio	n and algorithms
18Y1TK	utational complexity, dealing with NP-complete problems, heuristic approach.	KZ	2
	Theory of Structures		2
16Y1TR	Theory of Railroad Vehicle Driving ransportation. Technical Condition Railroad traffic regulations. Railroad rasportation. Technical condition of railroad vehicles and responsibility for their condition. Railroad traffic regulations. Railroa	d traffic safety Sig	_
_	ystem. Powering system. Power distribution.	d traffic safety. Oig	griai systems.
16Y1TZ	Transporting Devices	KZ	2
	al transport technology, loose material transport - conveyors with tractive elements, conveyors without tractive elements, tran		
	c transport devices, crane mechanisms, steel constructions. Vertical transport, transport in mines, long-distance conveyor bel		
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 applicat	ion programmed
in PHP language.			
14Y1TF	Technical Documentation	KZ	2
	will be introduced into photographic technique, photos editation and composition. In this course students will prepare 3 seme	estral projects, eac	h of 10 - 20
·	20 x 30 cm on given themas from the area of architektura, technical artefakt in its natural environment and still-life.		
21Y1ULE	Aircraft Maintenance	KZ	2
18Y1UK	Introduction of Rail Vehicles	KZ	2
	nd parameters rail transport systems - railway and urban transport. Basis driving mechanics rail vehicles - equation of motion		_
	unning resistance. Acceleration force. Analyzing driving cycle rail vehicle. Speed-power diagrams and characteristics rail vehic gn concept rail vehicles and drive of wheel set.	ie - nydromecnani	c, nyaroaynamic
22Y1UN	Traffic Accidents Introduction	KZ	2
14Y1VB	Visual Basic	KZ KZ	2
	୍ବ for Visual Basic on MS-Windows .NET platform with use of .NET libraries or Visual Studio tools for graphic or console mode	1	_
	ations. Work with VBA at superstructures creation for MS-Windows applications supporting VBA.	s. i ditilei, creation	or installation
12Y1VC	Waterways and Shipping	KZ	2
	ort. The position of water transport in the transport system of the Czech Republic and the EU. Advantages and disadvantages	1	
	, a network of waterways in the Czech Republic. Construction of the waterway and its equipment. Management of waterways	-	-
in inland navigation, na	vigation rules of operation, navigation maps.		
12Y1VD	Water Transport and Transportation	KZ	2
<del>-</del>	ti vnitrozemské plavby. Základní rozd Iení vnitrozemských plavidel a jejich základní parametry. Základy konstrukce a stavby p		
	stavby infrastruktury vodní dopravy. Poptávka po vodní doprav v eské republice. Zp soby financování investi ních a provo	zních náklad infr	astruktury vodní
	ístavy lod nice apod.). Námo ní doprava obecn a v podmínkách R.		
18Y1VF	Numerical and Experimental Modelling in Transportation	KZ .	2
	onal principles in numerical modelling. Finite element method. Method of boundary elements and final strips. Application of p		=
	in transport. Model similarity. Strain gauge measuring. Optical method. Mechanical properties and phenomena observed exped processing of experimental values.	erimentally. Meast	ining of transport
14Y1VM	Development of Applications for Mobile Devices	KZ	2
	mming, Java programming language, development environment, operating system Android, development application - widget	1	
permissions, services,		,	,,
15Y1VV	Origins and Development of Cars	KZ	2
	istics in technical, economical, cultural, political and ecological context. Focus on vehicle technology, development of its technic	1	
Development of relevar	nt legislature and transport infrastructure. Social and cultural aspects of transportation. History of unrealised or non-standard transportation.	ransportation solu	tions, alternative
propulsion and fuels.			
21Y1ZT	ATM Systems	KZ	2
	classical and modern facilities, systems and technologies designed for ATS. Student obtains knowledge of technical principle	s and solutions of	communication,
	ance systems used in aviation.		
17Y1ZC	Transportation in Tourism	KZ	2
	hes and typology. Market and marketing. Transport services in terms of tourist trade, scheduled and other kinds of transport, c transport services. Low cost airlines. Reservation and information systems. Modern kinds of transport and tourism. Rent a 0		
14Y1ZA	Basics of Animation and Visualization	KZ	2
	Dasics of Animation and visualization ment, 2D and 3D primitives. Tools for transformation and transformation control, tools for figurative constructing, and primitive	1	
	napping and its types. Material editor, material of Standard kind, lights, cameras and their setup. Basic objects of Space Warp		
	ut - rendering + rendering parameters setup.		

20Y1ZG	Fundamentals of Applied Computer Graphics	KZ	2
Creation of three-dime	sional and two-dimensional scenes, working with professional and freeware software for creating 2D and 3D graphics. Le	arning and working w	ith software for
creation and processing	g of 2D and 3D graphics.		
16Y1ZG	Introduction into Applied Computer Graphics	KZ	2
Computer graphics, div	ision and applications with emphasis on transport, including development and research. Colours, colour perception, colou	r schemes, models, p	rinciples of 2D
and 3D generation, ele	mentary algorithms for graphic data workout. Visualisation principles and tasks, technics, graphics and visualisation HW b	asics. Introduction to	2D and 3D
graphics software.			
18Y1ZD	Basics of Two-Dimensional Design	KZ	2
The comprehensive tea	iching method includes primary creative principles and the introduction to the logic of free shapes in the plane. The "step-by	-step"procedure pass	sing from simple
relatioships to more co	mplex ones. The topics are closed by two-dimensional variations on basic conceptual elements and other tasks of the crea	ative character.	
11Y1ZF	Introduction to Solid State Physics	KZ	2
Structure of solids, cry	stal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic proper	ties of solids. Semico	nductors.
Magnetism.			
14Y1ZM	Fundamentals of parametric and adaptive modeling	KZ	2
Basics of work at produ	icts and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models	from 2D sketches. Im	port and export
from and to another sy	stems. Fundamentals of assemblies creation.		
16Y1ZR	Principles of Transportation Machinery Control	KZ	2
Combustion engine ch	aracteristics. Piston combustion engines - external and full- scale characteristics, factors affecting power and effectivenes.	Regulation and control	ol.
18Y1ZT	Basics of Three-Dimensional Design	KZ	2
The design tasks focus	first on the three-dimensional design in defined space. The next step is the synthesis of the internal space with three-dimensional design in defined space.	ensional elements an	d correct shape
modelling.			
12Y1ZU	Principles of Urbanism	KZ	2
Survey on history of cir	y and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Sp	pacial arrangement of	f settlements.
Types of towns or cities	with a certain prevailing function, forms of their development. Brief overview of land-use planning.		
	Radiation in Traffic	KZ	
15Y1ZD			2
15Y1ZD Health protection again	st radiation in traffic.	, ,	2
	st radiation in traffic.    Vehicle Testing, Legislation and Construction	KZ	2
Health protection again		1 1	2
Health protection again 16Y1ZL Vehicle, bus and motorl	Vehicle Testing, Legislation and Construction	sonal cars, trucks, bu	2

Name of the block: Jazyky

Minimal number of credits of the block: 8

The role of the block: J

Code of the group: J2B-B OD05/06 P+K

Name of the group: Jazyk 2.bl.bak.od 05/06 prez.+kombin.

Requirement credits in the group: In this group you have to gain 8 credits

Requirement courses in the group: In this group you have to complete at least 5 courses

Credits in the group: 8 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
15JA2B	Foreign Language - English (exam 2)	ZK	0			J
15J1A5	Foreign Language - English 5	Z	2	0+2		J
15J1A6	Foreign Language - English 6	Z	2	0+2		J
15J1A7	Foreign Language - English 7	Z	2	0+2		J
15J1A8	Foreign Language - English 8	Z,ZK	2	0+2		J
15JF2B	Foreign Language - French (exam 2)	ZK	0			J
15J1F5	Foreign Language - French 5	Z	2	0+2		J
15J1F6	Foreign Language - French 6	Z	2	0+2		J
15J1F7	Foreign Language - French 7	Z	2	0+2		J
15J1F8	Foreign Language - French 8	Z,ZK	2	0+2		J
15JN2B	Foreign Language - German (exam 2)	ZK	0			J
15J1N5	Foreign Language - German 5	Z	2	0+2		J
15J1N6	Foreign Language - German 6	Z	2	0+2		J
15J1N7	Foreign Language - German 7	Z	2	0+2		J
15J1N8	Foreign Language - German 8	Z,ZK	2	0+2		J
15JR2B	Foreign Language - Russian (exam 2)	ZK	0			J

15J1R5	Esseign Longuego Duration 5	Z	2	0+2	1	J
	Foreign Language - Russian 5				-	
15J1R6	Foreign Language - Russian 6	Z	2	0+2		J
15J1R7	Foreign Language - Russian 7	Z	2	0+2		J
15J1R8	Foreign Language - Russian 8	Z,ZK	2	0+2		J
15JS2B	Foreign Language - Spanish (exam 2)	ZK	0			J
15J1S5	Foreign Language - Spanish 5	Z	2	0+2		J
15J1S6	Foreign Language - Spanish 6	Z	2	0+2		J
15J1S7	Foreign Language - Spanish 7	Z	2	0+2		J
15J1S8		Z,ZK	2	0+2	+	
100100	Foreign Language - Spanish 8	Ζ,ΖΝ		0+2		J
Characteristics of the	courses of this group of Study Plan: Code=J2B-B OD05/06 P+	K Name=Jaz	zyk 2.bl.k	ak.od 05	5/06 pre	z.+kombin.
15JA2B Fo	reign Language - English (exam 2)				ZK	0
15J1A5 Fo	reign Language - English 5				Z	2
	of Transportation Sciences study two foreign languages one after another at the Depart				-	-
•	about every-day matters but also to read and write and discuss professional and specia		•			
•	the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take ation students take two exams in English - at the end of 4th and 6th semester). Those :	•	-			
	lish language" as their first choice. This is, however, not a guarantee for being excepted					
_ <del>-</del>	and Russian at different levels. The courses are also taught in our multimedia laborator		, ,	,,,		
15J1A6 Fo	reign Language - English 6				Z	2
-	of Transportation Sciences study two foreign languages one after another at the Depart				-	-
· ·	about every-day matters but also to read and write and discuss professional and specia		0 /	,		0 0
•	the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take	•	-			
	ation students take two exams in English - at the end of 4th and 6th semester). Those lish language" as their first choice. This is, however, not a guarantee for being excepted					
<del>_</del>	and Russian at different levels. The courses are also taught in our multimedia laborator		uuy.an,brag	it, Our de	partificin	provides courses
	reign Language - English 7	· <u> </u>			Z	2
	of Transportation Sciences study two foreign languages one after another at the Depart	tment of Humani	ties. These	ourses aim	_	_
	about every-day matters but also to read and write and discuss professional and specia					
are ended with an exam (at	the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take	e an English exar	m only - at t	ne end of 4t	h semeste	er; the PP
	ation students take two exams in English - at the end of 4th and 6th semester). Those s					
-	lish language" as their first choice. This is, however, not a guarantee for being excepted		udy. <br&g< td=""><td>t; Our de</td><td>partment</td><td>provides courses</td></br&g<>	t; Our de	partment	provides courses
	and Russian at different levels. The courses are also taught in our multimedia laborator	ту.			7 71/	
	reign Language - English 8 of Transportation Sciences study two foreign languages one after another at the Depart	ton ant of Llumani	tiaa Thaaa	1	Z,ZK	2
	about every-day matters but also to read and write and discuss professional and specia				-	-
	the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take		-			
(Professional Pilot) specialis	ation students take two exams in English - at the end of 4th and 6th semester). Those	students who wa	nt to apply f	or the Air Tr	affic speci	alizations are
	lish language" as their first choice. This is, however, not a guarantee for being excepted		udy. <br&g< td=""><td>t; Our de</td><td>partment</td><td>provides courses</td></br&g<>	t; Our de	partment	provides courses
	and Russian at different levels. The courses are also taught in our multimedia laborator	ry.				
	reign Language - French (exam 2)				ZK	0
· ·	reign Language - French 5		·		Z	2
	of Transportation Sciences study two foreign languages one after another at the Depart about every-day matters but also to read and write and discuss professional and specia				-	-
•	the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take		•			
	ation students take two exams in English - at the end of 4th and 6th semester). Those s	Ü	,			,
recommended to enrol "Eng	lish language" as their first choice. This is, however, not a guarantee for being excepted	d in the project st	udy. <br&g< td=""><td>t; Our de</td><td>partment</td><td>provides courses</td></br&g<>	t; Our de	partment	provides courses
in English, German, French	and Russian at different levels. The courses are also taught in our multimedia laborator	ry.				
15J1F6 Fo	reign Language - French 6				Z	2
	of Transportation Sciences study two foreign languages one after another at the Depart				-	-
•	about every-day matters but also to read and write and discuss professional and specia		•			
	the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take ation students take two exams in English - at the end of 4th and 6th semester). Those :	_	-			
	lish language" as their first choice. This is, however, not a guarantee for being excepted				•	
•	and Russian at different levels. The courses are also taught in our multimedia laborator			,,,		
15J1F7 Fo	reign Language - French 7	-			Z	2
	of Transportation Sciences study two foreign languages one after another at the Depart	tment of Humani	ties. These	courses aim	at providi	1
		alised issues &lt.	hr&at· Ro	th arodually		
knowledge to communicate	about every-day matters but also to read and write and discuss professional and specia		•			
knowledge to communicate are ended with an exam (at	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take	e an English exa	m only - at t	ne end of 4t	h semeste	er; the PP
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take taxon students take two exams in English - at the end of 4th and 6th semester). Those station students take two exams in English - at the end of 4th and 6th semester).	e an English exai students who wa	m only - at to nt to apply f	ne end of 4t or the Air Tr	th semeste affic speci	er; the PP alizations are
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Eng	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take tation students take two exams in English - at the end of 4th and 6th semester). Those slish language" as their first choice. This is, however, not a guarantee for being excepted	e an English exar students who wa d in the project st	m only - at to nt to apply f	ne end of 4t or the Air Tr	th semeste affic speci	er; the PP alizations are
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Eng in English, German, French	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take action students take two exams in English - at the end of 4th and 6th semester). Those slish language" as their first choice. This is, however, not a guarantee for being excepted and Russian at different levels. The courses are also taught in our multimedia laborator	e an English exar students who wa d in the project st	m only - at to nt to apply f	ne end of 4t or the Air Tr pt; Our de	th semeste affic speci partment	er; the PP alizations are provides courses
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Eng in English, German, French 15J1F8	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take action students take two exams in English - at the end of 4th and 6th semester). Those solish language as their first choice. This is, however, not a guarantee for being excepted and Russian at different levels. The courses are also taught in our multimedia laborator reign Language - French 8	e an English exal students who wa d in the project st ry.	m only - at the strain only -	ne end of 4t or the Air Tr it; Our de	th semester affic speci partment Z,ZK	er; the PP alizations are provides courses
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Eng in English, German, French 15J1F8 Fo The students of the Faculty	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take attion students take two exams in English - at the end of 4th and 6th semester). Those solish language as their first choice. This is, however, not a guarantee for being excepted and Russian at different levels. The courses are also taught in our multimedia laborator reign Language - French 8  of Transportation Sciences study two foreign languages one after another at the Depart	e an English exantstudents who was in the project stry.	m only - at the street of the	ne end of 4t or the Air Tr it; Our de	th semester affic specific spe	er; the PP alizations are provides courses  2 ng sufficient
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Eng in English, German, French 15J1F8 Fo The students of the Faculty knowledge to communicate	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take action students take two exams in English - at the end of 4th and 6th semester). Those solish language as their first choice. This is, however, not a guarantee for being excepted and Russian at different levels. The courses are also taught in our multimedia laborator reign Language - French 8	e an English exan students who wa d in the project st ry. tment of Humani alised issues.<	m only - at the	ne end of 4t or the Air Trat; Our de	ch semeste affic speci partment Z,ZK at providi chosen la	er; the PP alizations are provides courses  2 ng sufficient unguage courses
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Eng in English, German, French 15J1F8 Fo The students of the Faculty knowledge to communicate are ended with an exam (at	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take take two exams in English - at the end of 4th and 6th semester). Those salish language as their first choice. This is, however, not a guarantee for being excepted and Russian at different levels. The courses are also taught in our multimedia laborator reign Language - French 8  of Transportation Sciences study two foreign languages one after another at the Depart about every-day matters but also to read and write and discuss professional and specia	e an English exan students who wa d in the project st ry. tment of Humani alised issues.< e an English exan	m only - at the notice of the total apply for	ne end of 4t or the Air Tr it; Our de courses aim th gradually ne end of 4t	ch semeste raffic speci partment Z,ZK at providi chosen la	er; the PP alizations are provides courses  2 ng sufficient unguage courses pr; the PP
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Engin English, German, French 15J1F8 FO The students of the Faculty knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Engine Pilot) For the students of the Faculty knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Engine	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take take two exams in English - at the end of 4th and 6th semester). Those salish language" as their first choice. This is, however, not a guarantee for being excepted and Russian at different levels. The courses are also taught in our multimedia laborator reign Language - French 8 of Transportation Sciences study two foreign languages one after another at the Depart about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take tation students take two exams in English - at the end of 4th and 6th semester). Those salish language" as their first choice. This is, however, not a guarantee for being excepted	e an English exan students who wa d in the project st ry. tment of Humani alised issues.< e an English exan students who wa d in the project st	m only - at ti nt to apply f udy. <br&g ties. These o br&gt; Bo m only - at ti nt to apply f</br&g 	ne end of 4t or the Air Trut; Our de 2 courses aim th gradually ne end of 4t or the Air Truth or the Air Tru	ch semeste affic speci partment Z,ZK at providi chosen la ch semeste affic speci	er; the PP alizations are provides courses  2 ng sufficient inguage courses er; the PP alizations are
knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Engin English, German, French 15J1F8 FO The students of the Faculty knowledge to communicate are ended with an exam (at (Professional Pilot) specialis recommended to enrol "Engin English, German, French	about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take take two exams in English - at the end of 4th and 6th semester). Those salish language" as their first choice. This is, however, not a guarantee for being excepted and Russian at different levels. The courses are also taught in our multimedia laborator reign Language - French 8 of Transportation Sciences study two foreign languages one after another at the Depart about every-day matters but also to read and write and discuss professional and special the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take take two exams in English - at the end of 4th and 6th semester). Those salisation students take two exams in English - at the end of 4th and 6th semester).	e an English exan students who wa d in the project st ry. tment of Humani alised issues.< e an English exan students who wa d in the project st	m only - at ti nt to apply f udy. <br&g ties. These o br&gt; Bo m only - at ti nt to apply f</br&g 	ne end of 4t or the Air Trut; Our de 2 courses aim th gradually ne end of 4t or the Air Truth or the Air Tru	ch semeste affic speci partment Z,ZK at providi chosen la ch semeste affic speci	er; the PP alizations are provides courses  2 ng sufficient inguage courses er; the PP alizations are

ZK

Foreign Language - German (exam 2)

15JN2B

15J1N5	Foreign Language - German 5	Z	2
	ulty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These cours		-
•	ate about every-day matters but also to read and write and discuss professional and specialised issues. Both gra (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the en	•	
	cialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the		
recommended to enrol '	English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. 	Our department p	rovides courses
in English, German, Fre	nch and Russian at different levels. The courses are also taught in our multimedia laboratory.		
15J1N6	Foreign Language - German 6	Z	2
	ulty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These cours		-
<del>-</del>	ate about every-day matters but also to read and write and discuss professional and specialised issues. Both gra (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the en	=	
	cialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the		
	English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. < br>	•	
in English, German, Fre	nch and Russian at different levels. The courses are also taught in our multimedia laboratory.		
15J1N7	Foreign Language - German 7	Z	2
	ulty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These cours		-
<del>-</del>	ate about every-day matters but also to read and write and discuss professional and specialised issues. Both gra	=	
	(at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the en cialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the		
	English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. 	•	
	nch and Russian at different levels. The courses are also taught in our multimedia laboratory.		
15J1N8	Foreign Language - German 8	Z,ZK	2
	ulty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These cours		-
•	rate about every-day matters but also to read and write and discuss professional and specialised issues. Both gra	•	
	(at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the en cialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the		
	ralisation students take two exams in English - at the end of 4th and oth semester). Those students who want to apply for the English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. 	•	
	nch and Russian at different levels. The courses are also taught in our multimedia laboratory.	our doparations p	1011000 0001000
15JR2B	Foreign Language - Russian (exam 2)	ZK	0
15J1R5	Foreign Language - Russian 5	Z	2
The students of the Fac	ulty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These cours	es aim at providin	g sufficient
•	ate about every-day matters but also to read and write and discuss professional and specialised issues. Both gra	•	
	(at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the en		
	cialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. 		
recommended to emor	English language as their hist choice. This is, nowever, not a guarantee for being excepted in the project study.	our department p	iovides codises
in English, German, Fre	nch and Russian at different levels. The courses are also taught in our multimedia laboratory.		
	nch and Russian at different levels. The courses are also taught in our multimedia laboratory.  Foreign Language - Russian 6	Z	2
15J1R6	nch and Russian at different levels. The courses are also taught in our multimedia laboratory.  Foreign Language - Russian 6  ulty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course	- 1	
15J1R6 The students of the Fac	Foreign Language - Russian 6	es aim at providin	g sufficient
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15J1S7 Foreign Language - Spanish 7
The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised

issues.<br&gt;&amp;nbsp

15J1S8 Foreign Language - Spanish 8

Code

Z,ZK

Completion

2

**Credits** 

The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised

issues.<br&gt;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study.&lt;br&gt;&amp;nbsp;&amp;nbsp;&amp;nbsp;&amp;nbsp;Our department provides courses in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.

## List of courses of this pass:

Name of the course

11MSAP	Modeling of Systems and Processes	Z,ZK	4
The course introd	duces mathematical methods and algorithms providing an essential tool for system analysis. Methods and algorithms represent cont	ext in which the sy	stems are
modelled and eva	lluated in continuous and discrete time domain. The Laplace transform, z-transform, and the recursive algorithms are introduced in or	der to understand	solution of
differential	l and difference equations, which are developed for system description. The course focuses on practical use of technical computing $\epsilon$	environment MATL	AB.
11MST	Mathematical Statistics	Z,ZK	2
Point estimation, pro	operties of point estimators (consistency, unbiasedness, efficiency), methods of point estimation (method of moments, maximum likelih	ood metod). Bayes	s estimators
Testing of statistical	I hypothesis, critical values, choice of hypothesis and level of significance, observed level of significance (P-value). Goodness of fit test,	independence test	. Regression
and correlation, lin	near regression, correlation coefficient, coefficient of determination, the general linear model, statistical inference in linear regression,	analysis of varian	ce, multiple
	regression, the use of matrices in regression.		
11MZD	Measurement and Data Processing	KZ	2
General principles	of detectors with special attention to traffic. Different technologies, data analysis, data preprocessing, analytical methods (decision trees	s, clustering or soft	computing)
11X15	Project 5	Z	2
11X16	Project 6	Z	2
11X17	Project 7	Z	6
11X18	Project 8	Z	10
11Y1LP	Linear Programming	KZ	2
	timization problem of linear programming, application of the linear programming on economic and technical problems, normal traffic	l .	_
Domination of the op	with constrains. Geometrical interpretation of linear programming problems, simplex method, duality principle.	probleme and train	io probiotiio
11Y1MM	Mathematical Models in Economy	KZ	2
	urse is to teach selected methods of linear programming, with theoretical procedures applicable for individual tasks and their program	l	_
god. o oo.	of the course is the ability to implement and solve basic tasks from the queue theory, graph theory and both free and constrained or	-	
11Y1MS	Systems Modelling From Data	KZ	2
11Y1OS	Image systems	KZ	2
11Y1PE	Computer Controlled Experiments	KZ	2
	of experiment consisting of designing, measurement method selection according to required results accuracy and available measur	1	1
implementation	computer-recorded parameters, data acquisition and results calculation. Evaluation of measurement method accuracy and result u		COLIOTI OI
11Y1PV	Parametrical and Multicriterial Programming	KZ	2
	learnest real and Matternest regramming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. Co		_
11Y1SI	Transportation Software Engineering	KZ	2
- 1	ran sportation contware Engineering oftware engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implemen		_
240.0 00.100 p.to 0.10	and practical usuage.	nanon donig roima	
11Y1TG	Graph Theory	KZ	2
	d terminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, mi	I	1
•	rian path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence a		
	for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.	•	Ü
11Y1ZF	Introduction to Solid State Physics	KZ	2
	ids, crystal lattice, Bloch function, Brillouin zones. Bend theory of solids. Dynamics of 1D lattice. Phonons. Thermodynamic properties		1
	Magnetism.		
12X15	Project 5	Z	2
12X16	Project 6	Z	2
12X17	Project 7	Z	6
12X17 12X18	Project 8	Z	10
10010			

12Y1CI Designing Roads in Civil 3D II recourse is overed to the traffic bildings design feel, specificity to eding in data is auth, by the means of a 3D software. Students go through the complete design of this personal friends bilding, from the initial subsidin, over the bright bilding section, is to the model and voice sections and the outer capacity calculation. The curves elso includes a basis of the personal friends with the control of the students of t				
particular forms building, from the initial albuston, over the longitudinal section, to the morate and own sections and the cube completion of the testific building depting in the great-life operation. The cursue is to between the testific buildings design feet, specifically be designed read to see the cursue is to device the testific buildings design feet, specifically be designed read and such by the memors of a 50 software. Students go through the cumples designed of the particular lines buildings, from the trials clustum, over the tripipationic section, is the montes and viols sections and the code requesty clustuations. The protocols protocols are protocols and the code requesty clustuations. The protocols protocols are protocols are protocols are protocols and the code requesty clustuations. The protocols are protocols are protocols are protocols are protocols are protocols and the code requesty clustuations. The protocols are protocols. The protocols are protocols are protocols are protocols are protocols are protocols. The protocols are protocols are protocols are protocols are protocols. The protocols are protocols are protocols are protocols are protocols. The protocols are protocols are protocols are protocols. The protocols are protocols are protocols are protocols are protocols. The protocols are protocols are protocols are protocols are protocols are protocols. The protocols are	12Y1C1	Designing Roads in Civil 3D I	KZ	2
explanation of the ratific building design in the results potentiary.  Text cause is decorated to the traffic buildings design ifful, specifically the design of mask as such, by the memors of a 3D ordinaris. Studerts go through the complete design of this protection into buildings design into the protection and the protection of the complete design of this protection in protection of the	The course is de	voted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software. Students go through	the complete de	sign of this
12Y1C2 Designing Roads in Civil 3D II Recursor is designed index profit particles profit pa	particular linear b		course also inclu	des a basic
The course a devoted to the traffice buildings design feels specifically intended buildings. Non the histils situation, over the Inspiration assessment and the quick capacity actuation. The previously acquired sellin are improved and devoleded. Students seen to design intended countries.  12Y1DO Transport Services of Settlements and Regions KZ 2 12Y1HD Transport Services of Settlements and Regions  KZ 2 12Y1HD Transport Services of Settlements and Regions  KZ 2 12Y1HD Transport Services of Settlements and Regions  KZ 2 12Y1HD Transport Services of Settlements and Regions  KZ 2 12Y1HD Transport Services of Settlements and Regions  KZ 2 12Y1HD Transport Services of Settlements and Regions  KZ 2 12Y1HD Transport Services of Settlements and Regions  KZ 2 12Y1HD Transport Services of Settlements of Settlements and Settlements of Settlements and Settlements on Settlements of Settlements and Settlements of Settlements on Settleme				
particular incer building, from the initial situation, one the burgularida section, to the model and work sections and the cabits capacity calculation. The provincely acquired shells are improved and developed. Substrate issue to design interrestication.  12Y1DO Transport Services of Settlements and Regions  Traffic foliage Acoustic inclination: Lose a capacity and acquired shell of the capacity				1
Tarsport Services of Settlements and Recigins   KZ   2   1271HD   Transport Services of Settlements and Regions   KZ   2   1271HD   Transport Services of Settlements and Regions   KZ   2   1271HD   Transport Services of Settlements and Regions   KZ   2   1271HD   Transport Services of Interest Services of Interest Services of Interest Services of Interest Settlement Services of Interest Settlement Settlement Services of Interest Settlement Settlem			-	-
12Y1HD	particular ililear b		previously acquir	eu skilis ale
Accessed introduction, basic terms, quantities Basics of physiological accounts, most improvides of urban accounts changed in the area of interest. Methodology of corporation, proceedings of the processes of the process of the processes of the processes of the	12V1DO	· · · · · · · · · · · · · · · · · · ·	K7	2
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	12Y1ZV	Rail Vehicles	KZ	2
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13X15	Project 5	Z	2
13X16	Project 6	Z	2
13X17	Project 7	Z	6
13X18	Project 8	Z	10
13Y1BC	Bourse, Stock, Investment Comanies	KZ	2
13Y1EA	Economic - Energetic Analysis of Land Transport	KZ	2
	stems, traction-energetic properties, laws of vehicle motion, assessment of energy demands, traction-energetic conceptions, technical,		
13Y1EP Special chara	Economics and Management of Postal Services cter of postal service and its impact on economic activity and company management. The position of the state as a regulator of liberation of the state as a regulator of liberatic postal service and its impact on economic activity and company management.	KZ disation of postal	2 service.
13Y1EV	Public Sector Economy	KZ	2
•	sic economic findings, public goods - definition, public sector domains, state budget, taxes, public goods and externalities, externalitie ods of assessment of public projects, transport projects and their funding, benefits of transport projects, the assessment of transport phom-4, CSHS.	•	
13Y1HG Basic concepts o	Economic Geography f economic geography. Economy and territorial relations. Rules of functioning and development of socio-economic spheres as the sta	KZ ndpoint of unders	2 standing the
13Y1KM	world economy.  Crisis Management in Transportation	KZ	2
	ransport. Risk of extraordinary events in relation to transport. Measures in the case of the state economic mobilisation in the sphere of transport.		1
	prerequisites for crisis solution in transportation. Technical means for liquidation of the consequences of extraordinary events in trans		
13Y1MR	Managerial Decision-making	KZ	2
	interruption Decision making issues. Basic concepts of decision-making theory , rational logistics for solution of decision-making issues in organisati		1
	roblems to assesment of different variants. Procedures of multi-criteria decision-making, choice of decision-making methods under ris successful type of decision-making procedure.		
13Y1MS	Marketing Strategies	KZ	2
13Y1MZ	Management of the Environment	KZ	2
13Y1PD	The Participation of Transport in Tourist Trade Management	KZ	2
-	port, typology, market, marketing mix, transport service providers, contract cooperation, reservation systems, transport valuables, sta		1
40)/4 DM	carriers, IATA, ICAO, road, water, rail transport.	1/7	
13Y1PM	Personal Management f leadership issue from the viewpoint of an employee as well as a manager. The accent at the experience of basic situations through	KZ	2 Systemic
	resonal management, the assessment as a process, SWOT analysis, basic principles of personal management, theory and practice of mostyles.	-	-
13Y1PM2	Personal Management 2	KZ	2
13Y1TC	Techniques of Travel Services		2
13Y1TC The aim, developr	Techniques of Travel Services ment and importance of tourism, outline of services in tourism with detailed analysis of transport services and means of transportation	KZ	2
		KZ	2
The aim, developr	nent and importance of tourism, outline of services in tourism with detailed analysis of transport services and means of transportation sea, road and railway transport).  Database and Presentation Systems	KZ n (air transport, w	2 raterway and
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The aim, development of the subject is specified by the subject is specified by the systems terminol technology by help or inciples and purporticiples and purportici	Database and Presentation Systems  E-R data model, relational data model, relational databases. Creation of a simple database application in the MS ACCESS environn by help of the PowerPoint environment - static snaps, simple database application in the MS ACCESS environn by help of the PowerPoint environment - static snaps, simple database application in the MS ACCESS environn by help of the PowerPoint environment - static snaps, simple animations, linking with other applications.  Information Systems  Inliced in theoretic and practical design resources and principles and information systems (IS) creation and realization. Students get kn logy, classification and characterization (process, transaction, knowledge, metainformation, etc.), IS projecting procedures, data/inforp of data structures, database systems and models. They obtain view of IS and information technologies technical infrastructure trend obses, human role in IS and possibilities of IS evaluation. In brief, they acquaint themselves with creation principles, architecture and station of computer network, security and legal problems relevant to information technologies, copyright and data protection law, compute according to the specialization.  Tutorial in Informatics 2  s. Expert systems and programmes based on knowledge, their architecture, knowledge representation, basic derivation and implems as creation and their design principles. Certainty and uncertainty in knowledge systems and different approaches to them. Common metazzy logics. Knowledge base design methods. Database and knowledge systems and their rules.  Information Systems in Transportation  Intents: information transmission processes, transmission security and reliability problems. Information protection, access control, author transportation and telecommunications in robotics systems of under relations to interaction human-machine security and reliability problems. Information systems.  Robotics in Transportation  Networks and Network Operating Systems  Networks and Network Operating	KZ n (air transport, w  KZ nent. Creation of p  ZK owledge of various mation computer ls, understand IS ndards of the stat  Z amage protection, r criminality) and  KZ entation methods. odel of balances  ZK nentification. Spece ability, optionally w  ZK ot and follows acrintellingence in ro  KZ tworks, connection and workstations ecurity.	2 aterway and 2 presentations 4 as information proceeding architecture e information 2 theft and practical par 2 Interface fo combination 4 cification of with functional ros terms of botics, robot 2 on information, installation,
The aim, development of the subject is specified by the subject is su	Database and Presentation Systems  E-R data model, relational data model, relational databases. Creation of a simple database application in the MS ACCESS environm by help of the PowerPoint environment - static snaps, simple database application in the MS ACCESS environm by help of the PowerPoint environment - static snaps, simple animations, linking with other applications.  Information Systems  isialized in theoretic and practical design resources and principles and information systems (IS) creation and realization. Students get know, classification and characterization (process, transaction, knowledge, metainformation, etc.), IS projecting procedures, data/inforp of data structures, database systems and models. They obtain view of IS and information technologies technical infrastructure trences, human role in IS and possibilities of IS evaluation. In brief, they acquaint themselves with creation principles, architecture and station of computer network, security and legal problems relevant to information technologies, copyright and data protection law, compute according to the specialization.  Tutorial in Informatics 2  Is. Expert systems and programmes based on knowledge, their architecture, knowledge representation, basic derivation and implements or creation and their design principles. Certainty and uncertainty in knowledge systems and different approaches to them. Common metal formation transmission processes, transmission security and reliability problems. Information protection, access control, autivativation and telecommunication. Problems of user comfort in relation to interaction human-machine security and reliability problems. Information protection, access control, autivativation and telecommunication. Problems of user comfort in relation to interaction human-machine security and reliability problems. Information protection, access control, autivativation and telecommunication. Problems of user comfort in relation to interaction human-machine security and reliability problems. Information protecti	KZ n (air transport, w  KZ nent. Creation of p  ZK owledge of various mation computer ls, understand IS ndards of the stat  Z amage protection, r criminality) and  KZ entation methods, odel of balances  ZK nentification. Spece ability, optionally w  ZK ot and follows acr ntellingence in ro  KZ tworks, connection and workstations ecurity.  Z,ZK	2 aterway and 2 presentations 4 as information proceeding architecture e information 2 theft and practical par 2 Interface fo combination 4 cification of with functiona 3 ros terms of botics, robot 1 2 in information installation, 4
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14X15	are briefly described.  Project 5	Z	2
14X16	Project 6	Z	2
14X17	Project 7	Z	6
14X18	Project 8	Z	10
14Y1AP	Automatization in Mail	KZ	2
	post shipment submission, transport, and delivery via physic and electronic way, virtual post operation. Technology of information trans		1
pplication of new	nformation and communication technologies in an offer of permanent, mobile, and NGN e-communication networks, solutions to e-communication networks, solutions to e-communication networks.	munication netwo	rk interfac
	technological principles of end telecommunication devices.		_
14Y1AV	Animation and Visualization	KZ KZ	2
	tions and modeling of NURBS, Patch objects, selection of objects (according to filter and properties). 3D Studio MAX systems and Spa is, rendering filters, Motion blur, advanced animations, Motion panel. Modeling for morphing and animation, bone formation, animatior		
14Y1BE	Barrierless Transport	KZ	2
	rless accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Students		_
	onment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation systems	-	
	Theoretical knowledge will be supplemented by practical examples.		
14Y1GD	GIS and Maps Digitalization	KZ	2
ork with map sou	urces and their creating. Maps digitalization and creation. Use and creation of other (non-graphic) information with use of databases. In	nterlinking externa	al referenc
14Y1HW	with drawings containing maps.  Computer Hardware	KZ	2
	Computer natuware ecture, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate p		1
compator around	arithmetic and logical units, I/O subsystem.	ranto accigining	
14Y1K2	Computer Aided Design 2 (AutoCAD, 3D, Map)	KZ	2
D space handling	, user setting creation, object sets creation, digitalization and filtering of map backgrounds, data work linked with external database an	d following map d	lata analy:
	Possibilities of raster backgrounds use.		
14Y1ND	Databases Design and Programming	KZ	2
Creation and sus	taining of DB application, i.e. database design, basic graphical interface creation, and programming of requested application behavio  Jet, basics of programming in Visual Basic for Application language, DAO object models, and their use for programme-controlled d		DB engir
14Y1NH	Databases Design and Programming	KZ	2
	urse will deepen their knowledge and skills in database design and learn the procedural extension of SQL, PL/SQL, which makes it po		_
	on the level of the database engine.		
14Y1NP	Non-parametric 3D Modelling	KZ	2
Work in 3D non-p	parametricmodeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, object of	data creation, wor	k with dat
	connected with external database. Basic definition of work with lights, materials and reflexes. Models presentation.		
14Y10L	Linux Operating System	KZ	2
	/Linux system installation. X-window system. Rights - Users and Groups, ACL rights. Filesystems and file attributes. Programs and pro mands. Configuration files. Managing SW system. Programs in graphic mode - tools for text, graphics, sound, video, communication. Ser		
2310 00113010 00111	of OS secure configuration. Remote administration.	vices manageme	пил ппор
14Y1OS	Operating Systems	KZ	2
Operating systems	their function and architecture, process and memory management, virtual memory, threads, interprocess communication, synchronization,	ation, file systems	, architect
of operating syste	ems Win and Linux, start of PC and operating systems, networking, safety in OS, terminals in MS Win and Linux, batch files. Domains	and workgroups	in MS Wir
14Y1PG	users and their rights, configuration of networks, Windows registry, remote desktop.	KZ	2
	Computer Graphics  graphic and possibilities of their editing and mutual conversion. Use of individual types according to character of work. Work with editing	l	
Dasic formats of	level scope) using layers, DPI, colors. Basics of digital photography, scanning and computer technology like monitors and graphics		iiii tiio use
14Y1PJ	C Programming Language	KZ	2
programming lar	iguage. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, strin	ıg, files, structure:	s and unio
	Implementations of abstract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise op		
14Y1PM	Advanced Methods of Parametric Programming	KZ	2
Assemblies pro	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 distribu	tion lines.
4.4V4.DV.L		V7	
14Y1PVJ 14Y1SP	Programming in Java	KZ KZ	2
	Strategic Planning for E-Business	KZ KZ	2
14Y1TD In the course, the	Design Theory   following aspects of design are treated: what are the characteristics of design problems; what is the structure of the design process; v		l .
	hich means of reasoning are used in design; what are the psychological structures used by designers; what is the role of external rep		_
used in design; w	ng of creativity in design? The theoretical background is based on two predominant notions of design: that of rational problem solving		
nature and meani	ends in design theory (design as a social activity, design rationale, learning to design, computer support, and research by design) are		
nature and meani current tre	Tachmical Decumentation	KZ	2
nature and meani current tre	Technical Documentation		of 10 - 20
nature and meani current tre	udents will be introduced into photographic technique, photos editation and composition. In this course students will prepare 3 semest		
nature and meani current tre 14Y1TF In this course str	idents will be introduced into photographic technique, photos editation and composition. In this course students will prepare 3 semest photos, size 15 x 20 to 20 x 30 cm on given themas from the area of architektura, technical artefakt in its natural environment and	still-life.	2
nature and meani current tre 14Y1TF In this course str	udents will be introduced into photographic technique, photos editation and composition. In this course students will prepare 3 semest photos, size 15 x 20 to 20 x 30 cm on given themas from the area of architektura, technical artefakt in its natural environment and  Creating Interactive Internet Applications	still-life.	2 programm
nature and meani current tre 14Y1TF In this course str	idents will be introduced into photographic technique, photos editation and composition. In this course students will prepare 3 semest photos, size 15 x 20 to 20 x 30 cm on given themas from the area of architektura, technical artefakt in its natural environment and	still-life.	II.

14Y1VM Object oriented i			
,,,	Development of Applications for Mobile Devices programming, Java programming language, development environment, operating system Android, development application - widgets	KZ , containers, threa	2 ds, menu,
	permissions, services, GUI.		T
and surfaces, surfa	Basics of Animation and Visualization  nvironment, 2D and 3D primitives. Tools for transformation and transformation control, tools for figurative constructing, and primitives of ceed to mapping and its types. Material editor, material of Standard kind, lights, cameras and their setup. Basic objects of Space Warp kind  Track View Editor. Output - rendering + rendering parameters setup.		
14Y1ZM	Fundamentals of parametric and adaptive modeling roducts and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2	KZ	2
basics of work at p	from and to another systems. Fundamentals of assemblies creation.	D sketches. Impor	t and export
15J1A5	Foreign Language - English 5	Z	2
	the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu		
•	an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end		•
,	ot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the	•	
recommended to e	nrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.	department provi	ues courses
15J1A6	Foreign Language - English 6	Z	2
	the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu		
•	an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the er		•
	ot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the		
recommended to e	enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.	r department provi	des courses
15J1A7	Foreign Language - English 7	Z	2
The students of	the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course	es aim at providing	sufficient
•	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the er		•
	ot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the		
recommended to e	enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our	r department provi	des courses
15J1A8	in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.	Z,ZK	2
	Foreign Language - English 8 the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course		1
•	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu		•
	an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th and 6th semester). Those students who want to apply for the		
	inrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our	=	
	in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.		
15J1F5	Foreign Language - French 5	Z	2
		os aim at providina	cufficiont
knowledge to comi	the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu		
are ended with	municate about every-day matters but also to read and write and discuss professional and specialised issues. Lt;br> Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end	nally chosen languated and of 4th semester	age courses r; the PP
are ended with (Professional Pilo	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th and 6th semester). Those students who want to apply for the	ially chosen languand of 4th semester Air Traffic specializ	age courses r; the PP zations are
are ended with (Professional Pilo	municate about every-day matters but also to read and write and discuss professional and specialised issues. Lt;br> Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end	ially chosen languand of 4th semester Air Traffic specializ	age courses r; the PP zations are
are ended with (Professional Pilo recommended to e	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th and 6th semester). Those students who want to apply for the introl "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.  Foreign Language - French 6	ially chosen languand of 4th semester Air Traffic specializer department provi	age courses r; the PP zations are des courses
are ended with (Professional Pilo recommended to e  15J1F6 The students of	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of y specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the introl "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.  Foreign Language - French 6  the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses	ially chosen languaring of 4th semester Air Traffic specializar department provious Zes aim at providing	age courses r; the PP zations are des courses 2 sufficient
are ended with (Professional Pilo recommended to e  15J1F6 The students of knowledge to comi	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th and 6th semester). Those students who want to apply for the introl "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.  Foreign Language - French 6	ially chosen languaring of 4th semester Air Traffic specializar department proving Zes aim at providingually chosen languaring defects a seminated for the seminary control of	age courses r; the PP rations are des courses  2 sufficient age courses
are ended with (Professional Pilo recommended to e  15J1F6 The students of knowledge to commare ended with (Professional Pilo	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of yespecialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the entrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.  Foreign Language - French 6  the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of yespecialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the	ally chosen languand of 4th semester Air Traffic specializer department proving a saim at providingually chosen languand of 4th semester Air Traffic specialize	age courses r; the PP rations are des courses  2 sufficient age courses r; the PP rations are
are ended with (Professional Pilorecommended to e  15J1F6 The students of knowledge to commare ended with (Professional Pilorecommended)	municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of y specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the entrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. Our in English, German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.  Foreign Language - French 6  the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course municate about every-day matters but also to read and write and discuss professional and specialised issues. Both gradu an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end	ally chosen languand of 4th semester Air Traffic specializer department proving a saim at providingually chosen languand of 4th semester Air Traffic specialize	age courses r; the PP rations are des courses  2 sufficient age courses r; the PP rations are
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The courses are also taught in our multimedia laboratory. 15J1R6 Foreign Language - Russian 6 Ζ 2 The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. <br&gt; Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. 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Foreign Language - Spanish 5 15J1S5 The students of the Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These courses aim at providing sufficient knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised issues. <br&gt; Both gradually chosen language courses are ended with an exam (at the end of 4th and 8th semester; the TL (Air Traffic Control) specialisation students take an English exam only - at the end of 4th semester; the PP (Professional Pilot) specialisation students take two exams in English - at the end of 4th and 6th semester). Those students who want to apply for the Air Traffic specializations are recommended to enrol "English language" as their first choice. This is, however, not a guarantee for being excepted in the project study. &lt:br&gt: Our department provides courses in English, German, French and Russian at different levels. 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15J1S8 The students of t	Foreign Language - Spanish 8 he Faculty of Transportation Sciences study two foreign languages one after another at the Department of Humanities. These course	Z,ZK s aim at providing	2 sufficient
_	knowledge to communicate about every-day matters but also to read and write and discuss professional and specialised mp;nbsp;  &		
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nowever, not a gua	German, French and Russian at different levels. The courses are also taught in our multimedia laboratory.	provides courses	iii Eiigiisii,
15JA2B	Foreign Language - English (exam 2)	ZK	0
15JF2B	Foreign Language - French (exam 2)	ZK	0
15JN2B	Foreign Language - German (exam 2)	ZK	0
15JR2B	Foreign Language - Russian (exam 2)	ZK	0
15JS2B	Foreign Language - Spanish (exam 2)	ZK	0
15X15	Project 5	Z	2
15X16	Project 6	Z	2
15X17	Project 7	Z	6
15X18	Project 8	Z	10
15Y1BO	Work Safety and Health Protection in Transportation	KZ	2
	lative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. H health insurance of home and foreign business trips, statistics, working practice.		ogrammes,
15Y1DP	Transportation Psychology	KZ	2
15Y1DU	History of Art and Society	KZ	2
History of art - d	efinitions, terminology, division into periods. Architecture, fine arts, design. Situation in Central Europe, today in the Czech Republic. buildings. Design of transport vehicles.	Stations, bridges, i	ndustrial
15Y1DZ	History of Railway	KZ	2
	rays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Repu		
War II railways, railv	vay development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connectirailway accidents, railway junctions. Excursions and projections.	ons, railway lines c	onstruction,
15Y1EH	European Integration within Historical Context	KZ	2
-	formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Li	•	
goals. Europe afte	er 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.	s consequences fo	or Europe.
15Y1FD	French Area Studies and Transportation	KZ	2
	rhy and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air traf Inch society and culture. Current political system. System of education, studying in France. Selected authors of French literature. Frence	•	minology.
15Y1FJ	French as a foreign language	KZ	2
15Y1HD	History of City Mass Transport	KZ	2
	s transport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trends a	•	of tariff and
	nce systems. History of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Reput		_
15Y1HE	Work Hygiene and Ergonomics in Traffic	KZ	2
J	of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these t ction of working conditions that do not damage public health. Mutual links: man-machine-environment. Adaptation of technology to po		
	Practical examples from the field of transportation; relevant legislature.		
15Y1HL	History of Civil Aviation	KZ	2
	g, development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development of a amous aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic era of		
	aviation. Modern era of civil aviation. Airline companies. Supersonic flying.		era di civii
15Y1IM	Intercultural management	KZ	2
15Y1LU	Logics of Engineer's Judgement	KZ	2
Logical structure o	f engineer's judgement, its propositional and predicative logical base. Solutions of logical tasks through the methods of truthfulness a Venn's diagram method. Logical basis for network design for the solution of technical tasks.	and semantic analy	rsis charts.
15Y1OC	Crucial Moments of Czechs	KZ	2
l l	view of crucial moments of the more than a thousand-year long history of western Slavs in Central Europe stressing the relations wi		
	Formation and strengthening of the P emysl state. The lands of the Czech Crown as a part of the Habsburgh monarchy. Political pro	_	
and formation of	of Czechoslovakia. Disputes over the sense of Czech history. Changes of the power structure of Europe in the 20th century regarding	the position of ou	r lands.
15Y1PF	French as a foreign language, Improvers level	KZ	2
15Y1RE	Oral Communication	KZ	2
15Y1SN	Sociology of Violence	KZ	2
15Y1VV	Origins and Development of Cars	KZ	2
-	statistics in technical, economical, cultural, political and ecological context. Focus on vehicle technology, development of its technical le	-	I
Development of rele	evant legislature and transport infrastructure. Social and cultural aspects of transportation. History of unrealised or non-standard trans propulsion and fuels.	portation solutions	, alternative
15Y1ZD	Radiation in Traffic	KZ	2
<u>'</u>	Health protection against radiation in traffic.		
16X15	Project 5	Z	2
16X16	Project 6	Z	2
16X17	Project 7	Z	6
16X18	Project 8	Z	10
16Y1AV	Automobile Aerodynamics	KZ	2

16Y1KA	Vehicle and Motorcycle Design	KZ	2
Inputs for decission	on-making on vehicle concept type and character, description of project procedure. Vehicle construction and its computer back up. Po		concepts,
concept of po	ower units. Legislative preconditions of vehicle projection, legislation. Preconditions of the construction of motorcycles, passenger vehicles.	icles, lorries, and b	ouses.
16Y1KJ	Railroad Vehicles	KZ	2
21st century mobilit	ry. Recent construction of railroad, city and intercity public vehicles, future and present situation, speed as a solution, maglev. From princ	ple to design and c	onstruction;
some realization in	the world. Division and ways of drive, efficient electronics, changers, railroad traction, energetic calculation. Railroad safety signalling	g systems, railroad	vehicle and
	infrastructure compliance (interference). Testing.		
16Y1KP	Car Body Design with Respect to Passive Safety of Vehicles	KZ	2
	erns principles of car body design with respect to passve safety, deformation zones' properties within accidents and legislative. Car b	•	
frame design, const	truction of apportionable body parts and their juncture, variation of forces in operation mode, bending and torsion, body dynamics, princ	iples of controlled o	leformation,
	restraint systems, biomechanics of injury, injury mechanisms and injury seriousness.		
16Y1LZ	Vehicle Testing and Legislation	KZ	2
	ational legislation concerning technical roadworthiness of vehicles. Procedures of homologation. Types of testing according to the sta	-	
type, nomologa	tion and operating life). Types of testing according to function (brakes, noise, exhalation, passive safety, driving properties, power). Ty	pes of testing acco	oraing to
40\(4\)	compatibility (components, sets, units). Testing methodologies and ways of evaluation.	1/7	2
16Y1MV	Material Application in Industry	KZ	2
16Y1NV	Configuration and Calculation of Vehicle Structures	KZ	2
16Y1PB	Vehicle Passive Safety	KZ	2
16Y1PD	Traction Elements of Vehicles	KZ	2
Principal characte	eristics of combustion engines. Principal characteristics of blade jet engines. Traction characteristics of surface devices output tranfer.	Mechanical tranfer	of output.
	Hydraulic transfer of output, hydrostatic, hydrodynamic with different coupling settings. Dieselelectric transfer of output.		
16Y1PR	Industrial Design	KZ	2
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 measurement	ent. Transmission n	nechanism.
	General principles of engine diagnostics.		
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, disadva	-	
and hybrid drive	control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic control,	safety, communica	ation and
	comfort systems.		
16Y1RV	Railroad Vehicles Driving	KZ	2
Electric circuits in r	ailroad vehicles. Railroad vehicle parametres regulation. Servicing and operation of the railroad vehicles. Rail traction technology. Sol	ution of emergenc	y situations.
	Searching and solving faults.		
16Y1TJ	Technological Quality Aspects	KZ	2
Certification and ac	reditation. Quality management. Standards of Quality Management and its application. Quality system creation. Tools and methods of q	uality improvement	. Conformity
40)/475	verification. Environmental certification. Workplace certification. QMS integration. Classification, certification of products and products and products are considered to the constant of the		
16Y1TR	Theory of Railroad Vehicle Driving	KZ	2
	Theory of Railroad Vehicle Driving road transportation. Technical condition of railroad vehicles and responsibility for their condition. Railroad traffic regulations. Railroad	KZ	
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17Y1BB	Banks and Banking	KZ	2
	system. Balance sheet, income statement, bank's capital and its functions. Banking risks. Banking products. Interest types, pay-off an	•	
products. Banking	deposit products. Banking payment-clearing products. Financial intermediation, open-end and closed-end funds, collective investmer its role. Bank regulation and supervision. International banking.	it schemes. Centra	ai bank and
17Y1BC	Bourse, Stock and Investment Companies	KZ	2
17Y1DG	Transport Geography	KZ	2
	procal relations between economical development and the transport system. Arrangement of transport infrastructure as a result of lor		
	road, water, air and combined transportation, cooperatiom betwen them; services offered.		
17Y1DN	Transportation of Dangerous Goods	KZ	2
	g, packing, marking, sending, carrying and receiving dangerous goods, technical requirements and certification for transport means and		
17Y1DP	Transportation Policy and Strategy  nsportation as a system; development of transport infrastructure, mobile technical platforms, transport law, transport financing, transport	KZ	2 es transport
ourient state of trai	safety and security, social development and research - all in the context of EU.	or territory service	,s, transport
17Y1DZ	Transported Commodities Cognization	KZ	2
Useful features. C	Quality. Testing. Standardization. Features relevant for the transport. Packing. Stress. Protection of goods and damage prevention during	ng the carriage. Op	otimization
	of the choice and effective transport means utility.		
17Y1HO	Heuristic Methods in Optimization Problems	KZ	2
	verview of heuristic methods, exact approaches for solving the Traveling Salesman Problem (TSP), Lagrangean approach, assignmer olem (VRP) - derivation from the TSP, classical heuristics solving the VRP, local search methods, Tabu Search method, genetic algorit	-	
vernole routing pro-	its enhancements.	ining in location pr	obicinis and
17Y1LL	Logistics of Passenger and Freight Air Transport	KZ	2
Logistics airline pas	ssenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial trans	sport process pass	engers and
	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 utiliza Isport corridors and link by maritime, river and rail transport I and II, global maritime corridors, logistics of maritime transportation, mar	_	
manumo porto, tran	containers, ITS in maritime transport.	oaopoao	αα σα
17Y1ZC	Transportation in Tourism	KZ	2
	branches and typology. Market and marketing. Transport services in terms of tourist trade, scheduled and other kinds of transport, rel		
	s. Specific transport services. Low cost airlines. Reservation and information systems. Modern kinds of transport and tourism. Rent a		
17ZTD	Introduction to Theory of Transport	Z,ZK	4
18X15	Project 5	Z Z	2
18X16	Project 6	Z	2
18X17 18X18	Project 7 Project 8	Z	6 10
18Y1AM	Anatomy, Mobility and Safety of Man	KZ	2
-	natomical 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 m	•	
	joint prostheses. Protective means and traffic safety regulations.		
18Y1AN	Traffic Accidents Analysis	KZ	2
=	fic accident as a physical process with its own regularities, quantities and applications. Basic types of accidents in terms of analytical ap /ehicle road-holding. Tyre adhesion. Conditions of car collisions. Analysis of wheel traces. Basic analysis of road traffic accident proce		
18Y1D1	Dynamics of Routes and Vehicles 1	KZ	2
	sis of vibration of multimass systems. Dynamical model of vehicle and interaction with transport structure. Assessment of structure vib		
	Vibroisolation and absorbers of dynamical effects. Methods of experimental dynamics. FEM in structure dynamics.		
18Y1EM1	Experimental Methods 1	KZ	2
18Y1EM2	Experimental Methods 2	KZ	2
18Y1EV	Experimental Methods and Numerical Modelling	KZ	2
	measured in structural mechanics and dynamics. Principles of strain gauge measurement. Theory of photoelasticimetry, experimental m numerical methods in structural mechanics and dynamics. Finite element method in statics and dynamics. Geometry development, dis		-
basic principles of i	of structural elements. Boundary conditions. Material models. Solution of problems.	scretization to elen	nents, types
18Y1EZ	Experimental Methods and Testing of Constructions	KZ	2
18Y1MK	Finite Element Method and Its Application	KZ	2
Variational princip	oles of solid mechanics used in finite element method. Types of finite elements and their applicability in different problems. Shape fund	ctions for selected	elements.
	, meshing of solid models. Boundary conditions and loads. Methods for solving large systems of algebraic equations. Preprocessor, s		
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 ogical materials and to biomimetics. Integral approach to material selection process is also demonstrated based on so called Ashby's	· · · · · · · · · · · · · · · · · · ·	ition is paid
18Y1NM	Numerical Modelling	KZ	2
	nite Element Method computational software in general. Philosophy behind the ANSYS software package. Development of the model		
Boolean operati	ons with basic geometrical primitives. Import and cleanup of geometry imported from other CAE systems. Definition of material prope	erties. Element type	es. From
geometrical mode	el to finite element model (mesh generation). Loading and boundary conditions. Selected basic problems (statical analysis, mode shape to the statical analysis and statical analysis).	oes and frequency	analysis).
40V4D4	Introduction to nonlinear problems (contact analysis, plasticity).	1/7	
18Y1P1 Deformations of be	Design of Structures 1  am elements, virtual work. Strength method. Frame analysis by strength method. Deformation method. Frame analysis by deformatio	KZ n method. Simple	2 planar grid.
	Winkler's foundation. Calculation of beam on elastic foundation. Basics of the mathematical elasticity. Wall as a structural element. Pl		
	Statical function of shells Examples of calculations		

18Y1PA Analysis of traffic accidents by means of PC-Crash and mitpute Expert 2000 applications. Introduction to principles and mathematic models used in basic tasks solutions systems. Vehicle movement simulation. Kinematic versus dynamic models. Basics of software use for analysis of road tolls and their reconstruction, model solutions of problems of boundary conditions.  18Y1PK Projection of Structures Projection of Structures. Loading of structures. Static function of basic structors used in a paystems. Concrete, steel and wooden constructions. Ground and foundation. Civil engineering and engineering structures. Static function of basic structors using computers.  18Y1PN Prevention of Road Traffic Accidents Systematic accident causes with focus on education. Typical examples of unsuitable street pattern creating places of frequent road accidents. Car defects causing possibilities to reduce the risk of accidents. Influence of speed. Pedestrians Visibility.  18Y1SN Statically Nondelterminated Structures KZ Deformations of the beam element, virtual work. Strength method. Frame analysis by strength method. Deformation method. Frame analysis by deformation method. Seam on elastic Winkler's foundation. Calculation beam on elastic foundation. Basement of the mathematical elasticity. Calculation of walls. Calculation of plat shells. Examples of calculations.  18Y1TK Theory of Structures  XZ Basic characteristics and parameters rail transport systems - railway and urban transport. Basis driving mechanics rail vehicle - equation of motion train and until track resistance. Total running resistance. Acceleration force. Analyzing driving cycle rail vehicle. Speed-power diagrams and characteristics rail vehicle - hydromechan and electric drive. Design concept rail vehicles and drive drive less.  18Y1VF Numerical and Experimental Modelling in Transportation  XZ The design tasks focus first on the three-dimensional design in defined space. The next step is the synthesis of the internal space with three-dimensional elements a	2 cucture element ems. Numerica 2 road accidents 2 d. Simple plana stes. Cylindrica 2 ains. Rolling ain nic, hydrodynai 2 cms for analysis suring of transp suring of transp 2 sssing from sim racter. 2 and correct sha ad safety syste action reliabilit 3 within the bod
Systems. Vehicle movement simulation. Kinematic versus dynamic models. Basics of software use for analysis of road tolls and their reconstruction, model solutions of problems of boundary conditions.    18Y1PK	2 cucture element ems. Numerica 2 road accidents 2 d. Simple plana stes. Cylindrica 2 ains. Rolling ain nic, hydrodynai 2 cms for analysis suring of transp suring of transp 2 sssing from sim racter. 2 and correct sha ad safety syste action reliabilit 3 within the bod
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Systematic accident causes with focus on education. Typical examples of unsuitable street pattern creating places of frequent road accidents. Car defects causing oposibilities to reduce the risk of accidents. Influence of speed. Pedestrians. Visibility.  18Y1SN   Statically Nondeterminated Structures   KZ  Deformations of the beam element, virtual work. Strength method. Frame analysis by strength method. Deformation method. Frame analysis by deformation method grid. Beam on elastic Winkler's foundation. Calculation beam on elastic foundation. Basement of the mathematical elasticity. Calculation of walls. Calculation of plat shells. Examples of calculations.  18Y1TK   Theory of Structures   KZ   18Y1UK   Theory of Structures   KZ   18Y1VF   Numerical and Experimental Modelling in Transport direction of motion train and unit rack resistance. Total running resistance. Acceleration force. Analyzing driving cycle rail vehicle. Speed-power diagrams and characteristics rail vehicle - hydromechan and electric drive. Design concept rail vehicles and drive of wheel set.  18Y1VF   Numerical and Experimental Modelling in Transportation   KZ   Virtual work and variational principles in numerical modelling. Finite element method. Method of boundary elements and final strips. Application of programme system certaviour of structures in transport. Model similarity. Strain gauge measuring. Optical method. Mechanical properties and phenomena observed experimentally. Measi-objects. Elaboration and processing of experimental values.  18Y1ZD   Basics of Two-Dimensional Design   KZ   The comprehensive teaching method includes primary creative principles and the introduction to the logic of free shapes in the plane. The "step-by-step" procedure past relatioiships to more complex ones. The topics are closed by two-dimensional variations on basic conceptu	d. Simple planates. Cylindrical tes. Cyl
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18Y1TK   Theory of Structures   KZ 18Y1UK   Introduction of Rail Vehicles   KZ 18Y1UK   Basic characteristics and parameters rail transport systems - railway and urban transport. Basis driving mechanics rail vehicles - equation of motion train and unit track resistance. Total running resistance. Acceleration force. Analyzing driving cycle rail vehicle. Speed-power diagrams and characteristics rail vehicle - hydromechan and electric drive. Design concept rail vehicles and drive of wheel set.  18Y1VF   Numerical and Experimental Modelling in Transportation   KZ Virtual work and variational principles in numerical modelling. Finite element method. Method of boundary elements and final strips. Application of programme system behaviour of structures in transport. Model similarity. Strain gauge measuring. Optical method. Mechanical properties and phenomena observed experimentally. Measure objects. Elaboration and processing of experimental values.  18Y1ZD   Basics of Two-Dimensional Design   KZ 18Y1ZD   Basics of Two-Dimensional Design   KZ 18Y1ZT   Basics of Three-Dimensional Design   KZ 18Y1ZT   Basics of Three-Dimensional Design   KZ The design tasks focus first on the three-dimensional design in defined space. The next step is the synthesis of the internal space with three-dimensional elements a modelling.  20BS   Safety and Reliability of Systems   ZK Basic theory of reliability and safety with special regard to information and automation equipments used in transportation safety systems. The aspects of reliability an analysis and synthesis are taken into account. A special interest is given to problems of human subject - artificial system (namely of the transportation nature) intered the concept of decision making. Linear and non-linear optimization, Structural, dynamic and stochastic programming. Definition of optimization task, problems arising of economics and technology that results in the task of linear programming, classical transportation problem, geometric interpretation of the tasks of linear programmin	ains. Rolling aranic, hydrodynaric, hydrodynaric, hydrodynaric arangement of transpersion of t
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Tack resistance. Total running resistance. Acceleration force. Analyzing driving cycle rail vehicle. Speed-power diagrams and characteristics rail vehicle - hydromechan and electric drive. Design concept rail vehicles and drive of wheel set.  18Y1VF   Numerical and Experimental Modelling in Transportation   KZ   Virtual work and variational principles in numerical modelling. Finite element method. Method of boundary elements and final strips. Application of programme system objects in transport. Model similarity. Strain gauge measuring. Optical method. Mechanical properties and phenomena observed experimentally. Measure objects. Elaboration and processing of experimental values.  18Y1ZD   Basics of Two-Dimensional Design   KZ   The comprehensive teaching method includes primary creative principles and the introduction to the logic of free shapes in the plane. The "step-by-step" procedure pass relatioships to more complex ones. The topics are closed by two-dimensional variations on basic conceptual elements and other tasks of the creative charges are lated to the process of the sprinciples of three-Dimensional Design   KZ   The design tasks focus first on the three-dimensional design in defined space. The next step is the synthesis of the internal space with three-dimensional elements and modelling.  20BSS   Safety and Reliability of Systems   ZK   Basic theory of reliability and safety with special regard to information and automation equipments used in transportation safety systems. The aspects of reliability analysis and synthesis are taken into account. A special interest is given to problems of human subject - artificial system (namely of the transportation nature) interest concept of decision making. Linear and non-linear optimization, Structural, dynamic and stochastic programming. Definition of optimization task, problems arising of economics and technology that results in the task of linear programming, classical transportation problem, geometric interpretation of the tasks of linear programming, their	2 ms for analysis suring of transpuring of transpuring from sim racter.  2 and correct shall a safety system action reliability.  3 within the body
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	basic methods
The content of the subject is the complex of the traffic knot, line of area control. In the introduction to this problem the basic conceptions from the branch are being a	
princip of control by means of light signalisation equipments, princip of signal picture proposal basic transport characteristic are being discussed. The technical mean	
and the corresponding software, princips and properties of traffic detectors and models of transport flow, methods of line control of transport flow, specifications of area	as control, cen
control, safety systems, modes of preferences in public transport and statistic component of transport (parking and parking systems etc) are always being gone through	The concept
of the telematics is being introduced, its content and the spedific problems of traffic control in tunnels and their environment also discussed.  20SANL Systems Analysis Z,ZK	4
Systems Analysis 2,2N Models and analyses of systemic features, means of detection of systemic characteristics, ways, decomposition, boundary and structure of systems, system behavior,	
processes, disgram characteristics, fuzzy sets/equations, formulation of states underindistinctly defined conditions, stability of systems.	doolololi man
20SRDP Vehicular Control Systems ZK	3
The aim of the course is to introduce fundamental principles of feedback control and to demonstrate their applications in different transport systems. Students are a	acquainted wit
fundamental concepts of linear control theory and discrete control. The fundamentals of nonlinear, adaptive and optimal control and their applications in transportation are	re also explain
20TM Telematics Z,ZK	
The subject Transport Telematics defines the basic principles of telematics in both theoretical and applicational areas. The user requirements are taking into account the subject transport Telematics defines the basic principles of telematics in both theoretical and applicational areas. The user requirements are taking into account the subject transport Telematics defines the basic principles of telematics in both theoretical and applicational areas. The user requirements are taking into account the subject transport Telematics defines the basic principles of telematics in both theoretical and applicational areas.	
system decomposition into the subsystems, modules, functions and processes. By chaining of strong processes the telematics applications are defined. The system different telematics applications are determined e.g. on computer centers, telecommunication environment, etc. The main goal of subject Transport Telematics is to pr	-
methodology of telematics systems in such way that the user requirements are fullfiled and the solution in close to optimality.	COOLIL HIG UGS
20X15 Project 5 Z	2
20X16 Project 6 Z	2
20X17 Project 7 Z	6
20X18 Project 8 Z	10
20Y1GI Geographical Information Systems KZ	
Introduction to geographical information systems, creating real-world model, data models, storage of geographical data, methods of data entry, digitization, geographical systems, map projections, raster and vector representation, spatial algorithms and operations, and general transport roles in GIS.	2
20Y1IC Human Machine Interaction KZ	I
Interaction of human system Methods and proceedures for detecting decreases in attention. Head activises and hardware tools. Die facilities I. ECO	phical coordina
Interaction of human-system. Methods and procedures for detecting decrease in attention. Used software and hardware tools. Bio-feedback, EEG measure	phical coordina
20Y1K Cybernetics KZ Fundamentals of information theory, dynamic systems, the principle of feedback, logical systems. Finite automata as a special case of dynamical systems. Relations be	phical coordina 2 ements.
	phical coordina 2 ements.

20Y1NS	Neural Networks	KZ	2
The basic structure	e and function of human brain and its main functional blocks and building elements - neurons. Models of neurons, modelling their netw of artificial neural networks.	orks and the basic	paradigms
20Y1OI	Fare Collection and Information Systems	KZ	2
	stems in public transport and their components (on-board units, validators, turnstiles,). Information systems and their components	for users (timetabl	es, maps,
ра	nels) and operators (cycles, location or current delay of vehicles,). The issue of tariff systems. Other examples of clearance systems	ems (parking).	
20Y1SC	Sensors and Actuators	KZ	2
Principles of sensor	rs and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sensors of		o-magnetic,
	state (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase ele		_
20Y1TE	Technology of Electronic Systems	KZ	2
	the technological process, the relation of the design, construction and technology. General scheme of technological process. Principle s. Basic technology of integrated circuits. Synthesis of integrated circuits. Higher levels of technology components. Measurement, diag		
electronic elements	aspects of electronic systems.	inostics, reliability.	Operational
20Y1ZG	Fundamentals of Applied Computer Graphics	KZ	2
	fimensional and two-dimensional scenes, working with professional and freeware software for creating 2D and 3D graphics. Learning		
	creation and processing of 2D and 3D graphics.		
20ZS	Railway Interlocking Systems	ZK	3
20ZT	Railway Interlocking	KZ	4
	onolitic end composite materials. Development of composite materials. Particular, fibre end laminar composite. Mechanics of composite	ite materials.	
21X15	Project 5	Z	2
21X16	Project 6	Z	2
21X17	Project 7	Z	6
21X18	Project 8	Z	10
21Y1BLD	Safety in Aviation	KZ	2
21Y1L	Airports - Design and Operation	KZ	2
Introductory condit	ions for development of planning of runway systems and terminal facilities. Road construction, approximate analysis of RWY distance.	Investment plannin	g - operator
	activities. Certification of international airports - standard checking. Unexpected events and their handling.		
21Y1LC	Human Factor	KZ	2
	e & limitations, ability & competence, accident statistics, flight safety, basics of flight physiology, individuals & environmer nealth & hygiene, health preservation, intoxication, incapacitation, basics of flight psychology, human information processing, me		
Sensory System, i	& model of human error, biorhythms & sleep, stress, fatigue, working methods.	mory &, learn	ing, trieory
21Y1LM	Aviation Meteorology	KZ	2
	phere. Vertical stratification. Pressures QNH, QFE, QFF, QME. Instability. Atmospherical fronts. Atmospherical precipitation, origin &an		
Forces producing v	vind. Cyclone and anticyclone. Gradient wind. Geostrofical and geocyclostrophical wind. Visibilities in air transport. Dangerous meteorol	ogical aspects. Me	teorological
	maps. Climatology. Circulation.Intertropical front. Meteorological information.		
21Y1LP	Traffic and Requirements in Aviation	KZ	2
21Y1LR	Radio Technology in Aviation	KZ	2
Electric signals a	nd the wave spectrum. Analog and digital modulations. Noises. Filters. Resonance circuits. Electromagnetic field. Electromagnetic wave	e propagation. Wa	ive ranges
2474011	in aviation, radiation and reception of electromagnetic field. Antennas in aviation, receivers and transmitters.	KZ	2
21Y1PU	Aircraft Maintenance Technology  Basics of aircraft maintenance technology, legislation, aircraft release into operation, safety, equipment.	NZ	2
21Y1RL	Air Traffic Control	KZ	2
	and their distribution. Organization of air traffic, flow and capacity management. Airspace management. System support for aircraft fly		• •
form, content. Se	paration of aircraft. Reports of air traffic services, form, content. Harmonization and integration of ATC. CFMU and its subsystems. Fle RVSM, RNP. New trends in the area of ATC.	exible use of airspa	ice - FUA.
21Y1ULE	Aircraft Maintenance	KZ	2
21Y1ZT	ATM Systems	KZ	2
	ces classical and modern facilities, systems and technologies designed for ATS. Student obtains knowledge of technical principles an		
	navigation and surveillance systems used in aviation.		
22X15		Z	2
22X16	Project 6	Z	2
22X17		Z	6
22X18	Project 8	Z	10
22Y1A1	Traffic Accidents Analysis 1	KZ	2
	is the road traffic accident as a physical process with its own regularities, quantities and their applications. Basic types of accidents in	-	
How to prepare do	ocuments for analysis. Vehicle road-holding. Tyre adhesion. Conditions of car collision. Analysis of wheel traces. Basic analysis of road		ocesses in
201/4 4.0	space and time.  \r\n\r\nThis subject will be continued in the summer term by the "Prevention of road traffic acci		
22Y1A2 The subject analys	Traffic Accidents Analysis 2 is the road traffic accident as a physical process with its own regularities, quantities and their applications. Basic types of accidents in	KZ terms of analytica	2 al approach
	is the road traffic accident as a physical process with its own regularities, quantities and their applications. Basic types of accidents in ocuments for analysis. Vehicle road-holding. Tyre adhesion. Conditions of car collision. Analysis of wheel traces. Basic analysis of road	=	
to propare de	space and time.  \r\n\r\nThis subject will be continued in the summer term by the "Prevention of road traffic acci	•	
22Y1PN	Prevention of Road Traffic Accidents	KZ	2
	about systematic accident causes with emphasis on education, about typical examples of unsuitable street pattern creating places of the		
_	g road accidents and about possibilities to reduce the risk of accidents.\r\nThis course is an optional continuation of the subject "Analy		
	ence: causes-analysis-prevention. That's why students who have completed the "Analysis of road accidents" in the winter term will be		
22Y1UN	Traffic Accidents Introduction	KZ	2

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