Study plan

Name of study plan: BD nav.prez.13/14

Faculty/Institute/Others:

Department:

Branch of study guaranteed by the department: Welcome page

Garantor of the study branch:

Program of study: Technology in Transportation and Telecommunications

Type of study: Follow-up master 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: 85

The role of the block: Z

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

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

Requirement credits in the group: In this group you have to gain 26 credits

Requirement courses in the group: In this group you have to complete 9 courses

Credits in the group: 26 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
404140	Tutors, authors and guarantors (gar.)	71/		0.0	7	
18AMC	Anatomy and human mobility	ZK	3	2+0	Z	Z
20BSD	Safety and Reliability in Transportation	KZ	2	2+0	Z	Z
15J2A1	Language - English 1 Barbora Horá ková, Jitka He manová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Marek Tome ek, Markéta Musilová,	Z	2	0P+2C+10B	Z	Z
11MAG	Algorithms	KZ	4	2+2	Z	Z
110V	Operational Research	ZK	2	2+0	Z	Z
14SBD	Transportation safety and software	Z	2	2+0	Z	Z
14SI	System Engineering	Z,ZK	4	2+1	Z	Z
20TSS	Telematic Systems and Services	Z,ZK	3	2+1	Z	Z
23ZP	Basics of Law	ZK	4	2+0	Z	Z

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

18AMC	Anatomy and human mobility	ZK	3
Medical science sy	stem. Life and its character. Human body topography. Anatomical nomenclature. Human body tissue list. Muscle structure. Joints.	The structure and	d mechanics of
the muscular and s	keleton system. Dysfunction and damage of the human body after an accident.The mobility, therapy and rehabilitation of the inju	red. Sources of hu	ıman security in
transport. Security	aids.		
20BSD	Safety and Reliability in Transportation	KZ	2
The content of subj	ect is basic notion, predicative diagnostics, safety in the traffic vehicles, safety infrastructure, human in the transportation and traf	fic systems, secur	ity of information
in transportation ar	d application of safety systems in the traffic and the transportation, etc.		
15J2A1	Language - English 1	Z	2
Presentation Skills	- expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.		'
11MAG	Algorithms	KZ	4
Fundamentals of di	screte and numerical algorithms and numerical methods. Practical excersises on selected algorithms, error analysis of numerical	algorithms, compa	arison of possible
variants of a nume	rical algorithm.		
110V	Operational Research	ZK	2
Definition of linear p	orogramming optimization problem, application of linear programming on economical and technical problems, traffic problems - both	conventional and	with constraints
Geometrical interpr	etation of linear programming problems, simplex method, duality principle.		
14SBD	Transportation safety and software	Z	2
The course is focus	sed on application of software which are being used as an engineering aid during the vehicle design, traffic modeling and GIS ap	, plications. Theore	tical background
to the software is p	rovided.		

14SI	System Engineering	Z,ZK	4
Standard analysis met	hods and synthesis (projecting) of objects with system identification from the methodology standpoint.		
20TSS	Telematic Systems and Services	Z,ZK	3
Telematic theory, telen	atic architecture, FRAME, cooperative systems - technologies, principles and aplications, European electronic toll service, tra	affic information s	ystems, e-call,
automated vehicle sys	tems, European railway traffic management system.		
23ZP	Basics of Law	ZK	4
Basic orientation in the	Czech legal system. The course is primarily intended to provide students with orientation in fundamentals of the Czech Repu	ublic' legal system	n and in various
forms of law, including	adoption of the basic principles of European Community law. The course consists of selected chapters from the public and pr	ivate law and Eur	opean law.

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

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

Safety aspects of vehicle design

Requirement credits in the group: In this group you have to gain 22 credits

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

Credits in the group: 22 Note on the group.

23BAND

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
23BAND	Safety aspects of vehicle design	ZK	2	2+0	L	Z
20IDFS	Identification Systems	Z	2	2P+0C	L	Z
20ITS	Intelligent Transport Systems	ZK	3	2+0	L	Z
15JBA2	Language - English 2 Barbora Horá ková, Jitka He manová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Marek Tome ek, Markéta Musilová,	Z	2	0P+2C+10B	L L	Z
23MAR	Risk Analysis and Management	Z,ZK	3	2P+1C+10B	B L	Z
20SAO	Sensors and controls	KZ	1	2+0	L	Z
11THRO	Queuing Theory Šárka Vorá ová Šárka Vorá ová Šárka Vorá ová (Gar.)	ZK	2	2P+0C+8B	L L	Z
23TDM	Continuum Thermodynamics and Fundamentals of Meteorology	Z,ZK	3	2+2	Z	Z
23TP	Criminal Law in IT and Transportation	KZ	2	2+0	L	Z
11VSM	Selected Statistical Methods	ZK	2	2+0	L	Z

Design of transportation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user demands. Vehicle dynamics. Propulsion systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, technological aspects etc. 20IDFS **Identification Systems** Basic identification systems, its technologies (barcodes, RFID, biomerics), their features, usage, security and standards. Applications of identification systems, e. g. identification of vehicles, cargo, devices and processes. Identifier as foundation of traffic telematics standardization. Intelligent Transport Systems Categorization of ITS, the ITS system architecture, sophisticated methods for urban traffic management, ITS for public transport, ITS for parking systems, road line traffic management, automated detection of excesses, intelligent highways, processing and modelling of traffic quantities, queuing theory and shock waves, ITS for road tunnels, tunnel risk analysis systems, the use of modern decision-making systems in ITS. 15JBA2 Language - English 2 Ζ Presentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement. 23MAR Risk Analysis and Management Z,ZK 3

Characteristics of the courses of this group of Study Plan: Code=2.S.NPBD 13/14 Name=2.sem.nav.prez.BD 13/14

Concept of risks and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management of risks. Risk engineering targets and good engineering practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system approach for benefit of security and

development. Territorial, emergency and crisis planning. Human factor - its role. **20SAO** Sensors and controls K7

System functions development of sensors. Principles, technological and construction of electric, non - electric and magnetic data and electromagnetic waves. Elements for rotating and sliding movement. Pneumatic and hydraulic elements in solid phase. 11THRO Queuing Theory

Discrete event process, definition, random distribution, and probability. Basic processes, process of revitalisation. Markov process, Markov models, Kendall classification, model M/M/1, models M/M/n. Non-markovian models, model M/C/n, models G/G/n. Models with continuous flow. Service net, examples of Petri net. Computer simulation.

23TDM Continuum Thermodynamics and Fundamentals of Meteorology Z.ZK Basic division and fluid properties. Fluid mechanics and the theory of physical similarity. Euler equation of hydrostatics. Basic equations of one-dimensional fluid flow. Stationary flow of incompressible fluid losses. The basic equation for multidimensional flow. Aerodynamics of bodies. Basic laws of thermodynamics. Equations of state. Ideal gas. Reversible and

irreversible state changes typical of an ideal gas. Real gases and vapor. 23TP Criminal Law in IT and Transportation K7 2 Introduction of criminal law into legal order, conception of culpability and criminal delict, consequency of other legal standards international treaty and criminal law, investigation of

crime, specific indicia of criminal court cases, practical examples. ZK 2 Selected Statistical Methods

Probability. Accident and fortuity.

Code of the group: 3.S.NPBD 13/14

Name of the group: 3.sem.nav.prez.BD 13/14

Requirement credits in the group: In this group you have to gain 23 credits

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

Credits in the group: 23 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
12BA	Road Safety Audit	KZ	2	2P+0C	Z	Z
15DPS	Transportation Psychology	Z	2	2+0	Z	Z
15JBA3	Language - English 3 Barbora Horá ková, Jitka He manová, Dana Boušová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Markéta Musilová, Eva Rezlerová	Z	2	0P+2C+10E	s z	Z
23KRIO	Crisis Management for Engineering Branches	KZ	3	2P+0C	Z	Z
22PSIN	Prevention of Road Traffic Accidents	Z	4	1+1	Z	Z
11STS	Stochastic Systems Šárka Vorá ová, Evženie Uglickich, Natálie Blahitka, Michal Matowicki, Pavla Pecherková Pavla Pecherková Šárka Vorá ová (Gar.)	Z,ZK	4	2P+2C+14E	s z	Z
22TZN	Technical Expertise	KZ	2	2+1	Z	Z
18TGK	Technology of structures in transportation	KZ	4	2+0	Z	Z

Characteristics of the courses of this group of Study Plan: Code=3.S.NPBD 13/14 Name=3.sem.nav.prez.BD 13/14

12BA	Road Safety Audit	KZ	2
Schedules of applic	ations of safety assessments during the process of preparations, and of the particular realization of the road network that should	d minimize traffic a	accident risks for
all those who take p	art in road traffic. Road safety survey. Application of European Directive 2008/96/EC on road safety infrastructure management.		
15DPS	Transportation Psychology	Z	2
Subject of psycholo	gy and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle c	onstruction. Psycl	hological aspects
of travel route and t	raffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in transport	operation.	
15JBA3	Language - English 3	Z	2
Presentation Skills	expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work engagement.	Optional courses	for certificates
FCE, CAE.			
23KRIO	Crisis Management for Engineering Branches	KZ	3
	sets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis manage	mont ita aima, da	mande rolee
Human system. Ass	sets, terms, concept and safety management aims. Gauses and consequences of disasters. Safety management. Chsis manage	ment-its aims, dei	manus, roics,
•	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS		
principles, specifics			
principles, specifics	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS		
principles, specifics and critical infrastru 22PSIN	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving.		otection of public
principles, specifics and critical infrastru 22PSIN	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents		otection of public
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pes of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc.	role. Planning. Pr	otection of public
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS The subject deals w	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pees of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Stochastic Systems	Z,ZK a. The results are i	4 Ulustrated on
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS The subject deals w	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pees of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Stochastic Systems ith the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction	Z,ZK a. The results are i	4 Ulustrated on
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS The subject deals w practical transportar 22TZN	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pees of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Stochastic Systems vith the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian prolation tasks.	Z Z,ZK The results are ibabilistic approach	4 4 Illustrated on h.
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS The subject deals w practical transportar 22TZN Historical evolution	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pes of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Stochastic Systems with the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian prolated Technical Expertise	Z Z,ZK The results are ibabilistic approach	4 4 Illustrated on h. 2 n, basic forensic
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS The subject deals w practical transportar 22TZN Historical evolution acts, expert role in the subject in the subject deals w practical transportar 22TZN	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pes of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Stochastic Systems with the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian prolated Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic,	Z Z,ZK The results are ibabilistic approach	4 4 Illustrated on h. 2 n, basic forensic
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS The subject deals w practical transportar 22TZN Historical evolution acts, expert role in the subject in the subject deals w practical transportar 22TZN	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pes of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Stochastic Systems with the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian prolematical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evidence obtaining, metrology, protocol, evidence obtaining metrology.	Z Z,ZK The results are ibabilistic approach	4 4 Illustrated on h. 2 n, basic forensic
principles, specifics and critical infrastru 22PSIN Basic definitions, ty 11STS The subject deals w practical transportar 22TZN Historical evolution acts, expert role in tiforensic report, eler 18TGK	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS cture. Problem solving. Prevention of Road Traffic Accidents pes of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Stochastic Systems with the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian probability and mathematical statistics and they use the methods of the Bayesian probability and mathematical statistics and they use the methods of the Bayesian probability and mathematical statistics and they use the methods of the Bayesian probability of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, ne obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evenents. Finding, expert testimony / report. Appraisal and its role in the forensic.	Z,ZK The results are it babilistic approach KZ forensic legislation vidences collection	4 4 ustrated on h. 2 n, basic forensic n, site inspection

Code of the group: 4.S.NPBD 14/15

Name of the group: 4.sem.nav.prez.BD 14/15

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 6 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
23BDP	Vehicles Safety	KZ	2	2+0	Z	Z
12BPU	Safety of Transfer Points	Z	2	2+0	L	Z
15JBA4	Language - English 4 Barbora Horá ková, Jitka He manová, Lenka Monková, Peter Morpuss, Markéta Vojanová, Marie Michlová, Markéta Musilová, Jan Feit, Eva Rezlerová	ZK	2	0P+2C+10B	L	Z

23PDY	Practical Vehicle Dynamics	Z	2	0+2	L	Z
20SIBS	Reliability Engineering and Safety of Systems	ZK	3	2+0	L	Z
23TPT	Creation of Legal and Technical Regulations	ZK	3	2+0	L	Z

Characteristics of the courses of this group of Study Plan: Code=4.S.NPBD 14/15 Name=4.sem.nav.prez.BD 14/15

23BDP	Vehicles Safety	KZ	2
Passive, active an	nd integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human inter	raction in emergency situations.	
12BPU	Safety of Transfer Points	Z	2
Design of areas w	with frequent pedestrian cumulation and movement. Interaction with other transportation vehicles. Optimization of p	latform placement etc.	•
15JBA4	Language - English 4	ZK	2
Presentation Skills	ls - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas wor	rk engagement. Optional courses	for certificates
FCE, CAE.			
23PDY	Practical Vehicle Dynamics	Z	2
	Practical Vehicle Dynamics dynamics. Practical demonstrations of transportation vehicles behavior in different situations. Excursion: air simulations of transportation vehicles behavior in different situations.	Z tor, simulator of air-traffic control,	2 train testing
-		Z tor, simulator of air-traffic control,	2 train testing
Theory of vehicle	dynamics.Practical demonstrations of transportation vehicles behavior in different situations. Excursion: air simulations	Z tor, simulator of air-traffic control,	2 train testing
Theory of vehicle ground. Course of 20SIBS	e dynamics.Practical demonstrations of transportation vehicles behavior in different situations. Excursion: air simular of sportive and safety driving and heavy vehicle dynamics example.	ZK	3
Theory of vehicle ground. Course of 20SIBS Basic theory of rel	dynamics.Practical demonstrations of transportation vehicles behavior in different situations. Excursion: air simulation sportive and safety driving and heavy vehicle dynamics example. Reliability Engineering and Safety of Systems	ZK	3
Theory of vehicle ground. Course of 20SIBS Basic theory of rel analysis and synth	e dynamics.Practical demonstrations of transportation vehicles behavior in different situations. Excursion: air simulation sportive and safety driving and heavy vehicle dynamics example. Reliability Engineering and Safety of Systems eliability and safety with special regard to information and automation equipment used in transportation safety system.	ZK	3
Theory of vehicle ground. Course of 20SIBS Basic theory of rel analysis and synth 23TPT	e dynamics.Practical demonstrations of transportation vehicles behavior in different situations. Excursion: air simulation sportive and safety driving and heavy vehicle dynamics example. Reliability Engineering and Safety of Systems eliability and safety with special regard to information and automation equipment used in transportation safety system thesis. Problems of human subject - artificial systems.	ZK ns. Various aspects of reliability ar	3 ad safety system

Name of the block: Semestrální projekt Minimal number of credits of the block: 19

The role of the block: ZP

Code of the group: XN BD 1.-4. 13/14

Name of the group: Projekt a dipl.práce BD 1.-4.sem. 13/14

Requirement credits in the group: In this group you have to gain 19 credits

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

Credits in the group: 19 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
23DPBD	Diploma Thesis (for the Field BD)	KZ	14	0+14	L	ZP
20XN1	Master Project 1 Ji i R ži ka	Z	2	0P+2C+4E	3 Z	ZP
18XN1	Master Project 1 Václav Rada, Nela Kr má ová	Z	2	0P+2C+4E	3 Z	ZP
17XN1	Master Project 1 Václav Baroch, Michal Drábek, Alexandra Dvo á ková, Veronika Faifrová, Eliška Glaserová, Rudolf F. Heidu, Tomáš Horák, Vít Janoš, Milan K íž,	Z	2	0P+2C+4E	B Z	ZP
11XN1	Master Project 1	Z	2	0P+2C+4E	B Z	ZP
15XN1	Master Project 1	Z	2	0P+2C+4E	3 Z	ZP
14XN1	Master Project 1	Z	2	0P+2C+4E	3 Z	ZP
12XN1	Master Project 1 Zuzana arská, Dagmar Ko árková, Iva Šturmová, Kristýna Neubergová, Martin Jacura, Jan Kruntorád, Ond ej Trešl, David Vodák, Tomáš Javo ík,	Z	2	0P+2C+4E	3 Z	ZP
22XN1	Master Project 1 Michal Frydrýn, Karel Kocián, Luboš Nouzovský, Zden k Svatý, Jakub Nová ek	Z	2	0P+2C+4E	B Z	ZP
23XN1	Master Project 1	Z	2	0P+2C+4E	3 Z	ZP
21XN1	Master Project 1 Jakub Kraus, Andrej Lališ, Slobodan Stoji , Terézia Pilmannová, Jakub Hospodka, Lenka Hanáková, Vladimír Socha, Peter Vittek, Lukáš Popek,	Z	2	0P+2C+4E	B Z	ZP
16XN1	Master Project 1 Pemysl Toman	Z	2	0P+2C+4E	3 Z	ZP
23XN2	Master Project 2	Z	2	0P+2C+8E	B L	ZP
22XN2	Master Project 2 Michal Frydrýn, Karel Kocián, Luboš Nouzovský, Zden k Svatý, Jakub Nová ek	Z	2	0P+2C+8E	B L	ZP
21XN2	Master Project 2	Z	2	0P+2C+8E	B L	ZP
20XN2	Master Project 2 Ji í R ži ka, Patrik Horaž ovský	Z	2	0P+2C+8E	B L	ZP
16XN2	Master Project 2 P emysl Toman, Josef Mík	Z	2	0P+2C+8E	B L	ZP

15XN2	Master Project 2	Z	2	0P+2C+8B	L	ZP
14XN2	Master Project 2	Z	2	0P+2C+8B	L	ZP
12XN2	Master Project 2 Zuzana arská, Dagmar Ko árková, Kristýna Neubergová, Martin Jacura, Jan Kruntorád, Ond ej Trešl, David Vodák, Tomáš Javo ík, Pavel Purkart,	Z	2	0P+2C+8B	L	ZP
11XN2	Master Project 2	Z	2	0P+2C+8B	L	ZP
18XN2	Master Project 2 Daniel Kytý	Z	2	0P+2C+8B	L	ZP
17XN2	Master Project 2 Václav Baroch, Michal Drábek, Alexandra Dvo á ková, Veronika Faifrová, Rudolf F. Heidu, Tomáš Horák, Vít Janoš, Milan K íž, Olga Mertlová, Vít Janoš (Gar.)	Z	2	0P+2C+8B	L	ZP
14XN3	Master Project 3	Z	1	0P+4C	Z	ZP
15XN3	Master Project 3	Z	1	0P+4C	Z	ZP
16XN3	Master Project 3 P emysl Toman, Josef Mik, Michal Cenkner, Josef Svoboda	Z	1	0P+4C	Z	ZP
23XN3	Master Project 3	Z	1	0P+4C	Z	ZP
17XN3	Master Project 3 Václav Baroch, Michal Drábek, Alexandra Dvo á ková, Veronika Faifrová, Eliška Glaserová, Rudolf F. Heidu, Tomáš Horák, Vít Janoš, Milan K íž,	Z	1	0P+4C	Z	ZP
11XN3	Master Project 3	Z	1	0P+4C	Z	ZP
20XN3	Master Project 3	Z	1	0P+4C	Z	ZP
21XN3	Master Project 3 Terézia Pilmannová, Miloš Strouhal	Z	1	0P+4C	Z	ZP
22XN3	Master Project 3 Michal Frydrýn, Karel Kocián, Luboš Nouzovský, Zden k Svatý, Tomáš Mi unek	Z	1	0P+4C	Z	ZP
12XN3	Master Project 3 Zuzana arská, Dagmar Ko árková, Martin Jacura, Jan Kruntorád, Ond ej Trešl, David Vodák, Tomáš Javo ík, Pavel Purkart, Lukáš Týfa,	Z	1	0P+4C	Z	ZP
18XN3	Master Project 3	Z	1	0P+4C	Z	ZP

23DPBD	Diploma Thesis (for the Field BD)	KZ	14
20XN1	Master Project 1	Z	2
8XN1	Master Project 1	Z	2
7XN1	Master Project 1	Z	2
1XN1	Master Project 1	Z	2
5XN1	Master Project 1	Z	2
4XN1	Master Project 1	Z	2
2XN1	Master Project 1	Z	2
22XN1	Master Project 1	Z	2
23XN1	Master Project 1	Z	2
21XN1	Master Project 1	Z	2
6XN1	Master Project 1	Z	2
23XN2	Master Project 2	Z	2
2XN2	Master Project 2	Z	2
1XN2	Master Project 2	Z	2
0XN2	Master Project 2	Z	2
6XN2	Master Project 2	Z	2
5XN2	Master Project 2	Z	2
4XN2	Master Project 2	Z	2
2XN2	Master Project 2	Z	2
1XN2	Master Project 2	Z	2
8XN2	Master Project 2	Z	2
7XN2	Master Project 2	Z	2
4XN3	Master Project 3	Z	1
5XN3	Master Project 3	Z	1
6XN3	Master Project 3	Z	1
3XN3	Master Project 3	Z	1
7XN3	Master Project 3	Z	1
1XN3	Master Project 3	Z	1
0XN3	Master Project 3	Z	1
21XN3	Master Project 3	Z	1
2XN3	Master Project 3	Z	1
2XN3	Master Project 3	Z	1
8XN3	Master Project 3	Z	1

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 8

The role of the block: PV

Code of the group: Y2-NPBD 13/14

Name of the group: PVP nav.prez.BD 13/14

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 4 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
23Y2AE	Acoustics and Electroacoustics in Transportation	KZ	2	2+0	Z	PV
12Y2BM	Safety on The Local Roads	KZ	2	2P+0C	Z	PV
14Y2C1	CATIA I	KZ	2	2P+0C	L	PV
14Y2C2	CATIA II	KZ	2	2P+0C	Z	PV
14Y2CS	Sensitivity of Systems	KZ	2	2P+0C	L	PV
15Y2DN	Transportation Psychology in German Speaking Countries	KZ	2	2P+0C	L	PV
18Y2D2	Dynamics of Transport Routes and Vehicles 2	KZ	2	2+0	L	PV
17Y2FM	Financing in Urban Mass Transportation Václav Baroch	KZ	2	2P+0C	Z	PV
11Y2FX	Functions of Complex Variable	KZ	2	2P+0C	Z	PV
18Y2FZ	Physical foundation of materials' properties Jaroslav Valach	KZ	2	2P+0C	L	PV
15Y2HS	Road Transport History Eva Rezlerová, Zuzana arská	KZ	2	2P+0C	L	PV
16Y2HP	Vehicle Hygiene	KZ	2	2P+0C	L	PV
12Y2IS	Urban Networks	KZ	2	2P+0C	Z	PV
14Y2JM	One-Chip Controllers	KZ	2	2P+0C	Z	PV
17Y2KI	Capital Investment in Transportation and Telecommunications	KZ	2	2+0	L	PV
16Y2KV	Car Body Design	KZ	2	2P+0C	L	PV
12Y2KS	Rail Transport in Settlements and Regions Miroslav Veliš	KZ	2	2P+0C	Z	PV
12Y2KE	Landscape Ecology Kristýna Neubergová	KZ	2	2P+0C	Z	PV
21Y2LS	Air Traffic Services	KZ	2	2P+0C+8E	L	PV
11Y2LG	Logics of Engineer's Judgement	KZ	2	2P+0C	L	PV
15Y2MS	Sociology for Managers Martina Šmidochová	KZ	2	2P+0C	Z	PV
21Y2MK	Marketing of Air Transport Peter Vittek Peter Vittek	KZ	2	2P+0C+8E	Z	PV
12Y2MH	Measurement and Modeling of Traffic Noise	KZ	2	2P+0C	L	PV
18Y2MP	Finite Element Method And Its Application Radek Kolman	KZ	2	2P+0C	L	PV
16Y2MK	Quality Methods for Vehicles	KZ	2	2P+0C	L	PV
12Y2MD	Methods of Traffic Regulation and Prediction Zuzana arská	KZ	2	2P+0C	L	PV
17Y2MS	Microsimulation of Railway Operation Zden k Michl	KZ	2	2P+0C	Z	PV
21Y2MS	Aerospace Engineering Simulation and Modelling	KZ	2	2P+0C	Z	PV
12Y2MZ	Modernization of Railway Lines and Stations Dagmar Ko árková, Miroslav Veliš	KZ	2	2P+0C	L	PV
17Y2NU	Cost and Benefits of Transport Systems	KZ	2	2+0	L	PV
21Y2NR	Navigation and Flight Control Systems	KZ	2	2+0	L	PV
23Y2NE	Design of Electronic Equipments	KZ	2	2+0	L	PV
23Y2NS	Nonlinear Systems	KZ	2	2+0	L	PV
14Y2OP	Object Oriented Programming in Transport	KZ	2	2P+0C	L	PV
15Y2OZ	Health Protection in Transportation and EU Eva Rezlerová, Petr Musil	KZ	2	2P+0C	Z	PV

15Y2OF	Specialised French for Transportation and Telecommunications	KZ	2	2P+0C	Z	PV
16Y2PG	Computer Graphics and Virtual Reality Stanislav Novotný, Petr Bouchner	KZ	2	2P+0C	Z	PV
22Y2PS	Traffic Accidents Computer Simulation and Analysis	KZ	2	2P+0C	L	PV
15Y2PT	Food in Transportation Eva Rezlerová. Petr Musil	KZ	2	2P+0C	L	PV
15Y2PS	Practical Spanish for Transportation, Management and Business	KZ	2	2+0	Z	PV
21Y2PP	Law and Operation in Air Transport Radoslav Zozu ák	KZ	2	2P+0C+8B	L	PV
20Y2PR	Prediction of time series	KZ	2	2P+0C	L	PV
14Y2PI	Process Information Systems in Transportation	KZ	2	2P+0C	Z	PV
14Y2PJ	C++ Programming Language	KZ	2	2P+0C	L	PV
14Y2PH	CAD Interface Programming	KZ	2	2P+0C	L	PV
11Y2PM	Programming in MATLAB Šárka Vorá ová	KZ	2	2P+0C	L	PV
21Y2PL	Operational Aspects of Aerodromes	KZ	2	2P+0C	Z	PV
17Y2PR	Carriage Processes	KZ	2	2+0	Z	PV
17Y2PS	Case Studies in Transportation	KZ	2	2P+0C	Z	PV
15Y2PU	Publications and Their Creation	KZ	2	2P+0C	Z	PV
12Y2RD	Realization of Transport Buildings Dagmar Ko árková, Martin Höfler, Tomáš Honc	KZ	2	2P+0C	L	PV
17Y2RS	Regional Transport - Mobility of Small Towns	KZ	2	2+0	Z	PV
17Y2RZ	Control of Transport Processes	KZ	2	2P+0C	Z	PV
15Y2SP	Seminar on Political Philosophy	KZ	2	2P+0C	Z	PV
16Y2ST	Special Technologies in Transport and Telecommunications	KZ	2	2P+0C	L	PV
18Y2SD	Reliability and Diagnostics, Experimental Methods	KZ	2	2P+0C	Z	PV
15Y2SR	Stylistics and Rhetorics	KZ	2	2P+0C	Z	PV
17Y2SG	Systematic Creating of Railway Timetables	KZ	2	2+0	Z	PV
17Y2SK	Urban and Regional Rail Transport System	KZ	2	2P+0C	L	PV
15Y2TS	Technician and Contemporary Society Jan Feit, Eva Rezlerová	KZ	2	2P+0C	L	PV
17Y2TP	Technological Prognoses in Transportation and Telecommunication	KZ	2	2+0	L	PV
20Y2TE	Technology of Electronic Systems	KZ	2	2P+0C	Z	PV
14Y2TU	Telecommunications Systems and Multimedia	KZ	2	2P+0C	Z	PV
16Y2TT	Transportation and Building Technology and Equipment	KZ	2	2P+0C	Z	PV
21Y2TL	Development Trends of Aircraft Construction	KZ	2	2+0	Z	PV
12Y2UD	Sustainable Transportation	KZ	2	2P+0C	L	PV
14Y2UI	Artificial Intelligence	KZ	2	2P+0C+8B	Z,L	PV
20Y2UA	Artificial Neural Networks, Realization and Applications	KZ	2	2P+0C	Z	PV
18Y2UB	Accident Biomechanics and Safety	KZ	2	2P+0C	L	PV
23Y2VZ	Leadership and Human Resource Development	KZ	2	2P+0C	L	PV
21Y2VA	Selected Chapters of Aerodynamics	KZ	2	2P+0C+8B	L	PV
23Y2VS	Negotiation and Cooperation	KZ	2	2+0	Z	PV
18Y2VC	Computational Mechanics in Transportation Radek Kolman	KZ	2	2P+0C	L	PV
12Y2VT	High Speed Railways	KZ	2	2P+0C	Z	PV
23Y2ZP	Basis of Communication for Practice	KZ	2	2+0	L	PV
12Y2ZK	Traffic Calming Zuzana arská	KZ	2	2P+0C	Z	PV

Characteristics of the courses of this group of Study Plan: Code=Y2-NPBD 13/14 Name=PVP nav.prez.BD 13/14

23Y2AE	Acoustics and Electroacoustics in Transportation	KZ	2				
Basic acoustic quantities, properties of acoustic signals. Basic equations in acoustics, method of equivalent circuits. Acoustic impedance, damping. Acoustic actuators, loudspeaker							
Acoustic sensors, micro	Acoustic sensors, microphones. Fundamentals of acoustic signal processing. Acoustics of closed spaces. Fundamentals of acoustics in solids. Acoustic problems in transport and their						
solutions.	solutions.						
12Y2BM	Safety on The Local Roads	KZ	2				
Classification of road accidents rates, social looses. Collision points, diagrams. Tools and methods for safer road transportation. Crossroads from the point of view of safety. Psychological							
Classification of road accidents rates, social looses. Collision points, diagrams. Tools and methods for safer road transportation. Crossroads from the point of view of safety. Psychological right of way. Roundabouts. Pedestrian transport, cyclists. Traffic lights coordination. Transport control and regulation.							

14Y2C1 CATIA I	KZ	2
Fundaments of working with CATIA, making basic parts and bodies. Making 2D sketches, geometric stucture, parametric linking, making adaptive n and export of made parts and bodies. Making assemble and visualization.	nodels from 2D sk	etcnes. Import
14Y2C2 CATIA II	KZ	2
Extension of basic course. Modeling compound bodies. Possibility of enumeration, comunications with other systems. Surface x solid bodies. Kinemand project cooperation. Outputs of projects.	atic mechanism. F	Project making
14Y2CS Sensitivity of Systems	KZ	2
Design of systems with defined reliability. The impact of changing parameters and subsystems within a system. System sensitivity computing, defining matrices and their usability in system design.	ition of sensitivity f	functions and
15Y2DN Transportation Psychology in German Speaking Countries	KZ	2
Introduction into broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, of in traffic, traffic accident, traffic psychology in the internet etc.)	getting of driving li	cence, children
18Y2D2 Dynamics of Transport Routes and Vehicles 2	KZ	2
Analysis of forces in the vehicle and transport routes and their influence on the stress and strain components of the vehicle structure or behavior of		=
models of vehicles and transport routes. Vibration of systems with a finite number of degrees of freedom. Methods of constant stiffness and constant of structural systems. Criteria for the admissibility of oscillation.	. compliance. Dyna	arriic calculations
17Y2FM Financing in Urban Mass Transportation	KZ	2
UMT history and development in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Undergro UMT types. UMT development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present more		
inspection and blind passengers. Tourism & DMT. UMT typology & Diplomatic particles of optimum financing.	ı	,
11Y2FX Functions of Complex Variable Derivation of complex function, holomorphic function, complex exponential series, integration, Cauchy theorem. Taylor series, Laurent series of complex function, complex exponential series, integration, Cauchy theorem.	KZ	2 tion, Basics of
Laplace and Z-transformation.		
18Y2FZ Physical foundation of materials' properties Atomistic models, lattice defects influence on properties of materials, stiffness, plasticity, strength, fracture, fatigue, creep, corrosion, effects of envir	KZ	2
behavior are the main discussed topics.	Onment and loadii	ng on materials
15Y2HS Road Transport History	KZ	2
Roads and road traffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road 1st part of 20th century. Development of road layout, geometric and construction layers. Beginning of modern road civil engineering. Development of		· -
History of road intercections, bridges and traffic control, development of road signs.		-
16Y2HP Vehicle Hygiene Emissions and ergonomy of vehicles and the influence on man and nature. National and international law related to the hygiene. Noise and vibration	KZ ns - sources, creati	2 ion, propagation.
physical values, ways of measuring, prevention, elimination. Exhausts - creation, measurement, reduction, non-regular fuels and drives. Ergonomy - s		
reach. Condition - heating, ventilation, air-conditioning, filtration, tiredom. 12Y2IS Urban Networks	KZ	2
The importance and the position of UN as public and technical infrastructure / utillities, metodology of the UN master planning, of UN design, UN co	I	
operation (basic technical standards of UN, trenchless technologies for UN). 14Y2JM One-Chip Controllers	KZ	2
14Y2JM One-Chip Controllers One-chip controllers architecture, embedded peripherals (counters, timers, converters, ports) and their utilisation. Practical tasks are programmed v	1	
17Y2KI Capital Investment in Transportation and Telecommunications	KZ	2
Financial market, investment desicion making - long term goals and investment strategies, long term financing. 16Y2KV Car Body Design	KZ	2
Personal cars body, high-load car body, bus car body, and motorcycle as a construction set. Principles of design, production, testing and operation.	Materials used for	-
construction. Active and passive safety parts. Ergonomics, HMI, view out of the vehicle, operational extent, view behind the car. Conditioning tools, of the car body. Design and artistic design principles. Practical training.	signaling function.	Aerodynamics
12Y2KS Rail Transport in Settlements and Regions	KZ	2
Modernization and development of railway infrastructure in Czech Republic. Arrangement of railway networks and junctions. Suburban railway servi operation of metro systems. Network configuration and operation of tram systems. Special thematic lectures (rail transport in selected countries / re		iguration and
12Y2KE Landscape Ecology	KZ	2
Landscape ecology. Landscape - definition, types, evolution. Landscape systems. Anthropogenic impacts on landscape. Methods using for evaluating and its potential applications in landscape ecology. Landscape planning.	ng landscape. Frac	ctal geometry
21Y2LS Air Traffic Services	KZ	2
Airspace structure in Czech Republic and other countries. Introduction and description of ATS units in Czech Republic. Practical examples of TWR,	APP a ACC contro	ol. History of ATS
at USA and Czechoslovakia. ATS - Model of financing. Training Systém of Air Traffic Controllers. Future development of ATS. 11Y2LG Logics of Engineer's Judgement	KZ	2
Logical structure of engineer's judgement, its propositional and predicative logical base. Solutions of logical tasks through the methods of truthfulne	1	analysis charts.
Venn's diagram method. Logical basis for network design for the solution of technical tasks. 15Y2MS Sociology for Managers	KZ	2
Sociological approach to a corporation. Corporation and its organization. Corporation and its running - human role and communication. Corporation	1	l .
Human's work position in free market economy. Corporate directorship, work groups, adaptation, strife, different roles and positions in corporation. 21Y2MK Marketing of Air Transport	KZ	2
The content of the course "Marketing in air transport" is the management of activities and processes using available marketing tools and processes	l .	l .
and implementation of sales of goods and services in the aviation industry. In addition to the theoretical foundations of marketing, the lectures prese and product analysis, creation of marketing strategies and planning.	ent systems of ma	rket, competition
12Y2MH Measurement and Modeling of Traffic Noise	KZ	2
Theoretical introduction to noise from traffic. Noise from rail transport. Noise from road traffic. Measurement and calculation of noise from rail traffic. noise from road traffic. Modelling of traffic noise in the CADNA A.	Measurement and	d calculation of
18Y2MP Finite Element Method And Its Application	KZ	2
Basic mathematical formulation of the Finite Element Method. Direct Stiffness Method used in structural mechanics. Evaluation of stiffness matrices	for the basic elen	-
variational principles. Element formulation (bar and beam elements, CST, LST, quadrilateral, tetrahedral and brick elements). Natural coordinates, n isoparametric representation. Numerical integration. Introduction to dynamics. FEM programming.	aturai sriape tunci	uons anu

16Y2MK Quality Methods for Vehicles KZ 2	
Quality management methods list, customer data acquisition and analysis of customer requirements, QFD, DFM, DFA, DFS. FMEA (Failure mode effect analysis). Elements of pa	rallel
(team) design.	
12Y2MD Methods of Traffic Regulation and Prediction KZ 2	
Basic ways of traffic prognosis, traffic prognosis for large area (calculation of future traffic volumes, calculation of future traffic volumes between areas (analogical and synthetic methodal split, traffic distribution to road network). Shock wave in traffic flow. Service levels and their traffic volumes. Acceleration noise.	ious,
17Y2MS Microsimulation of Railway Operation KZ 2	
Introduction to the characteristics of simulation tools, creation of a simulation model of railway infrastructure, verification of a specific operational concept on the given infrastructure.	ıre.
adaptation of the infrastructure model and modification to the infrastructure to allow the implementation of the proposed operational concept. Stability tests and evaluations. Evaluations	
of sensitivity of the operational concept to delays.	
21Y2MS Aerospace Engineering Simulation and Modelling KZ 2	
The course is designed as a set of exemplary tasks and problems based on practical aviation issues. The university degree mathematic skills and software applications usage will	ll be
necessary for successful figuring out. Both simple tasks, where students create own model themselves (e.g. in Matlab), and more complicated problems where professional developments are also as a successful figuring out.	oped
tools will be applied.	
12Y2MZ Modernization of Railway Lines and Stations KZ 2	-1\
Line speed increasing. AGC and AGTC Agreement. AGC and AGTC railway network. Principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts, individual principles of modernization (conceptual papers, definitions of basic concepts).	
and realization of projects. Technical description of the tranzit corridors.	
17Y2NU Cost and Benefits of Transport Systems KZ 2	
Transport systems and their history, externalities and their internalization, public goods, transport funding, assessment of transport constructions and systems by the methods CE	3A,
MCA, CA, transport taxation, influence of transport constructions on public budgets, relation of transport and economic growth, importance of transport in area, spatial economy.	
21Y2NR Navigation and Flight Control Systems KZ 2	
Navigtion (ANP/RNP), area navigation, FMS, FMC, A/P, A/T, FD, MCDU, GPWS.	
23Y2NE Design of Electronic Equipments KZ 2	
Characteristics and realization of semiconductor electronic components, basic electronic devices division. Sources, input and output elements, process elements. Realization of the components o	basic
circuits - amplifiers, data converters. Analog electronic systems, analog computing. Switching elements, logic circuits, FPGA implementation. Single chip microcomputers and	
microcontrollers. Design (ORCAD), construction of electronic devices.	
23Y2NS Nonlinear Systems KZ 2 Model development and parameter identification of nonlinear, time-varying and periodic systems. Analyses of continuous and discrete non-linear systems. Solution presentations	of
several non-linear models and non-linear differential equations using the MATLAB software. Linearization, stability of nonlinear systems, stability and instability theorems. Nonline	
phenomena -multiple equilibria, limit cycles, bifurcations, chaos.	
14Y2OP Object Oriented Programming in Transport KZ 2	
Class, object, encapsulation, inheritance, polymorphism, templates, retyping, stream, exceptions, repository, collections, virtual methods and classes. Problem cases will be chos	en
from microscopic simulation system, discrete event simulation, celular automata simulation and virtual life area.	
15Y2OZ Health Protection in Transportation and EU KZ 2	
Health protection in transportation in CR in the past and present. Conditions before 1989 and after, current legislature, future prospects. Harmonisation of legislation with other Elements of the past and present.	U
members. Fundamental principles of health protection and support in selected EU countries.	
15Y2OF Specialised French for Transportation and Telecommunications KZ 2	
Basic transportation (public transport, railway, air, road and ship transport) and telecommunications terminology. Special focus on independent speaking and writing skills.	
16Y2PG Computer Graphics and Virtual Reality KZ 2 Principles of creation and processing of bitmap and vector 2D graphics, 3D virtual scenes and algorithms used for their computerized processing. Adopting skills of work with profess	ional
and freeware tools for creation and processing of bitmap and vector 25 graphics, and basics of programming language VRML and graphic libraries (OpenGL).	ioriai
22Y2PS Traffic Accidents Computer Simulation and Analysis KZ 2	
Vehicle dynamics simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evaluation, single-track vehicle	de,
vehicle passangers, pedestrian, traffic accident simulation and analysis.	
15Y2PT Food in Transportation KZ 2	
The nutrition policy. Interaction transportation and foodstuffs. The health risks. Hygienic safeguard. The practical examples from the Czech Republic and from the world. The issue	es of
dining cars, work trains and other railroad equipment. Legislation.	
15Y2PS Practical Spanish for Transportation, Management and Business KZ 2	
Development of communication skills, training of correct written expression of formal character, basic technical vocabulary, cultural specifics of the Spanish speaking countries.	
Terminology of transport and commerce, business letter. 21Y2PP Law and Operation in Air Transport KZ 2	
Development of aviation law. International conventions on civil aviation. International organisations and including of the Czech Republic in these organisations. EU legislation and	l civil
aviation. Execution of state administration and state supervision in matters of civil aviation, in accordance with Act No. 49/1997 Col. Facilitation. Responsibilities of air carriers for	O1 V 11
passengers, luggage and cargo. The safe transport of dangerous goods.	
20Y2PR Prediction of time series KZ 2	
Introduction to time series prediction, meaning of prediction, basics of quantitative prediction. Methods for predictive quality evaluation, descriptive statistics, MAE, MAPE, RMSE, respectively.	naive
prediction, prediction for general formula of loss function. Calculation and programming environment R. Regression models, basics of linear regression, simple regression. Multiple and the state of the	ie
regression, statistical tests of linear dependence, selection of input variables.	
14Y2PI Process Information Systems in Transportation KZ 2	.n.d
14Y2PI Process Information Systems in Transportation KZ 2 Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system a	ınd
14Y2PI Process Information Systems in Transportation KZ 2 Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system a SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits.	ınd
14Y2PI Process Information Systems in Transportation KZ 2 Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system a SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits. 14Y2PJ C++ Programming Language KZ 2	
14Y2PI Process Information Systems in Transportation KZ 2 Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system a SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits.	
14Y2PI Process Information Systems in Transportation KZ 2 Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system a SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits. 14Y2PJ C++ Programming Language OOP philosophy and basics of C++ programming language. Class, object, constructor, destructor, inheritance, abstract class, virtual methods, exceptions, streams, method and operations.	
14Y2PI Process Information Systems in Transportation KZ 2 Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system a SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits. 14Y2PJ C++ Programming Language KZ 2 OOP philosophy and basics of C++ programming language. Class, object, constructor, destructor, inheritance, abstract class, virtual methods, exceptions, streams, method and operational data type implementation in C++.	erator
14Y2PI Process Information Systems in Transportation Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system as SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits. 14Y2PJ C++ Programming Language OOP philosophy and basics of C++ programming language. Class, object, constructor, destructor, inheritance, abstract class, virtual methods, exceptions, streams, method and operations, abstract data type implementation in C++. 14Y2PH CAD Interface Programming Introduction to CAD interface programming techniques with the help of LIST and VBA programming languages. Possibilities of proper objects (commands), dialogues, interfaces, applications creation in CAD systems. Programming of cooperation with other applications (databases, spread-sheets).	erator
14Y2PI Process Information Systems in Transportation Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system as SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits. 14Y2PJ C++ Programming Language OOP philosophy and basics of C++ programming language. Class, object, constructor, destructor, inheritance, abstract class, virtual methods, exceptions, streams, method and operations, abstract data type implementation in C++. 14Y2PH CAD Interface Programming INTERPRETATION INTERPRET	erator
14Y2PI Process Information Systems in Transportation Introduction and detailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on architecture of this system as SOA (Service Oriented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process) included lectures and visits. 14Y2PJ C++ Programming Language OOP philosophy and basics of C++ programming language. Class, object, constructor, destructor, inheritance, abstract class, virtual methods, exceptions, streams, method and operations overloading, abstract data type implementation in C++. 14Y2PH CAD Interface Programming Introduction to CAD interface programming techniques with the help of LIST and VBA programming languages. Possibilities of proper objects (commands), dialogues, interfaces, applications creation in CAD systems. Programming of cooperation with other applications (databases, spread-sheets).	erator

21Y2PL	Operational Aspects of Aerodromes	KZ	2
Operational aspects of a	nerodromes. Location of aerodrome and orientation of runways. Requirements for apron. Capacity of airports runways and te	rminals. Operatio	n under winter
conditions. Firefighting u	inits. Protection against unlawful interference. Local transport connection. Environmental protection.		
	Carriage Processes	KZ	2
	cility. Ordering and contracting of carriage. Intergovernmental conventions on international carriage. Contract on passenger car	_	
	bility and rights based on carrying contract. Contractual carrying conditions. Guarantee of carrying contract by more operato	rs. Internationally	accepted
` '	DTERMS). Tariff and calculation of prices.	1/7	
	Case Studies in Transportation	KZ	2
	ssions on the topics - the impact of transport on the environment and the economy, energy, construction of transport infrastru urrent and the real issue, which solutions will have to think of each other. Each of them will be represent another role (public		
representative interest g		authornies, invest	ors, carrier
-	Publications and Their Creation	KZ	2
	otnotes and references. Exploration of facts. Quotations. Formal document layout. Working with information databases. Typog		
	aTeX. Practical creation of simple scientific documents.	grapino principioo	. Typograpino
	Realization of Transport Buildings	KZ	2
	es. Project Documentation Types. Building Code. Land Permission and Building Permission Process. Building Process. Project		
17Y2RS	Regional Transport - Mobility of Small Towns	KZ	2
ļ ,	f railway and bus lines, alternative forms of regional transport, influence in regional transport in vicinity of big cities, solutions	of passenger and	freight transport
in regions, activities rela	ted to regional transport, passenger transport safety in regions.		
17Y2RZ	Control of Transport Processes	KZ	2
Theoretical bases, trans	port system, decomposition, factors influencing control, quality diagnosis, methods of control, systems for decision making s	support, risk of de	cision making,
telematics.			
	Seminar on Political Philosophy	KZ	2
	ical texts, view of society, state and their system of government.		
	Special Technologies in Transport and Telecommunications	KZ	2
	technologies, electric arc and its applications, plasma technologies, dipping, beam technologies, electron beams technology	in roduction and	mending of
	technologies, soldering, gluing, ultrasound, diffusion, friction and explosion technologies, micro stoves, gas.		
	Reliability and Diagnostics, Experimental Methods	KZ	2
	n theoretical background and practical experience in the field of reliability of constructions, implementation of diagnostic proce		
	on of residual life of structures. For this purpose, non-destructive methods of experimental mechanics (e. g. strain-gauge measure experimental mechanics)	surement, photoe	lasticimetry) and
<u> </u>	ng electron microscopy, will be used.	1/7	
!	Stylistics and Rhetorics vritten expression as a means of human communication. Basic information about speech, articulation, oral and written languation.	KZ	2
	anguage semantics, language syntactic and the pragmatic aspect. Creative thought and its oral and written expression. Practic	•	
	Systematic Creating of Railway Timetables	KZ	2
!	acity allocation, technological intervals in railway operation. Rules and regulations of train paths, running times, time adds ar		
	g. Rules of train-diagramm creating. Train-diagramm construction in case of more service-levels on the line.	.а сарр.сс.ног.	toming older and
17Y2SK	Urban and Regional Rail Transport System	KZ	2
	sport demand, modal-split, traffic flows distribution on public transit network. Line network optimization and configuration. Tim		
accenting integrated per	iodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation,	non-barrier effects	s and preference
of public transport. Mark	eting.		
15Y2TS	Technician and Contemporary Society	KZ	2
Why to take off a hat in a	a room and open a door for a lady, are there simple solutions, science vs belief, do we need to know or is it enough to turn or	n a PC, it must be	true - it's on the
Internet and in newspap	ers, what are the sights for, interest in public affairs - a hangover from the past?		
17Y2TP	Technological Prognoses in Transportation and Telecommunication	KZ	2
The students will be ana	lysing both the general forecasting studies (NASA, CIA) and forecasting in the segment of transport and telecommunication		
ļ ,	Technology of Electronic Systems	KZ	2
	or an effective operation of electronically controlled systems. Maintaining, meassuring, optimization of safety and reliability of	complex systems	. Semiconductor
	cuits, assembly operations, interconnection and repairs technologiesusers and operators.		
14Y2TU	Telecommunications Systems and Multimedia	KZ	2
	unications namely applied in transport solutions, identification and quantification of telecommunications networks and services	performance bas	ed on redundant
	ng of guaranteed service quality, two generations of the handover principles.	1/7	
	Transportation and Building Technology and Equipment	KZ	2
· ·	ling technology and equipment.Transport of solid and mass material, soil and rock above all. Highway and underground cons d construction features, delivered mass calculation, economy of operation.Technics and technology of underground construct		
· ·	gy (ultrasound, laser, GPS, total stations).	ions. Terrestriai ve	chicles operation
	Development Trends of Aircraft Construction	KZ	2
	s trends. Future scenarios. Space industry. Economy.	112	_
	Sustainable Transportation	KZ	2
	nt, definition, history, legal framework. Sustainable development indicators. Sustainable transportation, definition, history, lega	· · · · · · · · · · · · · · · · · · ·	
of sustainable developm			• • •
14Y2UI	Artificial Intelligence	KZ	2
	gence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, machine learning		'
20Y2UA	Artificial Neural Networks, Realization and Applications	KZ	2
'	ks. Basic principles. Comparing the structure of a natural and an artificial neuron. Neural classificators, predictors, compresors		
functional blocs and sys	tems. Modelling of neurons. Grossberg's equations. Learning principles. Leyered and Hopfield's nets.		
18Y2UB	Accident Biomechanics and Safety	KZ	2
Anatomy of man. Method	ds of Medical Diagnostics - RTG, CT, MRI, US. Dynamics of traumatic events. Factors influencing the severity of an accident a	and the extent of a	a traffic accident.
-	edestrian injuries. Injury in railway and air traffic accidents. Analysis of biomechanical events in accidents and their computation	ional modeling. P	rinciples of
treatment and rehabilitat	tion. Protective elements and safety measures in transport.		

23Y2VZ Leadership and Human Resource Development Introduction to the study of human resources, human resources management, corporate goals, strategies, cultural and ethical aspects. Team management, communication in teams, strategy and planning in human resources, ethics and corporate culture, cross-cultural differences. The labor code. Introduction into protocols. 21Y2\/A Selected Chapters of Aerodynamics ΚZ Physical properties of real gases, atmosphere, aeronautical applications of external and internal aerodynamics, compressible internal flow, inlet nozzles and drive nozzles, compressible external flow, supercritical wings and profiles, vertical and oblique shock wave, energy losses, aeronautical aerodynamic profiles of wings, propellers, blades gratings, lift, drag, polar, viscosity, laminar and turbulent flow, boundary layer. 23Y2VS **Negotiation and Cooperation** ΚZ Negotiation principles. Negotiation sense, base, essence. Business and crisis negotiation differences. The "Win-Win" principle. Specification. Credibility. Negotiation behavior principles. Negotiation and command. Team variability. Formal and informal team roles. Computational Mechanics in Transportation ΚZ 2 Principle of virtual work and variational principles in FEM. Bar shaped, planar and three - dimensional structures in FEM. FEM in statics and in dynamics of transportational systems. Elastic, elastoplastic and viscoelastic material. FEM in problems of biomechanics. Numerical analysis of structural parts with programme ANSYS on instances High Speed Railways High speed rail (HSR) transport characteristics and position in transportation system. HSR vehicles types and characteristics and control-command and signalling system. HSR system interoperability. Non-adhesion HSR systems. City traffic service by HSR. HSR operating points. HSR worldwide network. HSR routing and traffic conception. Specifics of HSR track construction and geometrical characteristics. Basis of Communication for Practice Course is oriented to the communication in pair, as well as in a small team. Also on personality - human, which through the own experiences and feet back recognise it's strong and weak, opportunity and theats affect the results of communication. Offer the base of personal SWOT analyse and aplications, with respectation principles of ethics and culture, fully

focused on enviroment, in which the communication is on 12Y2ZK Traffic Calming

KZ 2

Principles of traffic calming. Solution of road network organization. Urban road layouts. Psychological and physical obstacles (measures of traffic calming) and their combinations. Traffic calming measures in crossroads. Pedestrian zones. Residential streets and zones.

Name of the block: Jazyky

Minimal number of credits of the block: 8

The role of the block: J

Code of the group: JZ-N-11/12

Name of the group: Jazyk nav.1.- 4.sem. 11/12

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 4 courses

Credits in the group: 8 Note on the group:

Note on the	<u> </u>					
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
15J2F1	Language - French 1 Eva Rezlerová, Irena Veselková	Z	2	0P+2C+10B	3 Z	J
15JBF2	Language - French 2 Eva Rezlerová, Irena Veselková	Z	2	0P+2C+10B	B L	J
15JBF3	Language - French 3 Eva Rezlerová, Irena Veselková	Z	2	0P+2C+10B	3 Z	J
15JBF4	Language - French 4 Eva Rezlerová, Irena Veselková	ZK	2	0P+2C+10B	L	J
15J2N1	Language - German 1 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	2	0P+2C+10B	3 Z	J
15JBN2	Language - German 2 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	2	0P+2C+10B	B L	J
15JBN3	Language - German 3 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	2	0P+2C+10B	Z	J
15JBN4	Language - German 4 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	ZK	2	0P+2C+10B	B L	J
15J2R1	Language - Russian 1 Marie Michlová, Eva Rezlerová	Z	2	0P+2C+10B	Z	J
15JBR2	Language - Russian 2 Marie Michlová, Eva Rezlerová	Z	2	0P+2C+10B	B L	J
15JBR3	Language - Russian 3 Marie Michlová, Eva Rezlerová	Z	2	0P+2C+10B	Z	J
15JBR4	Language - Russian 4 Marie Michlová, Eva Rezlerová	ZK	2	0P+2C+10B	B L	J
15J2S1	Language - Spanish 1 Eva Rezlerová, Nina Hricsina Puškinová	Z	2	0P+2C+10B	Z	J
15JBS2	Language - Spanish 2 Eva Rezlerová, Nina Hricsina Puškinová	Z	2	0P+2C+10B	L L	J
15JBS3	Language - Spanish 3 Eva Rezlerová, Nina Hricsina Puškinová	Z	2	0P+2C+10B	B Z	J
15JBS4	Language - Spanish 4 Eva Rezlerová, Nina Hricsina Puškinová	ZK	2	0P+2C+10B	B L	J

Characteristics of the courses of this group of Study Plan: Code=JZ-N-11/12 Name=Jazyk nav.1.- 4.sem. 11/12 15J2F1 Language - French 1 Ζ 2 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, language of management 15JBF2 Language - French 2 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, 15JBF3 Language - French 3 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation. 15JBF4 Language - French 4 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation. Language - German 1 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, language of management 15JBN2 Language - German 2 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, language of management. 15.JBN3 Language - German 3 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation. 2 15JBN4 ZK Language - German 4 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation. 15J2R1 Language - Russian 1 Ζ 2 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, language of management. 15JBR2 Language - Russian 2 Ζ 2 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, language of management 15JBR3 Language - Russian 3 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development, Basic stylistic forms, Presentation of own knowledge in oral and written form, Work with (professional) text and its features. Practice of oral and written presentation. Language - Russian 4 15JBR4 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation. Language - Spanish 1 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, language of management. Language - Spanish 2 Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising technical text content, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical registers and their use, language of management 15JBS3 Language - Spanish 3 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation. 15JBS4 Language - Spanish 4 ZK 2 Grammar and stylistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language structure knowledge and perceptive and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work with (professional) text and its features. Practice of oral and written presentation.

List of courses of this pass:

Code	Name of the course	Completion	Credits
11MAG	Algorithms	KZ	4
Fundamentals of dis	screte and numerical algorithms and numerical methods. Practical excersises on selected algorithms, error analysis of numerical algori variants of a numerical algorithm.	thms, comparisor	of possible
110V	Operational Research	ZK	2
Definition of linear p	rogramming optimization problem, application of linear programming on economical and technical problems, traffic problems - both conv Geometrical interpretation of linear programming problems, simplex method, duality principle.	entional and with	constraints
11STS	Stochastic Systems	Z,ZK	4
•	with the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction. The proportation tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian p		
11THRO	Queuing Theory	ZK	2
· · · · · · · · · · · · · · · · · · ·	ess, definition, random distribution, and probability. Basic processes, process of revitalisation. Markov process, Markov models, Kendal s M/M/n. Non-markovian models, model M/C/n, models G/G/n. Models with continuous flow. Service net, examples of Petri net. Comp		odel M/M/1
11VSM	Selected Statistical Methods Probability. Accident and fortuity.	ZK	2
11XN1	Master Project 1	Z	2
11XN2	Master Project 2	Z	2
11XN3	Master Project 3	Z	1
11Y2FX	Functions of Complex Variable	KZ	2
	olex function, holomorphic function, complex exponential series, integration, Cauchy theorem. Taylor series, Laurent series of complex Laplace and Z-transformation.		_
11Y2LG	Logics of Engineer's Judgement	KZ	2
	f engineer's judgement, its propositional and predicative logical base. Solutions of logical tasks through the methods of truthfulness at Venn's diagram method. Logical basis for network design for the solution of technical tasks.		l
11Y2PM	Programming in MATLAB	KZ	2
	ciple of modelling and simulation, description of Matlab environment and its settings, optimization and program code debugging, data Matlab.		ning GUI in
12BA	Road Safety Audit	KZ	2
	ations of safety assessments during the process of preparations, and of the particular realization of the road network that should min those who take part in road traffic. Road safety survey. Application of European Directive 2008/96/EC on road safety infrastructure m		ent risks fo
12BPU	Safety of Transfer Points	Z	2
Desig	n of areas with frequent pedestrian cumulation and movement. Interaction with other transportation vehicles. Optimization of platform	placement etc.	'
12XN1	Master Project 1	Z	2
12XN2	Master Project 2	Z	2
12XN3	Master Project 3	Z	1
12Y2BM	Safety on The Local Roads	KZ	2
Classification of road	d accidents rates, social looses. Collision points, diagrams. Tools and methods for safer road transportation. Crossroads from the point o right of way. Roundabouts. Pedestrian transport, cyclists. Traffic lights coordination. Transport control and regulation.	f view of safety. Ps	sychologica
12Y2IS	Urban Networks	KZ	2
The importance and	the position of UN as public and technical infrastructure / utillities, metodology of the UN master planning, of UN design, UN coordin operation (basic technical standards of UN, trenchless technologies for UN).	ation, UN installa	tion and UI
12Y2KE	Landscape Ecology	KZ	2
Landscape ecolog	gy. Landscape - definition, types, evolution. Landscape systems. Anthropogenic impacts on landscape. Methods using for evaluating la and its potential applications in landscape ecology. Landscape planning.	andscape. Fractal	geometry
12Y2KS	Rail Transport in Settlements and Regions	KZ	2
	d development of railway infrastructure in Czech Republic. Arrangement of railway networks and junctions. Suburban railway services tion of metro systems. Network configuration and operation of tram systems. Special thematic lectures (rail transport in selected coun	-	ration and
12Y2MD	Methods of Traffic Regulation and Prediction	KZ	2
Basic ways of traffic	prognosis, traffic prognosis for large area (calculation of future traffic volumes, calculation of future traffic volumes between areas (analomodal split, traffic distribution to road network). Shock wave in traffic flow. Service levels and their traffic volumes. Acceleration not	-	tic methods
12Y2MH	Measurement and Modeling of Traffic Noise	KZ	2
Theoretical introdu	ction to noise from traffic. Noise from rail transport. Noise from road traffic. Measurement and calculation of noise from rail traffic. Meanoise from road traffic. Modelling of traffic noise in the CADNA A.		lculation of
12Y2MZ	Modernization of Railway Lines and Stations	KZ	2
•	ng. AGC and AGTC Agreement. AGC and AGTC railway network. Principles of modernization (conceptual papers, definitions of basic oc characteristics on modernized railway lines. Superstructure and substructure on upgraded lines. Designing of railway stations. Bridge	• •	
10/200	and realization of projects. Technical description of the tranzit corridors.	V7	2
	Realization of Transport Buildings Types. Project Documentation Types. Building Code. Land Permission and Building Permission Process. Building Process. Project Ecor		
12Y2UD Sustainable develop	Sustainable Transportation pment, definition, history, legal framework. Sustainable development indicators. Sustainable transportation, definition, history, legal fra	KZ mework. Practica	2 I application

	High Conned Delivered	1/7	_
	High Speed Railways	KZ	2
	R) transport characteristics and position in transportation system. HSR vehicles types and characteristics and control-command and s		-
interoperability. No	on-adhesion HSR systems. City traffic service by HSR. HSR operating points. HSR worldwide network. HSR routing and traffic conce	eption. Specifics of	HSR track
	construction and geometrical characteristics.		
12Y2ZK	Traffic Calming	KZ	2
	,	l	l
Principles of traff	ic calming. Solution of road network organization. Urban road layouts. Psychological and physical obstacles (measures of traffic calm	ling) and their com	binations.
	Traffic calming measures in crossroads. Pedestrian zones. Residential streets and zones.		
14SBD	Transportation safety and software	Z	2
	sed on application of software which are being used as an engineering aid during the vehicle design, traffic modeling and GIS applica	ations Theoretical	l
1110 000130 13 10000	to the software is provided.	ations. Theoretical	background
	· ·		
14SI	System Engineering	Z,ZK	4
	Standard analysis methods and synthesis (projecting) of objects with system identification from the methodology standpoin	nt.	
14XN1	Master Project 1	Z	2
	,		
14XN2	Master Project 2	Z	2
14XN3	Master Project 3	Z	1
	CATIA I	KZ	2
14Y2C1		l .	_
Fundaments of wo	orking with CATIA, making basic parts and bodies. Making 2D sketches, geometric stucture, parametric linking, making adaptive moc	lels from 2D sketch	nes. Import
	and export of made parts and bodies. Making assemble and visualization.		
14Y2C2	CATIA II	KZ	2
		l	l
Extension of basic	course. Modeling compound bodies. Possibility of enumeration, comunications with other systems. Surface x solid bodies. Kinematic	c mechanism. Proj	ectmaking
	and project cooperation. Outputs of projects.		
14Y2CS	Sensitivity of Systems	KZ	2
	s with defined reliability. The impact of changing parameters and subsystems within a system. System sensitivity computing, definitio	l	l
200.911 01 090.0111		o. conominately full	and
	matrices and their usability in system design.		_
14Y2JM	One-Chip Controllers	KZ	2
One-chip cont	rollers architecture, embedded peripherals (counters, timers, converters, ports) and their utilisation. Practical tasks are programmed	with the aid of AVF	chips.
14Y2OP	Object Oriented Programming in Transport	KZ	2
_		l	_
Class, object, enc	apsulation, inheritance, polymorphism, templates, retyping, stream, exceptions, repository, collections, virtual methods and classes.	Problem cases wil	be cnosen
	from microscopic simulation system, discrete event simulation, celular automata simulation and virtual life area.		
14Y2PH	CAD Interface Programming	KZ	2
	D interface programming techniques with the help of LIST and VBA programming languages. Possibilities of proper objects (comman	l	l
Introduction to O/t		as), alalogues, inte	maccs, and
	applications creation in CAD systems. Programming of cooperation with other applications (databases, spread-sheets).	ı	ı
14Y2PI	Process Information Systems in Transportation	KZ	2
Introduction and d	etailed usage of transport information systems, e.g. EFC, ePurse and transport check-in systems for public transport with focus on a	rchitecture of this s	ystem and
SOA (Service Or	riented Architecture). Inforamtion systems implementation and operations description in the Czech Republic (technical and process)	included lectures a	and visits.
			2
14Y2PJ	C++ Programming Language	KZ	_
OOP philosophy an	d basics of C++ programming language. Class, object, constructor, destructor, inheritance, abstract class, virtual methods, exceptions,		
		streams, method a	and operator
	overloading, abstract data type implementation in C++.	streams, method a	and operator
14Y2TU	overloading, abstract data type implementation in C++.		1
14Y2TU	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia	KZ	2
	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per	KZ	2
New trends in teleco	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles.	KZ rformance based o	2 n redundant
	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per	KZ	2
New trends in telecond	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles.	KZ rformance based o	2 n redundant
New trends in telecond 14Y2UI His	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made	KZ rformance based o	2 n redundant 2
New trends in telecond 14Y2UI His 15DPS	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia mmunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made artificial intelligence. Transportation Psychology	KZ rformance based o KZ chine learning.	2 n redundant 2
14Y2UI His 15DPS Subject of psycholo	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made transportation Psychology gy and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints.	KZ rformance based o KZ chine learning. Z truction. Psycholog	2 n redundant 2
14Y2UI His 15DPS Subject of psycholo	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia mmunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made artificial intelligence. Transportation Psychology	KZ rformance based o KZ chine learning. Z truction. Psycholog	2 n redundant 2
14Y2UI His 15DPS Subject of psycholo of trave	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made transportation Psychology gy and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints.	KZ rformance based o KZ chine learning. Z truction. Psycholog	2 n redundant 2
14Y2UI His 15DPS Subject of psycholo of trave	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constant route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training and behaviour.	KZ rformance based o KZ chine learning. Z truction. Psycholog ansport operation.	2 n redundant 2 2 ical aspects
14Y2UI His 15DPS Subject of psycholo of trave 15J2A1	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constant rarefic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training and behaviour. Performance. Engineering psychology and vehicle constant conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training and behaviour in the staff. Work and leisure in the sesentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of the staff.	KZ rformance based o KZ chine learning. Z truction. Psycholog ansport operation. Z engagement.	2 n redundant 2 2 ical aspects
14Y2UI His 15DPS Subject of psycholo of trave 15J2A1 P1 15J2F1	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constell route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training and behaviour. Performance in the staff. Work and leisure in the language - English 1 resentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z	2 n redundant 2 2 ical aspects 2
14Y2UI His 15DPS Subject of psycholo of trave 15J2A1 Pi 15J2F1 Grammatical Struct	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constant rareful conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training and training of the staff. Work and leisure. Age as a factor in training Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills,	KZ rformance based of KZ chine learning. Z truction. Psychologransport operation. Z engagement. Z , feedback skills, so	2 n redundant 2 2 ical aspects 2 ummarising
14Y2UI His 15DPS Subject of psycholo of trave 15J2A1 Pi 15J2F1 Grammatical Struct	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constell route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training and behaviour. Performance in the staff. Work and leisure in the language - English 1 resentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1	KZ rformance based of KZ chine learning. Z truction. Psychologransport operation. Z engagement. Z , feedback skills, so	2 n redundant 2 2 ical aspects 2 ummarising
14Y2UI His 15DPS Subject of psycholo of trave 15J2A1 Pi 15J2F1 Grammatical Struct	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constructed and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace. Language - English 1 resentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures.	KZ rformance based of KZ chine learning. Z truction. Psychologransport operation. Z engagement. Z , feedback skills, so	2 n redundant 2 2 ical aspects 2 ummarising
14Y2UI His 15DPS Subject of psycholo of trave 15J2A1 Pi 15J2F1 Grammatical Structechnical text conte	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constructed and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training and training of the staff. Work and leisure. Age as a factor in training and styles are several technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques.	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z truction. S chinical registers are	2 n redundant 2 2 ical aspects 2 ummarising d their use,
New trends in telection 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conternical text conternical	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constructed and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in transportation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - German 1	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z, feedback skills, suchnical registers and	2 n redundant 2 2 ical aspects 2 unmarising d their use, 2
New trends in telect 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical Structechnical text conter 15J2N1 Grammatical Structechnical Struc	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraint and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and traffic conditions, accidents and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - German 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style.	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z, feedback skills, suchnical registers ar	2 n redundant 2 2 ical aspects 2 ummarising d their use, 2 ummarising
New trends in telect 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical Structechnical text conter 15J2N1 Grammatical Structechnical Struc	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constructed and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in transportation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - German 1	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z, feedback skills, suchnical registers ar	2 n redundant 2 2 ical aspects 2 ummarising d their use, 2 ummarising
New trends in telect 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical Structechnical text conter 15J2N1 Grammatical Structechnical Struc	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraint and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and traffic conditions, accidents and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - German 1 stures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and style.	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z, feedback skills, suchnical registers ar	2 n redundant 2 2 ical aspects 2 ummarising d their use, 2 ummarising
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 Pi 15J2F1 Grammatical Structechnical text contered text cont	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constructed and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace. Language - English 1 resentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of the staff. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and practical application,	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers are chinical registers are	2 n redundant 2 2 ical aspects 2mmarising d their use, 2mmarising d their use,
New trends in telecond 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 Property of the structure	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints are route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and traffic conditions, accidents and style; Analysis of expert texts and their production; Preparation for overseas work of the tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, e	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers are chinical registers are z	2 n redundant 2 2 ical aspects 2 2 2 2 2 2 2 2 2 2 2 2 2
New trends in telect 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter	Telecommunications Systems and Multimedia Immunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence Intervigence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints are route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training of the staff. Selection in the staff. Selection is constraint in the seventation skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of the staff. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques of management. Language - Russian 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and the staff.	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 mmarising d their use, 2 mmarising d their use, 2 mmarising d their use,
New trends in telect 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the Language - English 1 resentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques of management. Language - Russian 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques of management. Language - Russian 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign langua	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 mmarising d their use, 2 mmarising d their use, 2 mmarising d their use,
New trends in telect 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter	Telecommunications Systems and Multimedia Immunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence Intervigence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints are route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training of the staff. Selection in the staff. Selection is constraint in the seventation skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of the staff. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques of management. Language - Russian 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and the staff.	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 mmarising d their use, 2 mmarising d their use, 2 mmarising d their use,
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the Language - English 1 resentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical structuring presentations of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technic	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising ditheir use, 2 ummarising ditheir use, 2 ummarising ditheir use,
New trends in telectors 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 Pr 15J2F1 Grammatical Struct technical text conternical text	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constant traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in training of the staff. Work and leisure. Age as a factor in training of the staff. Work and leisure and traffic training of expert texts and their production; Preparation for overseas work and styles. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, that, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and text language of management. Language - German 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and text language of management. Language - Russian 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and text language of management. Language - Spanish 1	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers and the chinical registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use,
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2S1 Grammatical Structechnical text conter	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia munications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constant of the staff conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in transportation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conver	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers and the chinical registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use,
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2S1 Grammatical Structechnical text conter	resentation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, int, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, int, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and textur	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers and the chinical registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use,
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2S1 Grammatical Structechnical text conter	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia munications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constant of the staff conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in transportation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of Language - French 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conver	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers and the chinical registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use,
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Structechnical text conter 15J2N1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2R1 Grammatical Structechnical text conter 15J2S1 Grammatical Structechnical text conter	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constell route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and style. Selection of conversation topics rel	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers and the chinical registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use, 2 ummarising d their use, 2 ummarising d their use, 2 ummarising d their use,
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 Pr 15J2F1 Grammatical Structechnical text contered text cont	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia ommunications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constellation and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in trace and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniques and style. Selection of conversation topics relat	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use,
14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 Pr 15J2F1 Grammatical Structechnical text contered text cont	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and traffic including frames, state space search, constraints, genetic algorithms, made and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents and traffic incidents. Selection of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical search and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical search search and style. Selection of conversation topics relating t	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use,
New trends in telectors 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Struct technical text conternical text	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia munications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence tory of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made the production of the handover principles. Transportation Psychology gry and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle constraints of the staff. Work and leisure. Age as a factor in transportation Skills - expert technical discourse and style; Analysis of expert texts and their production; Preparation for overseas work of the Language - English 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and text language of management. Language - German 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and text language of management. Language - Russian 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and text language of management. Language - Spanish 1 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentation	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significal registers and the chinical registers are chinical registers. Z engagement. Z engagement.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use, 2 ummarising at their use,
New trends in telectors 14Y2UI His 15DPS Subject of psycholor of trave 15J2A1 P 15J2F1 Grammatical Struct technical text conternical text	overloading, abstract data type implementation in C++. Telecommunications Systems and Multimedia communications namely applied in transport solutions, identification and quantification of telecommunications networks and services per architecture, provissioning of guaranteed service quality, two generations of the handover principles. Artificial Intelligence story of artificial intelligence, knowledge, its representation including frames, state space search, constraints, genetic algorithms, made and traffic including frames, state space search, constraints, genetic algorithms, made and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in the search at traffic incidents and traffic incidents. Selection of the staff. Work and leisure. Age as a factor in the search at traffic incidents. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical search and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, and, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical search search and style. Selection of conversation topics relating t	KZ rformance based of KZ chine learning. Z truction. Psycholog ansport operation. Z engagement. Z feedback skills, significant registers and chinical registers are chinical registers.	2 n redundant 2 2 ical aspects 2 2 ummarising at their use, 2 ummarising at their use,

15JBA4	Language - English 4	ZK	2
	Language - English 4 		1
	FCE, CAE.		
15JBF2	Language - French 2	Z	2
	ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech		
on mode toxt con	language of management.	oai rogiotoro ai	
15JBF3	Language - French 3	Z	2
•	distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		
and perceptive ar	nd communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation.	rith (professional)	text and
15JBF4	Language - French 4	ZK	2
	distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		
and perceptive ar	nd communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w	rith (professional)	text and
15JBN2	features. Practice of oral and written presentation.	Z	2
	Language - German 2 cutures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills,	_	-
	tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech		
	language of management.		
15JBN3	Language - German 3	Z	2
•	distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la nd communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w		
and perceptive di	features. Practice of oral and written presentation.	nin (proicssional)	toxt and
15JBN4	Language - German 4	ZK	2
-	listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		
and perceptive ar	nd communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w	rith (professional)	text and
15JBR2	features. Practice of oral and written presentation. Language - Russian 2	Z	2
	Lariguage - Russian 2 actures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills,	-	1
	tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech		
	language of management.		
15JBR3	Language - Russian 3	Z	2
-	distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la nd communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w		
and perceptive ai	features. Practice of oral and written presentation.	itii (proicosioriai)	toxt and
	leatures. Fractice of oral and written presentation.		
15JBR4	Language - Russian 4	ZK	2
Grammar and sty	Language - Russian 4 //istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la	nguage structure	knowled
Grammar and sty	Language - Russian 4 listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w	nguage structure	knowled
Grammar and sty and perceptive ar	Language - Russian 4 /listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation.	nguage structure rith (professional)	knowledg text and
Grammar and sty and perceptive ar 15JBS2	Language - Russian 4 listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w	nguage structure vith (professional) Z	knowledge text and
Grammar and sty and perceptive ar 15JBS2 Grammatical Stru	Language - Russian 4 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work written presentation. Language - Spanish 2 Inductories and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, itent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech	nguage structure rith (professional) Z feedback skills, s	knowledge text and a contract and a
Grammar and sty and perceptive ar 15JBS2 Grammatical Stru echnical text cont	Language - Russian 4 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management.	nguage structure rith (professional) Z feedback skills, s nnical registers a	knowledg text and i 2 ummarisin nd their us
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3	Language - Russian 4 Visitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3	nguage structure rith (professional) Z feedback skills, s nnical registers an	knowledge text and 2 ummarising their use 2
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty	Language - Russian 4 Visitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work was features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3 Visitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language level.	nguage structure ith (professional) Z feedback skills, s inical registers ar Z nguage structure	knowledge text and a contract their use their use their use the contract
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty	Language - Russian 4 Visitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3	nguage structure ith (professional) Z feedback skills, s inical registers ar Z nguage structure	knowledge text and a contract their use their use their use the contract
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty	Language - Russian 4 Visitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work was features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3 Visitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work was a communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work was a communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work was a communicative skills, vocabulary development.	nguage structure ith (professional) Z feedback skills, s inical registers ar Z nguage structure	knowledge text and 2 ummarising their use 2 knowledge
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty	Language - Russian 4 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, itent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniquage of management. Language - Spanish 3 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language - Spanish 4	nguage structure Z feedback skills, s nnical registers at Z nguage structure rith (professional)	knowledge text and 2 ummarising their use 2 knowledge text and 2 knowledge knowledge knowledge 2 knowledge 3 knowl
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty	Language - Russian 4 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, itent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and techniquage of management. Language - Spanish 3 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we have decommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we have decommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we have decommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we have decommunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we have decommended in oral and written form. Work we have decommended in oral and written form. Work we have decommended in oral and written form.	nguage structure Z feedback skills, s nnical registers at Z nguage structure rith (professional)	knowledge text and 2 ummarising their use 2 knowledge text and 2 knowledge knowledge knowledge 2 knowledge 3 knowl
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar and perceptive a	Language - Russian 4 //isitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, itent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - Spanish 3 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 //listics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation.	nguage structure Z feedback skills, s nnical registers at Z nguage structure rith (professional) ZK nguage structure rith (professional)	knowledge text and 2 ummarising their use 2 knowledge text and 2 knowledge text and 2 knowledge text and 2 knowledge text and 3 knowled
T5JBS3 Grammar and sty and perceptive ar 15JBS3 Grammatical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar	Language - Russian 4 //isitics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la and communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, items, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - Spanish 3 //istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 //istics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Master Project 1	nguage structure Z feedback skills, s nnical registers ar Z nguage structure ith (professional) ZK nguage structure ith (professional)	knowledde text and 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN1	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - Spanish 3 Disticts. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 Disticts. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 2	nguage structure ith (professional) Z feedback skills, s nnical registers at Z nguage structure ith (professional) ZK nguage structure ith (professional) Z Z Z	knowledge text and 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - Spanish 3 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 2 Master Project 3	nguage structure Z feedback skills, s nnical registers ar Z nguage structure ith (professional) ZK nguage structure ith (professional)	knowledde text and 2 2 2 2 2
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - Spanish 3 Disticts. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 Disticts. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 2	nguage structure rith (professional) Z feedback skills, s nnical registers ar Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z KZ	knowledde text and 2 ummarising their und text and 2 knowledd text and 2 2 land 1 2
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN ntroduction into be	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - Spanish 3 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, getting in traffic, traffic accident, traffic psychology in the internet etc.)	nguage structure ith (professional) Z feedback skills, s innical registers an Z inguage structure ith (professional) ZK inguage structure ith (professional) Z Z Z KZ ing of driving licen	knowled- text and 2 ummarisi- nd their u- 2 knowled- text and 2 knowled- text and 2 ce, childro
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN Introduction into the 15Y2HS	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, itent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique and presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, getting in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History	nguage structure rith (professional) Z feedback skills, s nnical registers an Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z KZ ng of driving licen KZ	knowlede text and 2 ummarising their use knowlede text and 2 knowlede text and 2 knowlede text and 2 2 ce, childred 2 2 ce, childred 2 2
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN ntroduction into the 15Y2HS Roads and road to	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, itent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique of management. Language - Spanish 3 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, getting in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History traffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road traffic.	nguage structure rith (professional) Z feedback skills, s nnical registers an Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z KZ ng of driving licen KZ ransport developer	knowlede text and 2 ummarising their use knowlede text and 2 knowlede text and 2 knowlede text and 2 2 ce, childred 2 ment during text and 2 2 central during text and 2 central during te
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN ntroduction into the 15Y2HS Roads and road to	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, itent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique and presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technique and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, getting in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History	nguage structure rith (professional) Z feedback skills, s nnical registers an Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z KZ ng of driving licen KZ ransport developer	knowledge text and strength of their use text and strength of
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15JN1 15XN2 15XN3 15Y2DN ntroduction into be 15Y2HS Roads and road to st part of 20th ce 15Y2MS	Language - Russian 4 distics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and text language - Spanish 3 disticts. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 disticts. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 1 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, getting in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History raffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road traftury. Development of road layout, geometric and construction layers. Beginning of modern road civil engineering. Development of road literatury. Development of road signs. Sociology for Managers	nguage structure ith (professional) Z feedback skills, s innical registers ar Z nguage structure ith (professional) ZK nguage structure ith (professional) Z Z Z Z R g of driving licen KZ ransport developed travelling in mo	knowlede text and 2 ummarising their use 2 knowlede text and 2 knowlede text and 2 2 ce, childred 2 ment durindern period 2 2
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN ntroduction into the 15Y2HS Roads and road the st part of 20th cents 15Y2MS Sociological app	Language - Russian 4 ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3 Idistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 Idistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries Transport History Road Transport History Transfic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road trantury. Development of road layout, geometric and construction layers. Beginning of modern road civil engineering. Development of road trantury. De	nguage structure rith (professional) Z feedback skills, s nnical registers ar Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z R Z R g of driving licen KZ ransport developed travelling in mo KZ s culture and social	knowled- text and 2 ummarisi- nd their u- 2 knowled- text and 2 knowled- text and 2 ce, childre 2 ment duri dern perio
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15JN1 15XN2 15XN3 15Y2DN ntroduction into be st part of 20th ce	Language - Russian 4 ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 2 Inctures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and technical language of management. Language - Spanish 3 Idistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Language - Spanish 4 Ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work we features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, getting in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History raffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road transport History of road intercections, bridges and traffic control, development of road signs. Sociology for Managers Sociology for Managers Sociology for Managers So	nguage structure ith (professional) Z feedback skills, s innical registers ar Z nguage structure ith (professional) ZK nguage structure ith (professional) Z Z Z KZ ag of driving licen KZ ransport developed travelling in mo KZ s culture and socioporporation.	knowled- text and 2 ummarising their under their under their under text and their under text and text
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN ntroduction into but st part of 20th ce 15Y2MS Sociological app	Language - Russian 4 Ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la nd communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3 Ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 Ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, gettir in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History raffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road traffic to the modern period, acceleration of road traffic to the Ancient Age, corridors of main mediveal pathways. Development of road traffic ontrol, developmen	nguage structure rith (professional) Z feedback skills, s nnical registers ar Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z R Z R Z R G G G G G G G G G G G G	knowled- text and 2 ummarisi- nd their u- 2 knowled- text and 2 knowled- text and 2 knowled- text and 2 ce, childred 2 ment duri dern period 2 al system
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text cont 15JBS3 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN2 15XN3 15Y2DN ntroduction into but 15Y2HS Roads and road t st part of 20th ce 15Y2MS Sociological app	Language - Russian 4 ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Lotures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3 ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for divers, abusing alcohol during driving, exhaustion, getting in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History raffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road traffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road traffic problement of road layout, geometric and construction l	nguage structure rith (professional) Z feedback skills, s nnical registers ar Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z KZ ag of driving licen KZ ransport developed travelling in mo KZ s culture and soci corporation. KZ aking and writing	knowlede text and 2 ummarising their use 2 knowlede text and 2 knowlede text and 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 2 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 3 3 5 3 5
Grammar and sty and perceptive ar 15JBS2 Grammatical Struechnical text contectnical text and perceptive ar 15JBS4 Grammar and sty and perceptive ar 15XN1 15XN1 15XN2 15XN3 15Y2DN Introduction into the style part of 20th cettnical text contectnical text part of 20th cettnical text	Language - Russian 4 Ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la nd communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 2 Ictures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, tent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tech language of management. Language - Spanish 3 Ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Language - Spanish 4 Ilistics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of land communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work w features. Practice of oral and written presentation. Master Project 1 Master Project 1 Master Project 2 Master Project 2 Master Project 3 Transportation Psychology in German Speaking Countries broader view of traffic problems with regard to the work with texts (Physics for drivers, abusing alcohol during driving, exhaustion, gettir in traffic, traffic accident, traffic psychology in the internet etc.) Road Transport History raffic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road traffic to the modern period, acceleration of road traffic to the Ancient Age, corridors of main mediveal pathways. Development of road traffic ontrol, developmen	nguage structure rith (professional) Z feedback skills, s nnical registers ar Z nguage structure rith (professional) ZK nguage structure rith (professional) Z Z Z KZ ag of driving licen KZ ransport developed travelling in mo KZ s culture and socioproration. KZ aking and writing KZ aking and writing KZ	knowledge text and in text and in text and in their use 2 knowledge text and in text and i

15Y2PS	Practical Spanish for Transportation, Management and Business	KZ	2
Development of	communication skills, training of correct written expression of formal character, basic technical vocabulary, cultural specifics of the Specifics of the Specifics of the Specifics of the Specific specifics of the Specific specif	panish speaking co	ountries.
45V2DT	Terminology of transport and commerce, business letter.	1/7	-
15Y2PT	Food in Transportation Interaction transportation and foodstuffs. The health risks. Hygienic safeguard. The practical examples from the Czech Republic and	KZ	2 ne issues of
The name policy	dining cars, work trains and other railroad equipment. Legislation.	nom the world. Th	10 100000 01
15Y2PU	Publications and Their Creation	KZ	2
Scientific texts type	bes. Footnotes and references. Exploration of facts. Quotations. Formal document layout. Working with information databases. Typogra	aphic principles. Ty	pographic
	editors - MS Word, Tex/LaTeX. Practical creation of simple scientific documents.		_
15Y2SP	Seminar on Political Philosophy	KZ	2
15Y2SR	Interpreting of philosophical texts, view of society, state and their system of government. Stylistics and Rhetorics	KZ	2
	and written expression as a means of human communication. Basic information about speech, articulation, oral and written language		_
	ng. Language semantics, language syntactic and the pragmatic aspect. Creative thought and its oral and written expression. Practice -		
15Y2TS	Technician and Contemporary Society	KZ	2
Why to take off a h	at in a room and open a door for a lady, are there simple solutions, science vs belief, do we need to know or is it enough to turn on a F	°C, it must be true	- it's on the
40)/114	Internet and in newspapers, what are the sights for, interest in public affairs - a hangover from the past?		
16XN1	Master Project 1	Z	2
16XN2	Master Project 2	Z	2
16XN3	Master Project 3	Z	1
16Y2HP	Vehicle Hygiene onomy of vehicles and the influence on man and nature. National and international law related to the hygiene. Noise and vibrations - s	KZ	2 ropagation
_	ys of measuring, prevention, elimination. Exhausts - creation, measurement, reduction, non-regular fuels and drives. Ergonomy - sitting		
,	reach. Condition - heating, ventilation, air-conditioning, filtration, tiredom.	<i>J.</i>	
16Y2KV	Car Body Design	KZ	2
	ody, high-load car body, bus car body, and motorcycle as a construction set. Principles of design, production, testing and operation.		-
construction. Activ	re and passive safety parts. Ergonomics, HMI, view out of the vehicle, operational extent, view behind the car. Conditioning tools, sign	aling function. Aer	odynamics
16Y2MK	of the car body. Design and artistic design principles. Practical training. Quality Methods for Vehicles	KZ	2
	nt methods list, customer data acquisition and analysis of customer requirements, QFD, DFM, DFA, DFS. FMEA (Failure mode effect		_
	(team) design.	,,-	
16Y2PG	Computer Graphics and Virtual Reality	KZ	2
•	on and processing of bitmap and vector 2D graphics, 3D virtual scenes and algorithms used for their computerized processing. Adopting		
	eware tools for creation and processing of 2D, 3D and interactive graphics, and basics of programming language VRML and graphic li		
16Y2ST	Special Technologies in Transport and Telecommunications special technologies, electric arc and its applications, plasma technologies, dipping, beam technologies, electron beams technology i	KZ	2 anding of
IVIICIO, HAHO AHO	vehicles, laser and laser technologies, soldering, gluing, ultrasound, diffusion, friction and explosion technologies, micro stoves,		ending of
16Y2TT	Transportation and Building Technology and Equipment	KZ	2
	and building technology and equipment. Transport of solid and mass material, soil and rock above all. Highway and underground const		t surface
vehicles, description	n and construction features, delivered mass calculation, economy of operation. Technics and technology of underground constructions	. Terrestrial vehicle	es operation
47)/14	management methodology (ultrasound, laser, GPS, total stations).		
17XN1	Master Project 1	Z	
17XN2 17XN3			2
I / A IV.5	Master Project 2	Z	2
	Master Project 3	Z Z	2
17Y2FM	Master Project 3 Financing in Urban Mass Transportation	Z Z KZ	2 1 2
17Y2FM UMT history and o	Master Project 3	Z Z KZ building and opera	2 1 2 ation. Other
17Y2FM UMT history and o	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground	Z Z KZ building and opera	2 1 2 ation. Other
17Y2FM UMT history and o	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & DMT. UMT typology & DMT. UMT typology & Capital Investment in Transportation and Telecommunications	Z Z KZ building and opera	2 1 2 ation. Other
17Y2FM UMT history and c UMT types. UMT c	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dut. UMT typology & Description of optimum financing. Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing.	Z Z KZ building and opera s of UMT financing	2 1 2 ation. Other i. Transport
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dut. UMT typology & Department; choice of optimum financing. Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing. Microsimulation of Railway Operation	Z Z KZ building and opera s of UMT financing KZ KZ	2 1 2 ation. Other . Transport 2
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dutt. UMT typology & Description of optimum financing. Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing. Microsimulation of Railway Operation characteristics of simulation tools, creation of a simulation model of railway infrastructure, verification of a specific operational conce	Z Z KZ building and opera s of UMT financing KZ KZ ot on the given infr	2 1 2 ation. Other 1. Transport 2 2 astructure,
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dut. UMT typology & Department; choice of optimum financing. Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing. Microsimulation of Railway Operation	Z Z KZ building and opera s of UMT financing KZ KZ ot on the given infr	2 1 2 ation. Other 1. Transport 2 2 astructure,
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dutt. UMT typology & Description of optimum financing. Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing. Microsimulation of Railway Operation characteristics of simulation tools, creation of a simulation model of railway infrastructure, verification of a specific operational concept frastructure model and modification to the infrastructure to allow the implementation of the proposed operational concept. Stability tes	Z Z KZ building and opera s of UMT financing KZ KZ ot on the given infr	2 1 2 ation. Other 1. Transport 2 2 astructure,
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the in 17Y2NU Transport systems	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & DMT. UMT typology &	Z Z KZ building and opera s of UMT financing KZ ot on the given infrits and evaluations KZ ystems by the meti	2 1 2 ation. Other 1. Transport 2 astructure, 1. Evaluation 2 hods CBA,
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dutt. UMT typology & Description of optimum financing. Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing. Microsimulation of Railway Operation characteristics of simulation tools, creation of a simulation model of railway infrastructure, verification of a specific operational concept frastructure model and modification to the infrastructure to allow the implementation of the proposed operational concept. Stability tess of sensitivity of the operational concept to delays. Cost and Benefits of Transport Systems and their history, externalities and their internalization, public goods, transport funding, assessment of transport constructions and sport taxation, influence of transport constructions on public budgets, relation of transport and economic growth, importance of transport	Z Z KZ building and opera s of UMT financing KZ ot on the given infrits and evaluations KZ ystems by the metirt in area, spatial of	2 1 2 ation. Other 1. Transport 2 astructure, 1. Evaluation 2 hods CBA, economy.
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt typology & Dunt types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt typology & D	Z Z KZ building and operates of UMT financing KZ ot on the given infirits and evaluations KZ ystems by the metter in area, spatial of KZ	2 1 2 ation. Other 1. Transport 2 2 astructure, 1. Evaluation 2 hods CBA, economy. 2
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport systems 17Y2PR Carrier's commerce	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & DMT. UMT typology	Z Z KZ building and opera s of UMT financing KZ ot on the given infr ts and evaluations KZ ystems by the met rt in area, spatial of KZ e. Contract on freig	2 1 2 ation. Other . Transport 2 astructure, . Evaluation 2 hods CBA, economy. 2 ght carriage.
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport systems 17Y2PR Carrier's commerce	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt typology & Dunt types. Historic and present models inspection and blind passengers. Tourism & Dunt. UMT typology & Dunt typology & D	Z Z KZ building and opera s of UMT financing KZ ot on the given infr ts and evaluations KZ ystems by the met rt in area, spatial of KZ e. Contract on freig	2 1 2 ation. Other . Transport 2 astructure, . Evaluation 2 hods CBA, economy. 2 ght carriage.
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport systems 17Y2PR Carrier's commerce	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & DMT. UMT typology	Z Z KZ building and opera s of UMT financing KZ ot on the given infr ts and evaluations KZ ystems by the met rt in area, spatial of KZ e. Contract on freig	2 1 2 ation. Other . Transport 2 astructure, . Evaluation 2 hods CBA, economy. 2 ght carriage.
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport, Systems 17Y2PR Carrier's commerce Forwarding con 17Y2PS Simulation expert	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Development in Samp; UMT. UMT typology & Development in Samp; Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing. Microsimulation of Railway Operation characteristics of simulation tools, creation of a simulation model of railway infrastructure, verification of a specific operational concept frastructure model and modification to the infrastructure to allow the implementation of the proposed operational concept. Stability tess of sensitivity of the operational concept to delays. Cost and Benefits of Transport Systems and their history, externalities and their internalization, public goods, transport funding, assessment of transport constructions and system transport constructions on public budgets, relation of transport and economic growth, importance of transport taxation, influence of transport constructions on public budgets, relation of transport and economic growth, importance of transport taxation, influence of transport constructions on public budgets, relation of transport and economic growth, importance of transport taxation, influence of transport constructions on public budgets, relation of transport and economic growth, importance of transport taxation, influence of transport constructions on international carriage. Contract on passenger carriage tract. Liability and rights based on carrying contract. Contractual carrying conditions. Guarantee of carrying contract by more operator commercial terms (INCOTERMS). Tariff and calculation of prices. Case Studies in Transportation	Z Z KZ building and operates of UMT financing KZ ot on the given inforts and evaluations KZ systems by the metter in area, spatial of KZ e. Contract on freiges. Internationally a KZ re etc. The student	2 1 2 ation. Other 1. Transport 2 astructure, 2 Evaluation 2 hods CBA, economy. 2 ght carriage. ccepted 2 ts will each
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport, Systems 17Y2PR Carrier's commerce Forwarding con 17Y2PS Simulation expert	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dutt. UMT typology	Z Z KZ building and operates of UMT financing KZ ot on the given inforts and evaluations KZ systems by the metter in area, spatial of KZ e. Contract on freiges. Internationally a KZ re etc. The student	2 1 2 ation. Other 1. Transport 2 astructure, 2 Evaluation 2 hods CBA, economy. 2 ght carriage. ccepted 2 ts will each
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transport, can be commerced forwarding con 17Y2PS Simulation expert lesson presente	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & amp; UMT. UMT typology & amp; choice of optimum financing. Capital Investment in Transportation and Telecommunications Financial market, investment desicion making - long term goals and investment strategies, long term financing. Microsimulation of Railway Operation characteristics of simulation tools, creation of a simulation model of railway infrastructure, verification of a specific operational concept frastructure model and modification to the infrastructure to allow the implementation of the proposed operational concept. Stability tes of sensitivity of the operational concept to delays. Cost and Benefits of Transport Systems and their history, externalities and their internalization, public goods, transport funding, assessment of transport constructions and so the transport constructions on public budgets, relation of transport and economic growth, importance of transport taxation, influence of transport constructions on public budgets, relation of transport and economic growth, importance of transport taxation, influence of transport constructions on public budgets, relation of transport and economic growth, importance of transport tract. Liability and rights based on carrying contract. Contractual carrying conditions. Guarantee of carrying contract by more operator commercial terms (INCOTERMS). Tariff and calculation of prices. Case Studies in Transportation discussions on the topics - the impact of transport on the environment and the economy, energy, construction of transport infrastructude one current and the real issue, which solutions will have to think of each other. Each of them will be represent another role (public a representativ	Z Z KZ building and operates of UMT financing KZ ot on the given inforts and evaluations KZ systems by the metter in area, spatial of KZ e. Contract on freiges. Internationally a KZ re etc. The student uthorities, investor	2 1 2 ation. Other 1. Transport 2 astructure, 2 Evaluation 2 hods CBA, economy. 2 ght carriage. ccepted 2 ts will each s, carrier
17Y2FM UMT history and of UMT types. UMT of 17Y2KI 17Y2MS Introduction to the adaptation of the ir 17Y2NU Transport systems MCA, CA, transp 17Y2PR Carrier's commerce Forwarding con 17Y2PS Simulation expert lesson presente	Master Project 3 Financing in Urban Mass Transportation evelopment in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground development in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present models inspection and blind passengers. Tourism & Dutt. UMT typology	Z Z KZ building and operate of UMT financing KZ ot on the given infirits and evaluations KZ systems by the mether in area, spatial of KZ e. Contract on freigns. Internationally a KZ re etc. The student uthorities, investor	2 1 2 ation. Other 1. Transport 2 2 astructure, 2 Evaluation 2 thods CBA, economy. 2 ght carriage. cccepted 2 ts will each s, carrier 2

17Y2RZ	Control of Transport Processes	KZ	2
	, transport system, decomposition, factors influencing control, quality diagnosis, methods of control, systems for decision making sup telematics.		-
17Y2SG	Systematic Creating of Railway Timetables	KZ	2
	. Capacity allocation, technological intervals in railway operation. Rules and regulations of train paths, running times, time adds and s crew circulation planning. Rules of train-diagramm creating. Train-diagramm construction in case of more service-levels on the		g stock and
17Y2SK	Urban and Regional Rail Transport System	KZ	2
	g transport demand, modal-split, traffic flows distribution on public transit network. Line network optimization and configuration. Timet		
	d periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, non		
	of public transport. Marketing.		
17Y2TP	Technological Prognoses in Transportation and Telecommunication	KZ	2
	e students will be analysing both the general forecasting studies (NASA, CIA) and forecasting in the segment of transport and telecol		
18AMC	Anatomy and human mobility	ZK	3
Medical science s	, ystem. Life and its character. Human body topography. Anatomical nomenclature. Human body tissue list. Muscle structure. Joints. Th		echanics of
the muscular and	skeleton system. Dysfunction and damage of the human body after an accident. The mobility, therapy and rehabilitation of the injured.	Sources of human	security in
	transport. Security aids.		
18TGK	Technology of structures in transportation	KZ	4
Analysis of product	design, focused on transportation technology. Functional evaluation, materials, technology analysis. Fitting and space analysis. Relial		and control,
	manufacturing and maintenance. Technological indexes. Volba optimálních technologií. Selection of optimal manufacturing technologií.	ology.	
18XN1	Master Project 1	Z	2
18XN2	Master Project 2	Z	2
18XN3	Master Project 3	Z	1
18Y2D2	Dynamics of Transport Routes and Vehicles 2	KZ	2
	in the vehicle and transport routes and their influence on the stress and strain components of the vehicle structure or behavior of traff		
	and transport routes. Vibration of systems with a finite number of degrees of freedom. Methods of constant stiffness and constant con		
	of structural systems. Criteria for the admissibility of oscillation.	. ,	
18Y2FZ	Physical foundation of materials' properties	KZ	2
	lattice defects influence on properties of materials, stiffness, plasticity, strength, fracture, fatigue, creep, corrosion, effects of environn		
	behavior are the main discussed topics.	_	
18Y2MP	Finite Element Method And Its Application	KZ	2
	i ical formulation of the Finite Element Method. Direct Stiffness Method used in structural mechanics. Evaluation of stiffness matrices f	or the basic eleme	nts using
variational prin	ciples. Element formulation (bar and beam elements, CST, LST, quadrilateral, tetrahedral and brick elements). Natural coordinates, na	atural shape functi	ons and
	isoparametric representation. Numerical integration. Introduction to dynamics. FEM programming.		
18Y2SD	Reliability and Diagnostics, Experimental Methods	KZ	2
The course is focus	sed on theoretical background and practical experience in the field of reliability of constructions, implementation of diagnostic procedur	es for the detection	of material
defects and determ	nination of residual life of structures. For this purpose, non-destructive methods of experimental mechanics (e.g. strain-gauge measure	ement, photoelastic	cimetry) and
	optical methods, including electron microscopy, will be used.		
18Y2UB	Accident Biomechanics and Safety	KZ	2
	lethods of Medical Diagnostics - RTG, CT, MRI, US. Dynamics of traumatic events. Factors influencing the severity of an accident and		
Injuries in road t	raffic. Pedestrian injuries. Injury in railway and air traffic accidents. Analysis of biomechanical events in accidents and their computation	onal modeling. Prir	nciples of
10)(0)(0	treatment and rehabilitation. Protective elements and safety measures in transport.		•
18Y2VC	Computational Mechanics in Transportation	KZ	2
	work and variational principles in FEM. Bar shaped, planar and three - dimensional structures in FEM. FEM in statics and in dynamic elastoplastic and viscoelastic material. FEM in problems of biomechanics. Numerical analysis of structural parts with programme AN		-
20BSD	Safety and Reliability in Transportation ject is basic notion, predicative diagnostics, safety in the traffic vehicles, safety infrastructure, human in the transportation and traffic s	KZ	2
The content of sub	in transportation and application of safety systems in the traffic and the transportation, etc.	ysterns, security or	IIIIOIIIIalioii
20IDFS	Identification Systems	Z	2
	n systems, its technologies (barcodes, RFID, biomerics), their features, usage, security and standards. Applications of identification s		
Dasic identification	vehicles, cargo, devices and processes. Identifier as foundation of traffic telematics standardization.	ysterns, c. g. ident	incation of
20ITS	Intelligent Transport Systems	ZK	3
	The ligent Transport Systems TS, the ITS system architecture, sophisticated methods for urban traffic management, ITS for public transport, ITS for parking systems		
	on of excesses, intelligent highways, processing and modelling of traffic quantities, queuing theory and shock waves, ITS for road tunnels		
	the use of modern decision-making systems in ITS.	•	
20SAO	Sensors and controls	KZ	1
	evelopment of sensors. Principles, technological and construction of electric, non - electric and magnetic data and electromagnetic wa		rotating and
_	sliding movement. Pneumatic and hydraulic elements in solid phase.		
20SIBS	Reliability Engineering and Safety of Systems	ZK	3
	ability and safety with special regard to information and automation equipment used in transportation safety systems. Various aspects of	of reliability and saf	ety systems
	analysis and synthesis. Problems of human subject - artificial systems.		
20TSS	Telematic Systems and Services	Z,ZK	3
	telematic architecture, FRAME, cooperative systems - technologies, principles and aplications, European electronic toll service, traffi		
	automated vehicle systems, European railway traffic management system.		
20XN1	Master Project 1	Z	2
20XN2	Master Project 2	Z	2
20XN3	Master Project 3	Z	1
20Y2PR	Prediction of time series	KZ	2
	rection of time series series prediction, meaning of prediction, basics of quantitative prediction. Methods for predictive quality evaluation, descriptive statisti		
	tion for general formula of loss function. Calculation and programming environment R. Regression models, basics of linear regression		
prodiction, prodic	alor for general formula of 1033 function. Calculation and programming environment it. Regression models, basics of linear regression		

20Y2TE			
	Technology of Electronic Systems	KZ	2
Principle technolog	ies for an effective operation of electronically controlled systems. Maintaining, meassuring, optimization of safety and reliability of con technologies, printed circuits, assembly operations, interconnection and repairs technologiesusers and operators.	nplex systems. Se	miconductor
20Y2UA	Artificial Neural Networks, Realization and Applications	KZ	2
History of neural ne	etworks. Basic principles. Comparing the structure of a natural and an artificial neuron. Neural classificators, predictors, compresors, ex functional blocs and systems. Modelling of neurons. Grossberg's equations. Learning principles. Leyered and Hopfield's net	-	r specialised
24 VN14			2
21XN1	Master Project 1	Z	2
21XN2	Master Project 2	Z	2
21XN3	Master Project 3	Z	1
21Y2LS	Air Traffic Services	KZ	2
	in Czech Republic and other countries. Introduction and description of ATS units in Czech Republic. Practical examples of TWR, APP		_
All space structure			Story or ATS
	at USA and Czechoslovakia. ATS - Model of financing. Training Systém of Air Traffic Controllers. Future development of ATS		ı
21Y2MK	Marketing of Air Transport	KZ	2
The content of the	course "Marketing in air transport" is the management of activities and processes using available marketing tools and processes for a	ınalysis, strategy o	development
and implementation	n of sales of goods and services in the aviation industry. In addition to the theoretical foundations of marketing, the lectures present s	ystems of market,	competition
•	and product analysis, creation of marketing strategies and planning.		•
21Y2MS		KZ	2
	Aerospace Engineering Simulation and Modelling		1
	gned as a set of exemplary tasks and problems based on practical aviation issues. The university degree mathematic skills and softw		-
necessary for succ	essful figuring out. Both simple tasks, where students create own model themselves (e.g. in Matlab), and more complicated problems tools will be applied.	where profession	al developed
21Y2NR	Novigation and Elight Control Systems	KZ	2
ZIIZNK	Navigation and Flight Control Systems	NΖ	
	Navigtion (ANP/RNP), area navigation, FMS, FMC, A/P, A/T, FD, MCDU, GPWS.		
21Y2PL	Operational Aspects of Aerodromes	KZ	2
Operational aspec	ts of aerodromes. Location of aerodrome and orientation of runways. Requirements for apron. Capacity of airports runways and term	inals. Operation u	nder winter
	conditions. Firefighting units. Protection against unlawful interference. Local transport connection. Environmental protection		
241/200		KZ	2
21Y2PP	Law and Operation in Air Transport		2
· ·	iation law. International conventions on civil aviation. International organisations and including of the Czech Republic in these organis	_	
aviation. Executi	on of state administration and state supervision in matters of civil aviation, in accordance with Act No. 49/1997 Col. Facilitation. Respo	onsibilities of air c	arriers for
	passengers, luggage and cargo. The safe transport of dangerous goods.		
21Y2TL	Development Trends of Aircraft Construction	KZ	2
	Historical and nowadays trends. Future scenarios. Space industry. Economy.		_
0.43/(0)//4		1/7	
21Y2VA	Selected Chapters of Aerodynamics	KZ	2
	of real gases, atmosphere, aeronautical applications of external and internal aerodynamics, compressible internal flow, inlet nozzles are		
external flow, supe	rcritical wings and profiles, vertical and oblique shock wave, energy losses, aeronautical aerodynamic profiles of wings, propellers, bl	ades gratings, lift,	drag, polar,
	viscosity, laminar and turbulent flow, boundary layer.		
0000111			1
I 22PSIN	Prevention of Road Traffic Accidents	7	4
22PSIN	Prevention of Road Traffic Accidents Racic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults ats	Z	4
	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc.		
22TZN	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise	KZ	2
22TZN	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc.	KZ	2
22TZN Historical evolution	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise	KZ nsic legislation, ba	2 asic forensic
22TZN Historical evolution	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore	KZ nsic legislation, ba	2 asic forensic
22TZN Historical evolution acts, expert role in	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evident forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic.	KZ nsic legislation, bances collection, situ	2 asic forensic e inspection,
22TZN Historical evolution acts, expert role in 22XN1	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1	KZ nsic legislation, baces collection, site	2 asic forensic e inspection,
22TZN Historical evolution acts, expert role in	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evident forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic.	KZ nsic legislation, bances collection, situ	2 asic forensic e inspection,
22TZN Historical evolution acts, expert role in 22XN1 22XN2	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2	KZ nsic legislation, bances collection, site	2 asic forensic e inspection,
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3	KZ nsic legislation, bances collection, site Z Z Z	2 asic forensic e inspection, 2 2 1
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis	KZ nsic legislation, bances collection, site Z Z Z KZ	2 asic forensic inspection, 2 2 1 2
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3	KZ nsic legislation, bances collection, site Z Z Z KZ	2 asic forensic inspection, 2 2 1 2
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests even vehicle passangers, pedestrian, traffic accident simulation and analysis.	KZ nsic legislation, baces collection, site Z Z Z KZ aluation, single-tra	2 asic forensic e inspection, 2 2 1 2 ack vehicle,
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evidence passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design	KZ nsic legislation, baces collection, site Z Z Z KZ aluation, single-tra	2 asic forensic e inspection, 2 2 1 2 ack vehicle,
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transpo	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests even vehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user	KZ nsic legislation, baces collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle	2 asic forensic e inspection, 2 2 1 2 ack vehicle, 2 dynamics.
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transpo	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evidence passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design	KZ nsic legislation, baces collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle	2 asic forensic e inspection, 2 2 1 2 ack vehicle, 2 dynamics.
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transpo	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests even vehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user	KZ nsic legislation, baces collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle	2 asic forensic e inspection, 2 2 1 2 ack vehicle, 2 dynamics.
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transpor	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evvehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techni	KZ nsic legislation, barces collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects external sites and sites as KZ	2 asic forensic e inspection, 2 2 1 2 ck vehicle, 2 dynamics. etc. 2
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, a	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evvehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in e	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects e KZ mergency situatio	2 asic forensic e inspection, 2 2 1 2 ck vehicle, 2 dynamics. etc. 2 ns.
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, a 23DPBD	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests even vehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in elements.	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situatio KZ	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. etc. 2 ns.
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, a 23DPBD 23KRIO	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evvehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in eight of the property of th	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situatio KZ KZ	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. etc. 2 ns. 14 3
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, a 23DPBD 23KRIO	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evvehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in elements.	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situatio KZ KZ	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. etc. 2 ns. 14 3
22TZN Historical evolution acts, expert role in 22XN1 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport propulsion 23BDP Passive, a 23DPBD 23KRIO Human system. A	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evvehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in eight of the property of th	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, dema	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. actc. 2 ns. 14 3 nds, roles,
22TZN Historical evolution acts, expert role in 22XN1 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport propulsion 23BDP Passive, a 23DPBD 23KRIO Human system. A	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evivenicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in explored in the properties of the properties of the properties of the properties. Crisis management for Engineering Branches Assets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, dema	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. actc. 2 ns. 14 3 nds, roles,
22TZN Historical evolution acts, expert role in 22XN1 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport propulsion 23BDP Passive, at 23DPBD 23KRIO Human system, A principles, specifics	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests ev vehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in either process. Safety management for Engineering Branches assets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis managements and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS role and critical infrastructure. Problem solving.	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, demai. Planning. Protect	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, a 23DPBD 23KRIO Human system. A principles, specifications	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evidence passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in eight and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in eight and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS role, and critical infrastructure. Problem solving. Risk Analysis and Management	KZ nsic legislation, bances collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, demail. Planning. Protect	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public
22TZN Historical evolution acts, expert role in 22XN1 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. A principles, specifics 23MAR Concept of risks at	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests even vehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in exploration of the properties of the proper	KZ nsic legislation, bances collection, situation Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engineer	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public
22TZN Historical evolution acts, expert role in 22XN1 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. A principles, specifics 23MAR Concept of risks at	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evident forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design retation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in ending and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in ending and critical infrastructure. Problem solving. Crisis Management for Engineering Branches assets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS role. and critical infrastructure. Problem solving. Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management of reprince process.	KZ nsic legislation, bances collection, situation Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engineer	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. Aprinciples, specification and good engined	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evenicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design retation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user asystems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, technology and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in expire and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in expire and consequences of disasters. Safety management. Crisis managements and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS role, and currical infrastructure. Problem solving. Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management development. Territorial, emergency and crisis planning. Human factor - its role.	KZ nsic legislation, bances collection, situation, single-tra Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects extended to the collection of the collection	2 asic forensic e inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public 3 aring targets ecurity and
22TZN Historical evolution acts, expert role in 22XN1 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. A principles, specifics 23MAR Concept of risks at	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evident forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design retation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in ending and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in ending and critical infrastructure. Problem solving. Crisis Management for Engineering Branches assets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS role. and critical infrastructure. Problem solving. Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management of reprince process.	KZ nsic legislation, bances collection, situation Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engineer	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. Aprinciples, specification and good engined	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evenicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design retation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user asystems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, technology and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in expire and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in expire and consequences of disasters. Safety management. Crisis managements and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS role, and currical infrastructure. Problem solving. Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management development. Territorial, emergency and crisis planning. Human factor - its role.	KZ nsic legislation, bances collection, situation, single-tra Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engined ich for benefit of situation situ	2 asic forensic e inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public 3 aring targets ecurity and
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. Aprinciples, specification and good engined	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance sytems. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Injury biomechanics and restraint systems. Vehicle-human interaction in eight process. Safety aspects of vehicle BD) Crisis	KZ nsic legislation, bances collection, situation, single-tra Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engined ich for benefit of situation situ	2 asic forensic e inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public 3 aring targets ecurity and
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. Aprinciples, specification and good engined and good engined 23PDY Theory of vehicles	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests evehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design ortation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user in systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in eightomatic programment of the programment of	KZ nsic legislation, barces collection, site Z Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situatio KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engined of site of the penefit of site of the control, tra Z r-traffic control, tra	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public 3 aring targets ecurity and
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transporation of t	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests even vehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design retation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user a systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in experimental management aims. Causes and consequences of disasters. Safety management. Crisis management and critical infrastructure. Problem solving. Crisis Management for Engineering Branches assets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management and critical infrastructure. Problem solving. Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management of retring practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system approadevelopment. Territorial, emergency and crisis planning. Human factor - its role	KZ nsic legislation, bances collection, situation, single-tra Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ ent-its aims, dema . Planning. Protect Z,ZK risks. Risk engined ich for benefit of situation situation situation ich for benefit of situation situat	2 asic forensic inspection, 2 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public 3 aring targets ecurity and 2 ain testing 3
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. Aprinciples, specification and good engineer 23PDY Theory of vehicle 23TDM Basic division and	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests ev vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user n systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in e Diploma Thesis (for the Field BD) Crisis Management for Engineering Branches as and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The I2S role, and critical infrastructure. Problem solving. Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management of reing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system approa development. Territorial, emergency and crisis planning. Human factor - its role. Practical Vehicle Dynamics a dynamics.Practical demonstrations of transportation vehicle	KZ nsic legislation, bances collection, situation, single-tra Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engined ich for benefit of size Z,ZK craffic control, tra Z,ZK conal fluid flow. Sta	2 asic forensic inspection, 2 2 1 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public 3 aring targets accurity and 2 ain testing 3 ationary flow
22TZN Historical evolution acts, expert role in 22XN1 22XN2 22XN3 22Y2PS Vehicle dynamics 23BAND Design of transport Propulsion 23BDP Passive, at 23DPBD 23KRIO Human system. Aprinciples, specification and good engineer 23PDY Theory of vehicle 23TDM Basic division and	Basic definitions, types of source materials, methods of analysis, influence of road, factors of accidents, vehicle faults etc. Technical Expertise of sworn forensic engineering, forensic activity, current legislature in the Czech Republic, different disciplines, notion of forensic, fore the obtaining proofs, forensic methodology. Notion of the evidence, general principles of evidence obtaining, metrology, protocol, evider forensic report, elements. Finding, expert testimony / report. Appraisal and its role in the forensic. Master Project 1 Master Project 2 Master Project 3 Traffic Accidents Computer Simulation and Analysis simulation, multi body systems and vehicle active safety systems, vehicle slipping, external influence on virtual model, crash tests even vehicle passangers, pedestrian, traffic accident simulation and analysis. Safety aspects of vehicle design retation vehicle according to its usage and function, concerning the safety aspects beginning the design concept. Marketing and user a systems. Design process, functional design and vehicle structure. Evaluation of variant concepts. Design phases. Realiability, techn Vehicles Safety active and integrated safety. Safety and assistance systems. Injury biomechanics and restraint systems. Vehicle-human interaction in experimental management aims. Causes and consequences of disasters. Safety management. Crisis management and critical infrastructure. Problem solving. Crisis Management for Engineering Branches assets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management and critical infrastructure. Problem solving. Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management of retring practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system approadevelopment. Territorial, emergency and crisis planning. Human factor - its role	KZ nsic legislation, bances collection, situation, single-tra Z Z KZ aluation, single-tra ZK demands. Vehicle ological aspects of KZ mergency situation KZ ent-its aims, dema Planning. Protect Z,ZK risks. Risk engined ich for benefit of size Z,ZK craffic control, tra Z,ZK conal fluid flow. Sta	2 asic forensic inspection, 2 2 1 2 1 2 ack vehicle, 2 dynamics. atc. 2 ns. 14 3 nds, roles, ion of public 3 aring targets accurity and 2 ain testing 3 ationary flow

23TP	Criminal Law in IT and Transportation	KZ	2
_	iminal law into legal order, conception of culpability and criminal delict, consequency of other legal standards, international treaty and		
	crime, specific indicia of criminal court cases, practical examples.	,	J
23TPT	Creation of Legal and Technical Regulations	ZK	3
Creation of legis	slation, structure of the bills of law, legal process, compatibility with the EC law, the creation of technical standards and their publication	on, ÚNMZ (Czech	Office for
	standards, metrology and testing) in Czech Republic, organizations CEN, CENELEC and ETSI, the notification process.		
23XN1	Master Project 1	Z	2
23XN2	Master Project 2	Z	2
23XN3	Master Project 3	Z	1
23Y2AE	Acoustics and Electroacoustics in Transportation	KZ	2
Basic acoustic qua	ntities, properties of acoustic signals. Basic equations in acoustics, method of equivalent circuits. Acoustic impedance, damping. Aco	ustic actuators, Ic	oudspeakers
Acoustic sensors, r	nicrophones. Fundamentals of acoustic signal processing. Acoustics of closed spaces. Fundamentals of acoustics in solids. Acoustic i	problems in transp	port and their
	solutions.		
23Y2NE	Design of Electronic Equipments	KZ	2
Characteristics and	d realization of semiconductor electronic components, basic electronic devices division. Sources, input and output elements, process	elements. Realiza	ation of basic
circuits - ampli	fiers, data converters. Analog electronic systems, analog computing. Switching elements, logic circuits, FPGA implementation. Single	chip microcompu	uters and
	microcontrollers. Design (ORCAD), construction of electronic devices.		
23Y2NS	Nonlinear Systems	KZ	2
Model developme	nt and parameter identification of nonlinear, time-varying and periodic systems. Analyses of continuous and discrete non-linear syste	ms. Solution pres	entations of
several non-linear	models and non-linear differential equations using the MATLAB software. Linearization, stability of nonlinear systems, stability and ir	stability theorems	s. Nonlinear
	phenomena -multiple equilibria, limit cycles, bifurcations, chaos.		
23Y2VS	Negotiation and Cooperation	KZ	2
Negotiation princip	les. Negotiation sense, base, essence. Business and crisis negotiation differences. The "Win-Win" principle. Specification. Credibility. N	legotiation behavi	or principles
	Negotiation and command. Team variability. Formal and informal team roles.		
23Y2VZ	Leadership and Human Resource Development	KZ	2
Introduction to the	study of human resources, human resources management, corporate goals, strategies, cultural and ethical aspects. Team managem	ent, communicati	on in teams,
	strategy and planning in human resources, ethics and corporate culture, cross-cultural differences. The labor code. Introduction into		
23Y2ZP	Basis of Communication for Practice	KZ	2
Course is oriented	to the communication in pair, as well as in a small team. Also on personality - human, which through the own experiences and feet b	ack recognise it's	s strong and
	y and theats affect the results of communication. Offer the base of personal SWOT analyse and aplications, with respectation principl		
	focused on enviroment, in which the communication is on.		
23ZP	Basics of Law	ZK	4
Basic orientation i	n the Czech legal system. The course is primarily intended to provide students with orientation in fundamentals of the Czech Republic	c' legal system ar	nd in various
forms of law, inc	luding adoption of the basic principles of European Community law. The course consists of selected chapters from the public and priv	vate law and Euro	pean law.

For updated information see http://bilakniha.cvut.cz/en/FF.html Generated: day 2024-03-29, time 09:53.