Study plan

Name of study plan: KOMBI navaz. mag. studium v 18-19 obor LA

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 combined

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: 103

The role of the block: Z

Code of the group: 1S K LA 18-19 P

Name of the group: 1.sem.navaz.mag. KOMBI obor LA 18-19 povinné p edm ty Requirement credits in the group: In this group you have to gain 28 credits Requirement courses in the group: In this group you have to complete 9 courses

Credits in the group: 28

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
611TER	Game Theory and Optimal Decision-Making Magdalena Hykšová Magdalena Hykšová (Gar.)	ZK	2	2P+0C+8B	Z	Z
617RLOG	Supply Chains Management	Z,ZK	5	12B	Z	Z
617RZO	Management of Inventory and Renewal, Schedules in Logistics	Z,ZK	4	10B	Z	Z
617TZDK	Technology of Railway Transport	Z,ZK	6	12B	Z	Z
611LP2	Linear Programming 2	KZ	3	10B	Z	Z
614PPRP	Computer Aided Project Management	KZ	2	0P+2C+8B	Z	Z
617TRI	Creation and Control of Investment Projects	KZ	2	6B	Z	Z
617TSI	Technology of Road Transport Michal Drábek Michal Drábek (Gar.)	KZ	2	2P+0C+8B	Z	Z
615J2A1	Language - English 1 V ra Pastorková	Z	2	0P+2C+10B	Z	Z

Characteristics of the courses of this group of Study Plan: Code=1S K LA 18-19 P Name=1.sem.navaz.mag. KOMBI obor LA 18-19 povinné p edm ty

permitte permitte			
611TER	Game Theory and Optimal Decision-Making	ZK	2
Decision-making theor	, utility theory. Explicit form games, backward induction. Normal form games. Antagonistic conflict, matrix games. Repeated of	games, evolutiona	ry game theory.
Cooperative games wit	hout transferable payoffs. Cooperative games with transferable payoffs (imputation, core, Shapley value, nucleolus). Applicati	ons of game theor	ry above all in
economics and transpo	rtation.		
617RLOG	Supply Chains Management	Z,ZK	5
Logistics chain. Logistic	s system. Horizontal and vertical dimensions of logistics integration. Types of logistics chain. Logistics chain with continual flu	ows, with interrupt	ed flows, with
synchronous flows. Ma	nagement based on planning in closed circle with information feedback. Possible position of decoupling point in a logistics ch	ain. Chain effects.	Case studies.
617RZO	Management of Inventory and Renewal, Schedules in Logistics	Z,ZK	4
The course is focused of	n optimizing inventory management, maintenance and equipment renewal. In addition to classification models, inventory and i	renovation, studen	ts will be familia
with the basic details of	deterministic and stochastic inventory models and renewal. In the second part, attention will be paid to the models of theory	schedules as mod	els of Job-Shop
Flow-Shop, Open-Shop	and methods of schedules optimization.		
617TZDK	Technology of Railway Transport	Z,ZK	6
Track line capacity ass	sment, model operational situation with a system running time between IPT-nodes, calculation of traction energy savings co	mpared with infras	structure costs
for designing of fleeting	crossing station, solving of capacity problem and blocking time in relation to train protection system, robustness of timetable	, system concept	of freight train
paths, guidelines for ce	ntralised operational traffic control and management.		
611LP2	Linear Programming 2	KZ	3

Task formulation and its solution in Excel. Integer linear programming, binary linear programming. Mixed linear programming, practical examples (transportation problem, epidemy of infectious disease, problem of order, problem of service).

614PPRP	Computer Aided Project Management	KZ	2				
The subject is conceived as a project at which students learn to work with all means needed for precise project management - from goals determining to time schedule, sensitivity							
analysis, project comple	etion check, and final project evaluation including work with supportive SW for personal computers.						
617TRI	Creation and Control of Investment Projects	KZ	2				
Technical-economic dat	Technical-economic data processing of investment porioject, design of logistics systems, methodology of technological and logistic centres design proposal, value engineering.						
617TSI	Technology of Road Transport	KZ	2				
Legislative, operational, technical, logistic and safety conditions of road transport, basic transport technologies, special transport, international agreements, requirements on the parameters and specialization of transport, handling and loading/unloading means, maintenance, service and repairs of road vehicles, safety of road transport and choice of optimal transport unit.							
615J2A1	Language - English 1	Z	2				
Grammatical Structures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills, feedback skills, summarising							
technical text content, s	tructuring presentations and meeting minutes, elementary rhetorics of English and practical application, formal and technica	I registers and the	ir use, language				
of management.							

Code of the group: 2S K LA 18-19 P

Name of the group: 2.sem.navaz.mag. KOMBI obor LA 18-19 povinné p edm ty

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 7 courses

Credits in the group: 22

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
611THRO	Queuing Theory Šárka Vorá ová Šárka Vorá ová (Gar.)	ZK	2	2P+0C+8E	B L	Z
617KMD	Quantitative Methods in Transport	Z,ZK	6	2P+2C+14E	B L	Z
617MGD	Management of Transport Systems	Z,ZK	3	2P+1C+8E	L	Z
617MID	Managerial Information Systems in Transport Václav Baroch Václav Baroch (Gar.)	Z,ZK	3	2P+1C+10E	L	Z
623MAR	Risk Analysis and Management	Z,ZK	3	2P+1C+10E	B L	Z
614MTKS	Telecommunications Systems Management	KZ	3	2P+1C+10E	L L	Z
615JBA2	Language - English 2 V ra Pastorková	Z	2	0P+2C+10E	B L	Z

Characteristics of the courses of this group of Study Plan: Code=2S K LA 18-19 P Name=2.sem.navaz.mag. KOMBI obor LA 18-19

611THRO	Queuing Theory	ZK	2
Discrete event prod	tess, definition, random distribution, and probability. Basic processes, process of revitalisation. Markov process, Markov models,	Kendall classification	n, model M/M/1
models M/M/n. Nor	n-markovian models, model M/C/n, models G/G/n. Models with continuous flow. Service net, examples of Petri net. Computer si	mulation.	
617KMD	Quantitative Methods in Transport	Z,ZK	6
The course focuses	s on the issue of the use of directed graphs in transport and logistics systems, undirected graphs tree type, planar graphs and t	heir coloring. Furthe	r distribution
roblems, covering	and location tasks are formulated and solved such as models of integer linear programming. Besides the use of exact methods	there are described	simple and als
nore sofisticated h	euristics (metaheuristics) methods.		
617MGD	Management of Transport Systems	Z,ZK	3
unctions, process	es and systems of management in transport, organisational structures, strategy, social responsibility, soft skills.		
617MID	Managerial Information Systems in Transport	Z,ZK	3
T and their use in	building IS of modern transport company. New EU legislation on cyber security and data protection puts transport organizations	in front of new chal	lenges. The
course focuses on	the security of IS and possible sources of danger. The practical part deals with the process of building a new IS from the idea thi	ough the timetable a	and the financia
oudget, the basic d	locuments for the possible assignment of the contract.		
SOOMAD			
)とSIVIAR	Risk Analysis and Management	Z,ZK	3
	Risk Analysis and Management and terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme	1 ' 1	•
Concept of risks ar		nt of risks. Risk engi	neering target
Concept of risks ar and good engineer	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme	nt of risks. Risk engi	neering targets
Concept of risks ar and good engineer levelopment. Territ	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme ing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system ap	nt of risks. Risk engi	neering targets
Concept of risks ar and good engineer levelopment. Territ 614MTKS	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme ing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system ap orial, emergency and crisis planning. Human factor - its role.	nt of risks. Risk engi proach for benefit of	neering target security and
Concept of risks are and good engineer development. Territ S14MTKS Contemporary state	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme ing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system apportant, emergency and crisis planning. Human factor - its role. Telecommunications Systems Management	nt of risks. Risk engl proach for benefit of KZ f basic managerial p	neering target f security and 3 rinciples applie
Concept of risks ar and good engineer levelopment. Territ 614MTKS Contemporary state of provisioning of g	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme ing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system apportant, emergency and crisis planning. Human factor - its role. Telecommunications Systems Management us and future expectations in area of telecommunications networks and telecommunications services provisioning; introduction or	nt of risks. Risk engl proach for benefit of KZ f basic managerial p	neering target f security and 3 rinciples applie
Concept of risks ar and good engineer levelopment. Territ 614MTKS Contemporary state on provisioning of g of financial and hur	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme ing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system apportance orial, emergency and crisis planning. Human factor - its role. Telecommunications Systems Management us and future expectations in area of telecommunications networks and telecommunications services provisioning; introduction of uaranteed level of telecommunications services quality, redundant telecommunications networking concept, networks and services.	nt of risks. Risk engl proach for benefit of KZ f basic managerial p	neering targets security and 3 rinciples applie
Concept of risks are and good engineer development. Territ 614MTKS Contemporary state in provisioning of gof financial and hur 615JBA2	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme ing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system apportunity or an application of strategic and system apportunity, emergency and crisis planning. Human factor - its role. Telecommunications Systems Management us and future expectations in area of telecommunications networks and telecommunications services provisioning; introduction of uaranteed level of telecommunications services quality, redundant telecommunications networking concept, networks and services management in telecommunications services provisioning.	nt of risks. Risk enging proach for benefit of KZ f basic managerial pices management to KZ	neering target f security and 3 rinciples applie ols and position
and good engineer development. Territ 614MTKS Contemporary state in provisioning of gof financial and hur 615JBA2 Grammatical Struc	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and manageme ing practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system apportance of the property of the	nt of risks. Risk enging proach for benefit of KZ f basic managerial pices management to Z skills, feedback skills	neering targer is security and 3 rinciples applie ols and position 2 s, summarising

Code of the group: 3S K LA 19-20 P

Name of the group: 3.sem.navaz.mag. KOMBI obor LA 19-20 povinné p edm ty Requirement credits in the group: In this group you have to gain 25 credits Requirement courses in the group: In this group you have to complete 7 courses Credits in the group: 25 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
611DOPM	Transportation Planning and Modeling	Z,ZK	6	2P+2C+14E	B Z	Z
611STS	Stochastic Systems Pavla Pecherková Evženie Uglickich (Gar.)	Z,ZK	4	2P+2C+14E	B Z	Z
617HDI	Evaluation of Transport Investments	Z,ZK	5	2P+2C+14E	B Z	Z
617PPC	Carriage Processes Roman St rba Roman St rba (Gar.)	ZK	3	2P+0C+10E	B Z	Z
614NDB	Databases Design and Programming	KZ	2	0P+2C+8E	B Z	Z
623KRIO	Crisis Management for Engineering Branches	KZ	3	2P+0C+10E	B Z	Z
615JBA3	Language - English 3 V ra Pastorková	Z	2	0P+2C+10E	3 Z	Z

Characteristics of the courses of this group of Study Plan: Code=3S K LA 19-20 P Name=3.sem.navaz.mag, KOMBI obor LA 19-20

611DOPM	Transportation Planning and Modeling	Z,ZK	6
Basic steps and too	ls used within four step model (trip generation, trip distribution, mode choice and trip distribution). Mobility and availability in urb	an areas, land use	New trends for
transportation plani	ning and modelling.		
611STS	Stochastic Systems	Z,ZK	4
The subject deals v	rith the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction	n. The results are ill	ustrated on
oractical transporta	tion tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian pro	babilistic approach	
617HDI	Evaluation of Transport Investments	Z,ZK	5
ransport and its ro	le in national economy, costs of transport companies, transport and environment, externalities and their solution, investments in	transport and their	evaluation, th
nultiplier effects of	transport; evaluation of transport investments by CBA.		
617PPC	Carriage Processes	ZK	3
Domestic carriages	, international carriages, nomenclature of goods, pricing, contracting, responsibility for damages.		
614NDB	Databases Design and Programming	KZ	2
	Databases Design and Programming at types, constraints, SQL statements for data definition, data manipulation, transaction management, connection managemer		_
Database design, d		nt and system admi	_
Database design, d single-row, aggrega	ata types, constraints, SQL statements for data definition, data manipulation, transaction management, connection managemer	nt and system admi	_
Database design, d single-row, aggrega 523KRIO	ata types, constraints, SQL statements for data definition, data manipulation, transaction management, connection managemer tion and SQL analytic functions. PL / SQL - variables, loops, conditions, procedures, functions, triggers, packages, cursors, exc	nt and system admi eptions.	nistration,
Database design, d single-row, aggrega 623KRIO Human system. Ass	ata types, constraints, SQL statements for data definition, data manipulation, transaction management, connection management tion and SQL analytic functions. PL / SQL - variables, loops, conditions, procedures, functions, triggers, packages, cursors, excellent to the square of the	nt and system admi eptions. KZ ement-its aims, den	nistration, 3 nands, roles,
Database design, d single-row, aggrega 523KRIO Human system. Ass principles, specifics	ata types, constraints, SQL statements for data definition, data manipulation, transaction management, connection management tion and SQL analytic functions. PL / SQL - variables, loops, conditions, procedures, functions, triggers, packages, cursors, exceed Crisis Management for Engineering Branches sets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis managements.	nt and system admi eptions. KZ ement-its aims, den	nistration, 3 nands, roles,
Database design, d single-row, aggrega 523KRIO Human system. Assorinciples, specifics and critical infrastru	ata types, constraints, SQL statements for data definition, data manipulation, transaction management, connection management tion and SQL analytic functions. PL / SQL - variables, loops, conditions, procedures, functions, triggers, packages, cursors, exceed Crisis Management for Engineering Branches sets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS	nt and system admi eptions. KZ ement-its aims, den	nistration, 3 nands, roles,
Database design, disingle-row, aggrega 623KRIO Human system. Assorinciples, specifics and critical infrastru 615JBA3	ata types, constraints, SQL statements for data definition, data manipulation, transaction management, connection management tion and SQL analytic functions. PL / SQL - variables, loops, conditions, procedures, functions, triggers, packages, cursors, exceeding the Crisis Management for Engineering Branches sets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS octure. Problem solving.	nt and system admi eptions. KZ ement-its aims, den 6 role. Planning. Pro	3 nands, roles, tection of pub
single-row, aggrega 623KRIO Human system. Assorinciples, specifics and critical infrastru 615JBA3 Grammatical struct	ata types, constraints, SQL statements for data definition, data manipulation, transaction management, connection management tion and SQL analytic functions. PL / SQL - variables, loops, conditions, procedures, functions, triggers, packages, cursors, exceed Crisis Management for Engineering Branches sets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis management comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS octure. Problem solving. Language - English 3	nt and system admi eptions. KZ ement-its aims, dem 6 role. Planning. Pro	3 nands, roles, tection of pub

Code of the group: 4S K LA 19-20 P

Name of the group: 4.sem.navaz.mag. KOMBI obor LA 19-20 povinný p edm t

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

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

Credits in the group: 2 Note on the group:

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
615JBA4	Language - English 4 V ra Pastorková	ZK	2	0P+2C+10B	L	Z

Characteristics of the courses of this group of Study Plan: Code=4S K LA 19-20 P Name=4.sem.navaz.mag. KOMBI obor LA 19-20 povinný p edm t

615JBA4 Language - English 4 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 English and practical application, formal and technical registers and their use, language of management.

Code of the group: DP NAV K LA 19-20

Name of the group: Diplomová práce nav.komb.LA (od) 19/20

Requirement credits in the group: In this group you have to gain 18 credits Requirement courses in the group: In this group you have to complete 1 course Credits in the group: 18 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
611XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
612XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
614XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
615XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
616XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
623XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
618XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
620XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
621XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
622XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z
617XNDP	Master Thesis	KZ	18	0P+20C+70B	L	Z

Characteristics of the courses of this group of Study Plan: Code=DP NAV K LA 19-20 Name=Diplomová práce nav.komb.LA (od) 19/20

	The state of the s		
611XNDP	Master Thesis	KZ	18
612XNDP	Master Thesis	KZ	18
614XNDP	Master Thesis	KZ	18
615XNDP	Master Thesis	KZ	18
616XNDP	Master Thesis	KZ	18
623XNDP	Master Thesis	KZ	18
618XNDP	Master Thesis	KZ	18
620XNDP	Master Thesis	KZ	18
621XNDP	Master Thesis	KZ	18
622XNDP	Master Thesis	KZ	18
617XNDP	Master Thesis	KZ	18

Code of the group: SDP NAV K LA 19-20

Name of the group: Seminá k diplomové práci nav.komb.LA (od) 19/20 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 1 course

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
611XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
612XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
614XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
615XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
616XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
623XN4K	Seminar for Diploma Thesis"	Z	8	8B	L	Z
618XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
620XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
621XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
622XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z
617XN4K	Seminar for Diploma Thesis	Z	8	8B	L	Z

Characteristics of the courses of this group of Study Plan: Code=SDP NAV K LA 19-20 Name=Seminá k diplomové práci nav.komb.LA (od) 19/20

611XN4K	Seminar for Diploma Thesis	Z	8
612XN4K	Seminar for Diploma Thesis	Z	8
614XN4K	Seminar for Diploma Thesis	Z	8
615XN4K	Seminar for Diploma Thesis	Z	8

616XN4K	Seminar for Diploma Thesis	Z	8
623XN4K	Seminar for Diploma Thesis"	Z	8
618XN4K	Seminar for Diploma Thesis	Z	8
620XN4K	Seminar for Diploma Thesis	Z	8
621XN4K	Seminar for Diploma Thesis	Z	8
622XN4K	Seminar for Diploma Thesis	Z	8
617XN4K	Seminar for Diploma Thesis	Z	8

Name of the block: Compulsory elective courses

Minimal number of credits of the block: 9

The role of the block: PV

Code of the group: PVP NAV K LA 18-19 Name of the group: PVP nav.komb.LA 18/19

Requirement credits in the group: In this group you have to gain 9 credits

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

Credits in the group: 9 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
617W2AM	Application of Marketing Tools in Transportation	KZ	3	8B	L	PV
617W2FM	Financing in Urban Mass Transportation	KZ	3	8B	Z	PV
615W2HS	Road Transport History	KZ	3	8B	L	PV
617W2KI	Capital Investment in Transportation and Telecommunications	KZ	3	8	L	PV
614W2KI	Capital Investment in Transportation and Telecommunications	KZ	3	8B	L	PV
621W2LS	Air Traffic Services	KZ	3	8B	L	PV
615W2MS	Sociology for Managers	KZ	3	8B	Z	PV
621W2MK	Marketing of Air Transport	KZ	3	8	L	PV
621W2MS	Aerospace Engineering Simulation and Modelling	KZ	3	8B	Z	PV
615W2OZ	Health Protection in Transportation and EU Petr Musil	KZ	3	8B	Z	PV
616W2PG	Computer Graphics and Virtual Reality	KZ	3	8	Z	PV
615W2PT	Food in Transportation Petr Musil	KZ	3	8B	L	PV
621W2PP	Law and Operation in Air Transport	KZ	3	8B	L	PV
621W2PL	Operational Aspects of Aerodromes	KZ	3	8B	Z	PV
617W2PS	Case Studies in Transportation	KZ	3	8B	Z	PV
617W2RZ	Control of Transport Processes	KZ	3	8B	Z	PV
615W2SR	Stylistics and Rhetorics	KZ	3	8B	Z	PV
617W2SK	Urban and Regional Rail Transit Systems	KZ	3	8B	L	PV
615W2TS	Technician and Contemporary Society	KZ	3	8B	L	PV
621W2TL	Development Trends of Aircraft Construction	KZ	3	8	Z	PV
621W2VA	Selected Parts of Aerodynamics	KZ	3	8	Z	PV

Characteristics of the courses of this group of Study Plan: Code=PVP NAV K LA 18-19 Name=PVP nav.komb.LA 18/19

617W2AM	Application of Marketing Tools in Transportation	KZ	3			
Application of marketing	ng principles in transport issues, marketing tools suitable for transport, case studies of the use of marketing in the sphere of pu	ublic passenger tr	ansport.			
617W2FM	Financing in Urban Mass Transportation	KZ	3			
UMT history and deve	UMT history and development in Prague and other cities in the world. Building and operation of public tram, bus, and trolleybus networks. Underground building and operation. Other					
UMT types. UMT deve	lopment in small towns. Particularities of investment and operation financing of individual UMT types. Historic and present mo	dels of UMT finan	cing. Transport			
inspection and blind p	assengers. Tourism & UMT. UMT typology & choice of optimum financing.					
615W2HS	Road Transport History	KZ	3			
Roads and road traffic	in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of ro	ad transport deve	lopment during			
1st part of 20th centur	y. Development of road layout, geometric and construction layers. Beginning of modern road civil engineering. Development of	f road travelling in	modern period.			
History of road interce	ctions, bridges and traffic control, development of road signs.					
617W2KI	Capital Investment in Transportation and Telecommunications	KZ	3			
Financial market, inve	stment desicion making - long term goals and investment strategies, long temr financing.	•	•			
614W2KI	Capital Investment in Transportation and Telecommunications	KZ	3			
Financial market, inve	stment desicion making - long term goals and investment strategies, long term financing	1	1			

621W2LS	Air Traffic Services	KZ	3
	n Czech Republic and other countries. Introduction and description of ATS units in Czech Republic. Practical examples of TWR,		_
	cidents caused or partially caused by ATS. History of ATS and Czech airspace.		
615W2MS	Sociology for Managers	KZ	3
	ch to a corporation. Corporation and its organization. Corporation and its running - human role and communication. Corporation,		
	on in free market economy. Corporate directorship, work groups, adaptation, strife, different roles and positions in corporation.		
621W2MK	Marketing of Air Transport	KZ	3
	evolution, stages and types of marketing. Marketing in air transportation. Marketing research. Market segmentation. Airlines mar	l .	_
	and revenues. Air transport market sales.	g oa.og.oo.	,
S21W2MS	Aerospace Engineering Simulation and Modelling	KZ	3
	ned as a set of exemplary tasks and problems based on practical aviation issues. The university degree mathematic skills and so		
_	ssful figuring out. Both simple tasks, where students create own model themselves (e.g. in Matlab), and more complicated proble		-
ools will be applied.			
315W2OZ	Health Protection in Transportation and EU	KZ	3
	transportation in CR in the past and present. Conditions before 1989 and after, current legislature, future prospects. Harmonisat		_
•	ntal principles of health protection and support in selected EU countries.	ion or regionation	56. 25
16W2PG	Computer Graphics and Virtual Reality	KZ	3
	n and processing of bitmap and vector 2D graphics, 3D virtual scenes and algorithms used for their computerized processing. Adop		_
•	or creation and processing of 2D, 3D and interactive graphics, and basics of programming language VRML and graphic libraries	-	With profession
15W2PT	Food in Transportation	KZ	3
	Interaction transportation and foodstuffs. The health risks. Hygienic safeguard. The practical examples from the Czech Republic		
	ins and other railroad equipment. Legislation.	and nom the wor	iu. The issues
_		V7	
21W2PP	Law and Operation in Air Transport tion law. International conventions on civil aviation. International organisations and including of the Czech Republic in these organisations.	KZ	3
		•	
	of state administration and state supervision in matters of civil aviation, in accordance with Act No. 49/1997 Col. Facilitation. Resp e and cargo. The safe transport of dangerous goods.	porisibilities of all	carriers ior
0 000		1/7	
21W2PL	Operational Aspects of Aerodromes	KZ	3
	of aerodromes. Location of aerodrome and orientation of runways. Requirements for apron. Capacity of airports runways and te	rminais. Operatio	in under winter
	ng units. Protection against unlawful interference. Local transport connection. Environmental protection.	1/7	
17W2PS	Case Studies in Transportation	KZ	3
· ·	scussions on the topics - the impact of transport on the environment and the economy, energy, construction of transport infrastru		
-	e current and the real issue, which solutions will have to think of each other. Each of them will be represent another role (public	authornies, inves	iors, carrier
-	est groups, residents, etc.).	1/7	
17W2RZ	Control of Transport Processes	KZ	3
	ransport system, decomposition, factors influencing control, quality diagnosis, methods of control, systems for decision making s	support, risk of de	cision making,
elematics.		147	
15W2SR	Stylistics and Rhetorics	KZ .	3
	nd written expression as a means of human communication. Basic information about speech, articulation, oral and written langu-	-	
	g. Language semantics, language syntactic and the pragmatic aspect. Creative thought and its oral and written expression. Practic		
17W2SK	Urban and Regional Rail Transit Systems	KZ	3
_	ransport demand, modal-split, traffic flows distribution on public transit network. Line network optimization and configuration. Tim	netable designing	
			a and professor
	$periodic\ time table.\ Rolling\ stock\ circulation,\ staff\ and\ crew\ services\ optimization\ and\ their\ order\ to\ rosters.\ Framework\ legislation,$	non-barrier effect	s and preferen
	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, Marketing.		s and preferen
f public transport. N 15W2TS	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, Marketing. Technician and Contemporary Society	KZ	3
f public transport. No. 15W2TS	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, Marketing.	KZ	3
f public transport. N 15W2TS /hy to take off a had	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, Marketing. Technician and Contemporary Society	KZ	3
f public transport. No 15W2TS Why to take off a har Internet and in news	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, Marketing. Technician and Contemporary Society Technician 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 turn or the state of the	KZ	3
of public transport. Note 15W2TS Why to take off a harmoner and in newsers S21W2TL	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, Marketing. Technician and Contemporary Society Technician and contemporary society	KZ n a PC, it must be	3 true - it's on th
of public transport. Note 15W2TS Why to take off a harmoner and in newsers S21W2TL	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, flarketing. Technician and Contemporary Society	KZ n a PC, it must be KZ	3 true - it's on th
f public transport. Model 15W2TS Why to take off a had a ternet and in news 121W2TL listorical and nowad 121W2VA	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, flarketing. Technician and Contemporary Society tin 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 spapers, what are the sights for, interest in public affairs - a hangover from the past? Development Trends of Aircraft Construction	KZ n a PC, it must be KZ	3 e true - it's on t
of public transport. No. 15W2TS Why to take off a harmonic and in news 521W2TL distorical and noward 521W2VA Real gases physical	periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, flarketing. Technician and Contemporary Society	KZ n a PC, it must be KZ KZ ons, wings, airfoil	3 true - it's on the 3 cascades, lift,

Name of the block: Jazyky

Minimal number of credits of the block: 8

The role of the block: J

Code of the group: JZ-NAV K (1.-4.SEM)

Name of the group: Jazyky navaz.mag. KOMBI studia (1.- 4.sem.) obor LA

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
615J2F1	Language - French 1	7	2	0P+2C+10B	7	J

615J2I1	Language - Italian 1	Z	2	0P+2C+10B	Z	J
615J2N1	Language - German 1 René Skalický	Z	2	0P+2C+10B	Z	J
615J2R1	Language - Russian 1 Vilma Gottwaldová	Z	2	0P+2C+10B	Z	J
615J2S1	Language - Spanish 1	Z	2	0P+2C+10B	Z	J
615JBF2	Language - French 2	Z	2	0P+2C+10B	L	J
615JBI2	Language - Italian 2	Z	2	0P+2C+10B	L	J
615JBN2	Language - German 2 René Skalický, Sv tlana Petrová	Z	2	0P+2C+10B	L	J
615JBR2	Language - Russian 2 Vilma Gottwaldová, Marie Michlová	Z	2	0P+2C+10B	L	J
615JBS2	Language - Spanish 2	Z	2	0P+2C+10B	L	J
615JBF3	Language - French 3	Z	2	0P+2C+10B	Z	J
615JBI3	Language - Italian 3	Z	2	0P+2C+10B	Z	J
615JBN3	Language - German 3 René Skalický	Z	2	0P+2C+10B	Z	J
615JBR3	Language - Russian 3 Vilma Gottwaldová	Z	2	0P+2C+10B	Z	J
615JBS3	Language - Spanish 3	Z	2	0P+2C+10B	Z	J
615JBF4	Language - French 4	ZK	2	0P+2C+10B	L	J
615JBI4	Language - Italian 4	ZK	2	0P+2C+10B	L	J
615JBN4	Language - German 4 René Skalický, Sv tlana Petrová	ZK	2	0P+2C+10B	L	J
615JBR4	Language - Russian 4 Vilma Gottwaldová, Marie Michlová	ZK	2	0P+2C+10B	L	J
615JBS4	Language - Spanish 4	ZK	2	0P+2C+10B	L	J

615J2F1	Language - French 1	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	ls, summarising
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal ai	nd technical registe	rs and their use
language of manage	ment.		
615J2l1	Language - Italian 1	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	ls, summarising
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal a	nd technical registe	rs and their use
language of manage	ment.		
615J2N1	Language - German 1	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	İs, summarising
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal aı	nd technical registe	rs and their use
language of manage	ment.		
615J2R1	Language - Russian 1	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	ls, summarisinç
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal a	nd technical registe	rs and their use
language of manage	ment.		
615J2S1	Language - Spanish 1	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	s, summarising
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal ai	nd technical registe	rs and their use
language of manage	ment.		
615JBF2	Language - French 2	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	İs, summarising
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal a	nd technical registe	rs and their use
language of manage	ment.		
615JBI2	Language - Italian 2	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	ls, summarising
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal a	nd technical registe	rs and their use
language of manage	ment.		
615JBN2	Language - German 2	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	ls, summarising
technical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal aı	nd technical registe	rs and their use
language of manage	ment.		
615JBR2	Language - Russian 2	Z	2
Grammatical Structu	res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	skills, feedback skil	ls, summarisino
echnical text conten	t, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal ai	nd technical registe	rs and their use
language of manage	ment.		
			Î
615JBS2	Language - Spanish 2	Z	2
	Language - Spanish 2 res and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative	_	_
		skills, feedback skil	ls, summarising

language of management.

615JBF3	Language - French 3	Z	2
Frammar and stylistic	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language struc	ture knowledge
nd perceptive and co	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	ork with (profession	nal) text and its
atures. Practice of o	al and written presentation.		·
15JBI3	Language - Italian 3	Z	2
rammar and stylistic	. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language struc	ture knowledge
nd perceptive and co	nmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	ork with (professio	nal) text and its
atures. Practice of o	al and written presentation.		
15JBN3	Language - German 3	Z	2
rammar and stylistic	. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language struc	ture knowledg
id perceptive and co	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	ork with (professio	nal) text and it
atures. Practice of o	al and written presentation.		
15JBR3	Language - Russian 3	Z	2
rammar and stylistic	. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language struc	ture knowledg
d perceptive and co	nmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	ork with (professio	nal) text and it
atures. Practice of o	al and written presentation.		
15JBS3	Language - Spanish 3	Z	2
ammar and stylistic	. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language struc	ture knowledg
nd perceptive and co	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	ork with (professio	nal) text and it
	al and written presentation.	· · ·	.,
15JBF4	Language - French 4	ZK	2
rammar and stylistic	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language struc	ture knowledg
nd perceptive and co	nmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	ork with (professio	nal) text and it
atures. Practice of o	al and written presentation.		
1E IDIA	Language - Italian 4	ZK	
101014			2
	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	1	. –
rammar and stylistic	s. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	of language struc	ture knowledg
rammar and stylistic nd perceptive and co		of language struc	ture knowledg
rammar and stylistic ad perceptive and co atures. Practice of o	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	of language struc	ture knowledg
rammar and stylistic ad perceptive and co atures. Practice of o 15JBN4	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	of language structork with (profession	ture knowledg nal) text and it
rammar and stylistic nd perceptive and co atures. Practice of o 15JBN4 rammar and stylistic	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation. Language - German 4	of language structork with (profession	ture knowledg nal) text and it 2 ture knowledg
rammar and stylistic and perceptive and co atures. Practice of o 15JBN4 rammar and stylistic and perceptive and co	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo al and written presentation. Language - German 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language structork with (profession	ture knowledg nal) text and it 2 ture knowledg
rammar and stylistic and perceptive and contact atures. Practice of one of the stylistic and perceptive and contact atures. Practice of one of the stylistic at perceptive and contact atures. Practice of one of one of the stylistic at perceptive and contact atures.	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo al and written presentation. Language - German 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	of language structork with (profession	ture knowledg nal) text and it 2 ture knowledg
rammar and stylistic and perceptive and cocatures. Practice of on 15JBN4 rammar and stylistic and perceptive and cocatures. Practice of on 15JBR4	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo al and written presentation. Language - German 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo al and written presentation.	of language structork with (profession ZK of language structork with (profession ZK	rure knowledg nal) text and it 2 ture knowledg nal) text and it 2
rammar and stylistic and perceptive and cocatures. Practice of of 15JBN4 rammar and stylistic and perceptive and cocatures. Practice of of 15JBR4 rammar and stylistic and manager and stylistic at a stylistic and perceptive and cocatures.	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo al and written presentation. Language - German 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo al and written presentation. Language - Russian 4	of language structork with (profession ZK of language structork with (profession ZK of language structork with (profession ZK of language structork language structork	ture knowledg nal) text and it 2 ture knowledg nal) text and it
rammar and stylistic and perceptive and contactures. Practice of or 15JBN4 arammar and stylistic and perceptive and contactures. Practice of or 15JBR4 arammar and stylistic and perceptive and contactures.	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation. Language - German 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation. Language - Russian 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement	of language structork with (profession ZK of language structork with (profession ZK of language structork with (profession ZK of language structork language structork	ture knowledg nal) text and it 2 ture knowledg nal) text and it 2 ture knowledg
nd perceptive and contactures. Practice of of a 15JBN4 rammar and stylistic and perceptive and contactures. Practice of of a 15JBR4 rammar and stylistic and perceptive and contactures.	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation. Language - German 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation. Language - Russian 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation.	of language structork with (profession ZK of language structork with (profession ZK of language structork with (profession ZK of language structork language structork	ture knowledg nal) text and it 2 ture knowledg nal) text and it 2 ture knowledg
rammar and stylistic and perceptive and contact atures. Practice of one of the stylistic and perceptive and contact atures. Practice of one of the stylistic atures. Practice of one of the stylistic and perceptive and contact atures. Practice of one of the stylistic atures. Practice of one of the stylistic atures. Practice of one of the stylistic atures. Practice of one of the stylistic atures. Practice of one of the stylistic atures.	mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation. Language - German 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo all and written presentation. Language - Russian 4 Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement mmunicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Wo	of language structork with (profession of language structork with language str	ture knowledgenal) text and i 2 ture knowledgenal) text and i 2 ture knowledgenal) text and i

features. Practice of oral and written presentation.

Code	Name of the course	Completion	Credits
611DOPM	Transportation Planning and Modeling	Z,ZK	6
Basic steps and to	ols used within four step model (trip generation, trip distribution, mode choice and trip distribution). Mobility and availability in urban a transportation planning and modelling.	areas, land use. Ne	w trends for
611LP2	Linear Programming 2	KZ	3
Task formulation a	nd its solution in Excel. Integer linear programming, binary linear programming. Mixed linear programming, practical examples (trans infectious disease, problem of order, problem of service).	portation problem,	epidemy of
611STS	Stochastic Systems	Z,ZK	4
•	s with the problems of mathematical modelling of dynamical systems, estimation od these models and their utilization for prediction. Insportation tasks. Mathematical theory roots from probability and mathematical statistics and they use the methods of the Bayesian		
611TER	Game Theory and Optimal Decision-Making	ZK	2
Decision-making th	neory, utility theory. Explicit form games, backward induction. Normal form games. Antagonistic conflict, matrix games. Repeated gan	nes, evolutionary ga	ame theory
Cooperative game	es without transferable payoffs. Cooperative games with transferable payoffs (imputation, core, Shapley value, nucleolus). Application	s of game theory a	bove all in
	economics and transportation.		
611THRO	Queuing Theory	ZK	2
Discrete event prod	ress, definition, random distribution, and probability. Basic processes, process of revitalisation. Markov process, Markov models, Kend	all classification, m	odel M/M/1
mode	ls M/M/n. Non-markovian models, model M/C/n, models G/G/n. Models with continuous flow. Service net, examples of Petri net. Com	nputer simulation.	
611XN4K	Seminar for Diploma Thesis	Z	8
611XNDP	Master Thesis	KZ	18
612XN4K	Seminar for Diploma Thesis	Z	8
612XNDP	Master Thesis	K7	18

List of courses of this pass:

614MTKS	Telecommunications Systems Management	KZ	3
	us and future expectations in area of telecommunications networks and telecommunications services provisioning; introduction of basic uaranteed level of telecommunications services quality, redundant telecommunications networking concept, networks and services n	•	
in provisioning or go	of financial and human resources management in telecommunications services provisioning.	ianagement tools a	and position
614NDB	Databases Design and Programming	KZ	2
	n, data types, constraints, SQL statements for data definition, data manipulation, transaction management, connection management		
single	e-row, aggregation and SQL analytic functions. PL / SQL - variables, loops, conditions, procedures, functions, triggers, packages, cur-	sors, exceptions.	
614PPRP	Computer Aided Project Management	KZ	2
The subject is con	nceived as a project at which students learn to work with all means needed for precise project management - from goals determining		sensitivity
04.414/01/1	analysis, project completion check, and final project evaluation including work with supportive SW for personal computers		
614W2KI	Capital Investment in Transportation and Telecommunications	KZ	3
614XN4K	Financial market, investment desicion making - long term goals and investment strategies, long term financing Seminar for Diploma Thesis	Z	8
614XNDP	Master Thesis	KZ	18
615J2A1	Language - English 1	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills		_
	nt, structuring presentations and meeting minutes, elementary rhetorics of English and practical application, formal and technical required		- 1
	of management.		
615J2F1	Language - French 1	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills		- 1
technical text conte	ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tec language of management.	ennicai registers ar	na tneir use,
615J2I1	Language - Italian 1	Z	2
	tures 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 tec		- 1
	language of management.		
615J2N1	Language - German 1	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills		- 1
technical text conte	ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and ted language of management.	chnical registers ar	nd their use,
615J2R1	Language - Russian 1	Z	2
	tures 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 tec		
	language of management.		
615J2S1	Language - Spanish 1	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills		- 1
technical text conte	ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tecture language of management.	diffical registers at	id triell use,
615JBA2	Language - English 2	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills	feedback skills, su	ummarising
technical text conte	nt, structuring presentations and meeting minutes, elementary rhetorics of English and practical application, formal and technical required	gisters and their us	e, language
	of management.	_	
615JBA3	Language - English 3 tures and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills,	Z	2
	nties and style. Selection of conversation topics relating to transportation sciences, beveloping perceptive and communicative skills, ant, structuring presentations and meeting minutes, elementary rhetorics of English and practical application, formal and technical reg		١
	of management.	,.c.c.c and then de	o, iai iguago
615JBA4	Language - English 4	ZK	2
Grammatical struc	tures and style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills,	feedback skills, su	immarising
technical text conte	nt, structuring presentations and meeting minutes, elementary rhetorics of English and practical application, formal and technical reconstructions are supplied to the contract of the contrac	gisters and their us	e, language
C4E IDEO	of management.	7	
615JBF2	Language - French 2 tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills	Z feedback skills, su	ımmarising
	ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tec		٠ ا
	language of management.	J	
615JBF3	Language - French 3	Z	2
	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I		
and perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)	text and its
615JBF4	features. Practice of oral and written presentation.	ZK	2
	Language - French 4 stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I		!
· · · · · · · · · · · · · · · · · · ·	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work		- 1
	features. Practice of oral and written presentation.		
615JBI2	Language - Italian 2	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills		- 1
technical text conte	ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tection and tection and tection and tection and tection are also applicated as a second and the contract and the contract are also applicated as a second and the contract are also application.	chnical registers an	nd their use,
615JBI3	language of management.	Z	2
	Language - Italian 3 stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of I		' '
-	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work		- 1
	features. Practice of oral and written presentation.		

615JBI4	Language - Italian 4	ZK	2
•	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of la		•
nd perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)) text and it
	features. Practice of oral and written presentation.		
615JBN2	Language - German 2	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills,		
chnical text conte	nt, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tec language of management.		
615JBN3	Language - German 3	Z	2
	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of lad communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work		-
615JBN4	features. Practice of oral and written presentation.	ZK	2
	Language - German 4 stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of le		_
	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work of features. Practice of oral and written presentation.		_
615JBR2	Language - Russian 2	Z	2
	tures and Style. Selection of conversation topics relating to transportation sciences. Developing perceptive and communicative skills,		
onnical text conte	ent, structuring presentations and meeting minutes, elementary rhetorics of foreign language and practical application, formal and tec language of management.	nnicai registers a	na their us
615JBR3	Language - Russian 3	Z	2
•	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of lad communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work value features. Practice of oral and written presentation.		_
615JBR4	Language - Russian 4	ZK	2
	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of led communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work to the faculty of the professional and written presentation.		_
615JBS2	features. Practice of oral and written presentation. Language - Spanish 2	Z	2
	Language - Spanish 2 tures 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 tec- language of management.		
615JBS3	Language - Spanish 3	Z	2
-	stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of language level and study focus at the Faculty.		_
nd perceptive and	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work	with (professional)) text and i
045 ID04	features. Practice of oral and written presentation.	ZK	
615JBS4	Language - Spanish 4 stics. Selection of conversation and professional topics based on the language level and study focus at the Faculty. Improvement of le		2 knowledg
-	d communicative skills, vocabulary development. Basic stylistic forms. Presentation of own knowledge in oral and written form. Work v		_
	features. Practice of oral and written presentation.	(1 - 1 - 1 - 1)	,
615W2HS	Road Transport History	KZ	3
oads and road tra	affic in the Ancient Age, corridors of main mediveal pathways. Development of road traffic in the modern period, acceleration of road	transport develop	ment durin
st part of 20th cen	ntury. Development of road layout, geometric and construction layers. Beginning of modern road civil engineering. Development of road History of road intercections, bridges and traffic control, development of road signs.		dern perio
615W2MS	Sociology for Managers	KZ	3
	oach to a corporation. Corporation and its organization. Corporation and its running - human role and communication. Corporation, it		ial system
	uman's work position in free market economy. Corporate directorship, work groups, adaptation, strife, different roles and positions in		_
615W2OZ	Health Protection in Transportation and EU	KZ	3
nealth protection	in transportation in CR in the past and present. Conditions before 1989 and after, current legislature, future prospects. Harmonisation members. Fundamental principles of health protection and support in selected EU countries.	n or registation wit	n omer Ec
615W2PT	Food in Transportation	KZ	3
	I harrisportation. Interaction transportation and foodstuffs. The health risks. Hygienic safeguard. The practical examples from the Czech Republic and	1	1
, , ,	dining cars, work trains and other railroad equipment. Legislation.		
615W2SR	Stylistics and Rhetorics	KZ	3
	and written expression as a means of human communication. Basic information about speech, articulation, oral and written language	. Teaching to spea	ak well-voo
-	ng. Language semantics, language syntactic and the pragmatic aspect. Creative thought and its oral and written expression. Practice -		
615W2TS	Technician and Contemporary Society	KZ	3
	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 Internet and in newspapers, what are the sights for, interest in public affairs - a hangover from the past?		
615XN4K	Seminar for Diploma Thesis	Z	8
615XNDP	Master Thesis	KZ	18
616W2PG	Computer Graphics and Virtual Reality	KZ	3
	n and processing of bitmap and vector 2D graphics, 3D virtual scenes and algorithms used for their computerized processing. Adopting		-
and free	eware tools for creation and processing of 2D, 3D and interactive graphics, and basics of programming language VRML and graphic I		
04017111	Seminar for Diploma Thesis	Z	8
616XN4K	Master Thesis	KZ	18
616XN4K 616XNDP 617HDI	Evaluation of Transport Investments	Z,ZK	5
			+

617KMD	Quantitative Methods in Transport	Z,ZK	6
The course focus	es on the issue of the use of directed graphs in transport and logistics systems, undirected graphs tree type, planar graphs and their	coloring. Further d	listribution
problems, covering	and location tasks are formulated and solved such as models of integer linear programming. Besides the use of exact methods there	are described simp	ple and also
	more sofisticated heuristics (metaheuristics) methods.		
617MGD	Management of Transport Systems	Z,ZK	3
	Functions, processes and systems of management in transport, organisational structures, strategy, social responsibility, soft s		
617MID	Managerial Information Systems in Transport	Z,ZK	3
	n building IS of modern transport company. New EU legislation on cyber security and data protection puts transport organizations in		-
course focuses on t	the security of IS and possible sources of danger. The practical part deals with the process of building a new IS from the idea through budget, the basic documents for the possible assignment of the contract.	the timetable and t	tne financiai
617PPC	Carriage Processes	ZK	3
017110	Domestic carriages, international carriages, nomenclature of goods, pricing, contracting, responsibility for damages.	211	
617RLOG	Supply Chains Management	Z.ZK	5
	ogistics system. Horizontal and vertical dimensions of logistics integration. Types of logistics chain. Logistics chain with continual flow	. , .	
_	s. Management based on planning in closed circle with information feedback. Possible position of decoupling point in a logistics chain		
617RZO	Management of Inventory and Renewal, Schedules in Logistics	Z,ZK	4
ı	ed on optimizing inventory management, maintenance and equipment renewal. In addition to classification models, inventory and reno	'	
with the basic detail	Is of deterministic and stochastic inventory models and renewal. In the second part, attention will be paid to the models of theory sche	dules as models c	of Job-Shop,
	Flow-Shop, Open-Shop and methods of schedules optimization.		
617TRI	Creation and Control of Investment Projects	KZ	2
Technical-econd	omic data processing of investment porioject, design of logistics systems, methodology of technological and logistic centres design processing of investment porioject, design of logistics systems, methodology of technological and logistic centres design processing of investment porioject, design of logistics systems, methodology of technological and logistic centres design processing of the contract of the cont	oposal, value eng	ineering.
617TSI	Technology of Road Transport	KZ	2
Legislative, oper	ational, technical, logistic and safety conditions of road transport, basic transport technologies, special transport, international agree	ments, requiremen	its on the
parameters and sp	pecialization of transport, handling and loading/unloading means, maintenance, service and repairs of road vehicles, safety of road transport.	ansport and choice	e of optimal
	transport unit.		
617TZDK	Technology of Railway Transport	Z,ZK	6
	v assesment, model operational situation with a system running time between IPT-nodes, calculation of traction energy savings comp		
for designing of fie	eeting crossing station, solving of capacity problem and blocking time in relation to train protection system, robustness of timetable, single paths, guidelines for centralised operational traffic control and management.	stem concept of fi	reignt train
617W2AM		KZ	3
l l	Application of Marketing Tools in Transportation narketing principles in transport issues, marketing tools suitable for transport, case studies of the use of marketing in the sphere of p		
617W2FM	Financing in Urban Mass Transportation	KZ	3
-	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 model		
7,	inspection and blind passengers. Tourism & DMT. UMT typology & DMT, choice of optimum financing.		,,
617W2KI	Capital Investment in Transportation and Telecommunications	KZ	3
'	Financial market, investment desicion making - long term goals and investment strategies, long temr financing.	'	
617W2PS	Case Studies in Transportation	KZ	3
Simulation expert	discussions on the topics - the impact of transport on the environment and the economy, energy, construction of transport infrastructu	re etc. The studen	ts will each
lesson presented	d 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	uthorities, investor	rs, carrier
	representative interest groups, residents, etc.).		
617W2RZ	Control of Transport Processes	KZ	3
Theoretical bases,	, transport system, decomposition, factors influencing control, quality diagnosis, methods of control, systems for decision making sup	port, risk of decision	on making,
047) 1/0 0 1/	telematics.	1/7	
617W2SK	Urban and Regional Rail Transit Systems	KZ	3
_	g transport demand, modal-split, traffic flows distribution on public transit network. Line network optimization and configuration. Timeta d periodic timetable. Rolling stock circulation, staff and crew services optimization and their order to rosters. Framework legislation, non		
accenting integrated	of public transport. Marketing.	-barrier effects and	preference
617XN4K	Seminar for Diploma Thesis	Z	8
617XNDP	Master Thesis	KZ	18
		Z	
618XN4K	Seminar for Diploma Thesis		8
618XNDP	Master Thesis	KZ	18
620XN4K	Seminar for Diploma Thesis	Z	8
620XNDP	Master Thesis	KZ	18
621W2LS	Air Traffic Services	KZ	3
Airspace structure	e in Czech Republic and other countries. Introduction and description of ATS units in Czech Republic. Practical examples of TWR, AF	P a ACC control. F	Procedural
00414/014/	and radar control. Incidents caused or partially caused by ATS. History of ATS and Czech airspace.	147	
621W2MK	Marketing of Air Transport	KZ	3
Definition, purpose,	, evolution, stages and types of marketing. Marketing in air transportation. Marketing research. Market segmentation. Airlines marketing research. Market segmentation. Airlines marketing research. Market segmentation. Airlines marketing research. Market segmentation. Airlines marketing research.	ig strategies. Airlin	ie Products.
62414/2140		V7	2
621W2MS	Aerospace Engineering Simulation and Modelling gned as a set of exemplary tasks and problems based on practical aviation issues. The university degree mathematic skills and softw	KZ KZ	3
-	gried as a set of exemplary tasks and problems based on practical aviation issues. The university degree mathematic skills and softw essful figuring out. Both simple tasks, where students create own model themselves (e.g. in Matlab), and more complicated problems	* *	-
	tools will be applied.	ioro proicosiorio	acroiopeu
621W2PL	Operational Aspects of Aerodromes	KZ	3
· ·	ts of aerodromes. Location of aerodrome and orientation of runways. Requirements for apron. Capacity of airports runways and term		
	conditions. Firefighting units. Protection against unlawful interference. Local transport connection. Environmental protection	-	

621W2PP	Law and Operation in Air Transport	KZ	3
Development of avi	ation law. International conventions on civil aviation. International organisations and including of the CzechRepublic in these organis	ations. EU legislat	ion and civil
aviation. Execution	on of state administration and state supervision in matters of civil aviation, in accordance with Act No. 49/1997 Col. Facilitation. Resp	onsibilities of air c	arriers for
	passengers, luggage and cargo. The safe transport of dangerous goods.		
621W2TL	Development Trends of Aircraft Construction	KZ	3
	Historical and nowadays trends. Future scenarios. Space industry. Economy.	'	
621W2VA	Selected Parts of Aerodynamics	KZ	3
Real gases physic	al properties, atmosphere. Fundamentals of fluid dynamics. External and internal aerodynamics in aircraft applications. Wing section	s, wings, airfoil ca	scades, lift,
drag. Polar, ideal	incompressible and compressible flows. Viscous flows. Boundary layer, stability, turbulence. Reynolds, Strouhal and Mach Numbers.	Flows aircraft aero	odynamics
	and light dynamics. Static and dynamic stability. Anoeurability. Aircraft performances.		
621XN4K	Seminar for Diploma Thesis	Z	8
621XNDP	Master Thesis	KZ	18
622XN4K	Seminar for Diploma Thesis	Z	8
622XNDP	Master Thesis	KZ	18
623KRIO	Crisis Management for Engineering Branches	KZ	3
Human system. A	ssets, terms, concept and safety management aims. Causes and consequences of disasters. Safety management. Crisis managem	ent-its aims, dema	nds, roles,
principles, specifics	and comparidon with the EU and NATO. Organisational, personal, legislative, finance, material and technical provision. The IZS role	. Planning. Protect	ion of public
	and critical infrastructure. Problem solving.		
623MAR	Risk Analysis and Management	Z,ZK	3
Concept of risks ar	nd terms. Risk sources, definition of hazard, impacts and risks. Methods for identification, analysis, assessment and management of	risks. Risk enginee	ring targets
and good enginee	ring practice. Methods, tools and techniques for risk engineering. System of systems risk. Application of strategic and system approa	ach for benefit of s	ecurity and
	development. Territorial, emergency and crisis planning. Human factor - its role.		
623XN4K	Seminar for Diploma Thesis"	Z	8
623XNDP	Master Thesis	KZ	18
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