Recomended pass through the study plan

Name of the pass: Bachelor Full-Time TET-LED from 2023/24

Faculty/Institute/Others:

Department:

Pass through the study plan: Bachelor TET-LED Full-Time from 2023/24

Branch of study guranteed by the department: Welcome page

Guarantor of the study branch:

Program of study: Technology in Transportation and Telecommunications

Type of study: Bachelor full-time

Note on the pass:

Coding of roles of courses and groups of courses:

P - compulsory courses of the program, PO - compulsory courses of the branch, Z - compulsory courses, S - compulsory elective courses, PV - compulsory elective courses, F - elective specialized courses, V - elective courses, T - physical training courses

Coding of ways of completion of courses (KZ/Z/ZK) and coding of semesters (Z/L):

KZ - graded assesment, Z - assesment, ZK - examination, L - summer semester, Z - winter semester

Number of semester: 1

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members)	Completion	Credits	Scope	Semester	Role
	Tutors, authors and guarantors (gar.)					
14ASD	Algorithm and Data Structures Tomáš Brandejský, Michal Je ábek, Alena Kubá ová, Jan Procházka, Vít Fábera, Martin Fiala, Lukáš Svoboda, Tereza Panská Vít Fábera Vít Fábera (Gar.)	KZ	3	0P+2C+8B	3 Z	Z
11CAL1	Calculus 1 Tomáš Tasák, Olga Vraštilová, Magdalena Hykšová, Bohumil Ková, Ond ej Navrátil Bohumil Ková Ond ej Navrátil (Gar.)	Z,ZK	7	2P+4C+22B	B Z	Z
15DPLG	Transportation Psychology	Z	2	2P+0C+6B	Z	Z
11GIE	Geometry Old ich Hykš, Pavel Provinský, Šárka Vorá ová Old ich Hykš Old ich Hykš (Gar.)	KZ	3	2P+2C+12B	3 Z	Z
14KSP	Constructing with Computer Aid Lukáš Svoboda	KZ	2	0P+2C+8B	Z	Z
11LA	Linear Algebra Magdalena Hykšová, Pavel Provinský, Lucie Kárná, Martina Be vá ová Magdalena Hykšová Martina Be vá ová (Gar.)	Z,ZK	3	2P+1C+10B	3 Z	Z
18MTY	Materials Science and Engineering Tomáš Doktor, Jaromír Kylar, Veronika Drechslerová, Nela Kr má ová, Jitka ezní ková, Jaroslav Valach, Vít Malinovský, Jaromír Kylar Jaroslav Valach Tomáš Doktor (Gar.)	Z,ZK	3	2P+1C+10B	3 Z	Z
18TED	Technical Documentation Jitka ezní ková, Vít Malinovský Jitka ezní ková Jitka ezní ková (Gar.)	KZ	2	1P+1C+8B	B Z	Z
TV-1	Physical Education	Z	1		Z	Z
16UDOP	Introduction into Vehicles Zuzana Radová, Petr Bouchner	Z	2	2P+0C+8B	3 Z	Z
12ZYDI	Introduction to Transportation Engineering Zuzana arská, Dagmar Ko árková	Z,ZK	2	1P+1C	Z	Z
18STD	Seminary from Technical Documentation	Z	0	0P+2C	Z	V
TVKZV	Physical Education Course	Z	0	7dní	Z	V

Number of semester: 2

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
11CAL2	Calculus 2 Magdalena Hykšová	Z,ZK	5	2P+3C+20B	L	Z
14PRG	Programming Jana Kaliková	KZ	2	0P+2C+8B	L	Z
18SAT	Structural Analysis	Z,ZK	4	2P+2C+14B	L L	Z
11STAT	Statistics	Z,ZK	4	2P+2C+12B	L	Z
20SYSA	Systems Analysis	Z,ZK	5	2P+2C+14B	L	Z

17TEDL	Transport Technology and Logistics	KZ	3	2P+1C	L	Z
TV-2	Physical Education	Z	1		L	Z
21ZALD	Basics of Air Transport	KZ	2	0P+2C+8B	L	Z
12ZTS	Railway Lines and Stations	Z,ZK	4	2P+2C+10B	L	Z
14DZT	Digital Support for Railway Lines	Z	0	0P+2C	L	V
21SLD	Seminar of Air Transport	Z	0	0P+2C	L	V
18SS	Seminary from Structural Analysis	Z	0	0P+2C	L	V
11SSF	Secondary School Physics Course Zuzana Malá	Z	0	0P+2C	L	V
TVKLV	Physical Education Course	Z	0	7dní	L	V

Number of semester: 3

Code	Name of the course / Name of the group of courses (in case of groups of courses the list of codes of their members) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
15JZ1A	Foreign Language - English 1 Markéta Vojanová, Dana Boušová, Marie Michlová, Marek Tome ek, Jan Feit, Markéta Musilová, Peter Morpuss, Jitka He manová, Eva Rezlerová Lenka Monková (Gar.)	Z	3	0P+4C+10B	Z	Z
14DATS	Database Systems Jan Kr ál, Jana Kaliková Jana Kaliková (Gar.)	KZ	2	1P+1C+10B	Z	Z
11FYZ	Physics Old ich Hykš, Pavel Demo, Zuzana Malá, Tomáš Vít , Jana Kuklová Jana Kuklová Pavel Demo (Gar.)	Z,ZK	5	2P+2C+18B	Z	Z
12MDE	Transport Models and Transport Excesses Tomáš Pad lek, Josef Kocourek	Z,ZK	3	2P+1C+8B	Z	Z
12PPOK	Designing Roads, Highways and Motorways Tomáš Pad lek, Josef Kocourek, Petr Kumpošt Josef Kocourek (Gar.)	KZ	3	1P+2C+10B	Z	Z
18PZP	Elasticity and Strength Tomáš Doktor, Jitka ezni ková, Josef Jíra, Jan Šleichrt, Jan Vy ichl, Daniel Kytý, Ond ej Jiroušek Ond ej Jiroušek Ond ej Jiroušek (Gar.)	Z,ZK	3	2P+1C+10B	Z	Z
17TGA	Graph Theory and its Applications in Transport Alena Rybi ková, Denisa Mocková, Dušan Teichmann	Z,ZK	4	2P+2C+12B	Z	Z
20UITS	Introduction to Intelligent Transport Systems Martin Šrotý, Martin Langr, Ji í R ži ka, Patrik Horaž ovský, Vladimír Faltus, Pavel Hrubeš, Kristýna Navrátilová, Eva Haj iarová Martin Langr	Z,ZK	7	3P+2C+20B	Z	Z
14DPK	Digital Support for Designing of Roads and Highways Libor Žídek, Drahomír Schmidt Drahomír Schmidt Drahomír Schmidt (Gar.)	Z	0	0P+2C	Z	V
11SCFZ	Seminar of Physics Old ich Hykš, Zuzana Malá, Tomáš Vít , Jana Kuklová Zuzana Malá Zuzana Malá (Gar.)	Z	0	0P+2C	Z	V
18SPP	Seminary from Elasticity and Strength Tomáš Doktor, Jan Vy ichl Jan Vy ichl Jan Vy ichl (Gar.)	Z	0	0P+2C	Z	V

Number of semester: 4

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
15JL2A	Foreign language - English 2 (for LED)	KZ	2	0P+2C	L	Z
11EMO	Electromagnetic Field and Optics Zuzana Malá	Z,ZK	4	2P+1C	L	Z
16LLA1	Aircraft 1	KZ	3	2P+1C	L	Z
21LEIS	Aerodromes Ladislav Capoušek	Z,ZK	3	2P+1C	L	Z
14PGP	Program Resources Michal Je ábek	Z	2	0P+2C	L	Z
21RELP	Air Traffic Control	Z,ZK	4	3P+1C	L	ZP
21RIBZ	Aviation Safety Andrej Lališ	KZ	2	2P+0C	L	Z
21SBL1	Bachelor Thesis Seminar 1 Lenka Hanáková	Z	1	1P+0C	L	Z
21ZT	ATM Systems	ZK	2	2P+0C	Z,L	Z
21ZYT1	Principles of Flight 1 Jakub Trýb	Z,ZK	3	2P+1C	L	Z
11SEMO	Seminar of Electromagnetic Field and Optics Zuzana Malá	Z	0	0P+2C	L	Z

X1-BP-LED-22/23	Projekty Bc. prezen ní TET-LED od 2022/23 16X31L,15X31L, (see the list of groups below)	Min. cours. 3 Max. cours. 3	Min/Max 6/6	ZP
Y1-BP-LED-23/24	PVP-B Bc. prezen ní TET-LED od 2023/24 21Y1AM,00Y1XB, (see the list of groups below)	Min. cours. 3 Max. cours. 3	Min/Max 6/6	PV

Number of semester: 5

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
15JL3A	Foreign language - English 3 (for LED) Markéta Vojanová, Dana Boušová, Marie Michlová, Marek Tome ek, Jan Feit, Markéta Musilová, Peter Morpuss, Jitka He manová, Eva Rezlerová,	KZ	2	0P+2C	Z	Z
21LGVP	Legislation and Operational Regulations Martin ernotik Martin ernotik (Gar.)	ZK	4	3P+0C	Z	Z
16LLA2	Aircraft 2 Jan Slezá ek, Karel Hylmar, Daniel Urban, Karel Mündel	Z,ZK	2	2P+1C	Z	Z
21LGL1	Aviation English 1 Jitka He manová Jitka He manová	Z	2	0P+2C	Z	Z
21LGCE	Air Navigation Jan Slezá ek	Z,ZK	3	2P+0C	Z	Z
21MEOL	Meteorology Iveta Kameniková Iveta Kameniková	KZ	3	2P+1C	Z	Z
21SYLP	Airport Security Lukáš Popek Lukáš Popek Andrej Lališ (Gar.)	KZ	2	2P+0C	Z	ZP
21SBL2	Bachelor Thesis Seminar 2 Lenka Hanáková, Vladimír Socha, Marta Urbanová Marta Urbanová	Z	1	1P+0C	Z	Z
22SELN	Air Accident Investigation Michal Frydrýn, Karel Mündel Michal Frydrýn Karel Mündel (Gar.)	ZK	2	2P+0C	Z	Z
21ZYT2	Principles of Flight 2 Jakub Trýb, P emysl Vávra Jakub Trýb	Z,ZK	3	2P+1C	Z	Z
14ZDAL	Data processing in air transport Martin Šrotý Martin Šrotý Martin Šrotý (Gar.)	KZ	2	0P+2C	Z	Z
X1-BP-LED-22/23	Projekty Bc. prezen ní TET-LED od 2022/23 16X31L,15X31L, (see the list of groups below)	Min. cours. 3 Max. cours. 3	Min/Max 6/6			ZP
Y1-BP-LED-23/24	PVP-B Bc. prezen ní TET-LED od 2023/24 21Y1AM,00Y1XB, (see the list of groups below)	Min. cours. 3 Max. cours. 3	Min/Max 6/6			PV

Number of semester: 6

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
15JL4A	Foreign language - English 4 (for LED)	ZK	2	0P+2C	L	Z
21EMIL	Air Transport Economy Peter Vittek	Z,ZK	5	3P+1C	L	Z
21LGL2	Aviation English 2	KZ	2	0P+2C	L	Z
21LMR1	Aircraft Engines 1	ZK	3	2P+0C	L	Z
21LVYO	Human Performance and Limitations	ZK	3	2P+0C	L	Z
11MSP	Modeling of Systems and Processes Bohumil Ková	Z,ZK	4	2P+2C+12E	L	Z
21PAP	Flight Planning and Performance Ladislav Capoušek	Z,ZK	4	2P+2C+14E	B L	Z
21SBL3	Bachelor Thesis Seminar 3 Lenka Hanáková	Z	1	1P+0C	L	ZP

X1-BP-LED-22/23	Projekty Bc. prezen ní TET-LED od 2022/23 16X31L,15X31L, (see the list of groups below)	Min. cours. 3 Max. cours. 3	Min/Max 6/6	ZP	
Y1-BP-LED-23/24	PVP-B Bc. prezen ní TET-LED od 2023/24 21Y1AM,00Y1XB, (see the list of groups below)	Min. cours. 3 Max. cours. 3	Min/Max	PV	

List of groups of courses of this pass with the complete content of members of individual groups

Kód		Name of the group o	f courses a	nd codes of members of this or below the list of courses)	Com	pletion	Credit	ts Scope	Semester	Role
X1-BP-I	LED-22/23			FET-LED od 2022/23	Min.	cours.	Min/Ma	ax		ZP
					wax.	cours.	6/6			
16X31L	Project 1 L	FD.	15X31L	Project 1 LED		14X31L		Project 1 LEI)	
12X31L	Project 1 L		11X31L	Project 1 LED		23X31L		Project 1 LEI		
18X31L	Project 1 L		20X31L	Project 1 LED		21X31L		Project 1 LEI		
2X31L	Project 1 L		17X31L	Project 1 LED		16X32L		Project 2 LEI		
5X32L	Project 2 L		14X32L	Project 2 LED		12X32L		Project 2 LEI)	
11X32L	Project 2 L	ED	17X32L	Project 2 LED		23X32L		Project 2 LEI)	
22X32L	Project 2 L	ED	21X32L	Project 2 LED		20X32L		Project 2 LEI)	
18X32L	Project 2 L	ED	11X33L	Project 3 LED		12X33L		Project 3 LEI)	
14X33L	Project 3 L	ED	15X33L	Project 3 LED		16X33L		Project 3 LEI)	
23X33L	Project 3 L	ED	21X33L	Project 3 LED		20X33L		Project 3 LEI)	
18X33L	Project 3 L	ED	17X33L	Project 3 LED		22X33L		Project 3 LEI)	
				· ·	Min	cours.				
					'*					
V1_RP_I	LED-23/24	DVD D Do	nrozon ní T	ET I ED ad 2022/24		3	Min/Ma	ax		PV
י יום-יו	LLD-23/24	PVP-B BC.	prezen ni i	ET-LED od 2023/24	Max.	cours.	6/6			FV
						3				
					<u> </u>					
21Y1AM		al Information Managem	00Y1XB	Active participation in a scient		20Y1AF			orms of Transpo	rtat
I8Y1AM		Mobility and Safety of	14Y1AV	Animation and Visualization		12Y1AE		Applied Ecol	0.	
20Y1AE	Applied Ele		14Y1BE	Barrierless Transport		15Y1BO		Work Safety	and Health Prot	ectio
11Y1BK	Error Dete	ction Codes for Interl	21Y1BS	Unmanned aircraft systems 1		14Y1BM		Biometric Me	thods	
15Y1DZ	History of	Railway	12Y1DS	Project Documentation in Practic		17Y1EV		Public Sector	Economy	
23Y1EH	Electronics	and hardware in secu	20Y1EK	Qualification in Electrical Engi		16Y1EN		Energy Requ	irements of Veh	icles
20Y1EA	Environme	ntal Aspects of Transpo	15Y1EH	European Integration within Hist		18Y1EM		Experimenta	Methods in Me	chanic
15Y1FD	French Are	ea Studies and Transpor	14Y1HW	Computer Hardware		15Y1HL		History of Civ	ril Aviation	
15Y1HD	History of	City Mass Transport	12Y1HD	Traffic Noise		15Y1HE		Work Hygien	e and Ergonom	ics in T
16Y1IS	Interactive	simulators and simul	12Y1KN	Combined Transportation		12Y1KP		Communicat	on and Promoti	on of T
20Y1KP	Communic	ation and presentation s	23Y1KM	Crisis Management		23Y1KO		Quantum Ph	sics and Optoe	lectron
23Y1KY	Cybernality	/	23Y1KB	Cyber security in transportation		21Y1LJ		Aeronautical	Radio and Fligh	nt In
21Y1LS	Air Traffic S	Services	17Y1LL	Logistics of Passenger and Freig		20Y1LN		Location and	Navigation	
23Y1MK	Crisis Situa	ation Management in C	23Y1MU	Emergency Events Management S	Solu	17Y1MD		Marketing in	Transportation	
18Y1MT	Engineerin	g Materials	21Y1MP	Matlab for project-oriented stud		14Y1MP		Modeling Co	mplex Assembli	es and
15Y1MK	Modern Hi	story in Context: Every	15Y1NE	German in the Economy and Socie	et	21Y1OH		Airline Busin	ess and Operati	ons
		of Critical Objects a	20Y1OI	Fare Collection and Information		14Y1OJ		Object - orier	ted programmi	ng in
23Y1OK	Protection	of Childal Objects a						D 111111	3	
	Protection Operating	<u> </u>	17Y10F	Personal Finance		20Y10K		Road Lightin		
14Y1OP 11Y1PV	Operating	<u> </u>	17Y1OF 17Y1PM	Personnel Management		12Y1PC			nd Cycling Trans	sport
14Y1OP 11Y1PV	Operating	System al and Multicriterial						Pedestrian a	•	•
14Y1OP 11Y1PV 14Y1PG	Operating Parametric Computer	System al and Multicriterial	17Y1PM	Personnel Management		12Y1PC		Pedestrian a Computer Si	nd Cycling Trans	chanic
14Y1OP 11Y1PV 14Y1PG 14Y1PI	Operating Parametric Computer Corporate	System ral and Multicriterial Graphics	17Y1PM 14Y1P2	Personnel Management Computer Aid of Transportation P	е	12Y1PC 18Y1PS		Pedestrian a Computer Si ATC Procedu	nd Cycling Trans	chanic
14Y1OP 11Y1PV 14Y1PG 14Y1PI 12Y1PD	Operating Parametric Computer Corporate Assessme	System al and Multicriterial Graphics Information System	17Y1PM 14Y1P2 14Y1PZ	Personnel Management Computer Aid of Transportation P Advanced Data Processing in Spre	е	12Y1PC 18Y1PS 21Y1PC		Pedestrian a Computer Sin ATC Procedu C Programm 3D Modeling	nd Cycling Transmulations in Me res and Activition Ing Language in AutoCAD	chanic es
14Y1OP 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1	Operating Parametric Computer Corporate Assessme Designing	System al and Multicriterial Graphics Information System nt of Transport Structur	17Y1PM 14Y1P2 14Y1PZ 20Y1PK	Personnel Management Computer Aid of Transportation P Advanced Data Processing in Spre Product Quality Management Proc	e ce	12Y1PC 18Y1PS 21Y1PC 14Y1PJ		Pedestrian a Computer Sin ATC Procedu C Programm 3D Modeling	nd Cycling Trans mulations in Me res and Activition ng Language	chanic es
14Y10P 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV	Operating Parametric Computer Corporate Assessme Designing Operation,	System al and Multicriterial Graphics Information System nt of Transport Structur Roads in Civil 3D I	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2	Personnel Management Computer Aid of Transportation P Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II	e ce	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA		Pedestrian a Computer Sin ATC Procedu C Programm 3D Modeling	nd Cycling Transmulations in Me res and Activitiong Language in AutoCAD s Reconstruction	chanic es
23Y1OK 14Y1OP 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV 16Y1RE 21Y1SI	Operating Parametric Computer Corporate Assessme Designing Operation,	System al and Multicriterial Graphics Information System nt of Transport Structur Roads in Civil 3D I Construction and Main d Electronic Vehicle S	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2 12Y1PU	Personnel Management Computer Aid of Transportation P Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II Organization Disposition of Rail	e ce	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA 12Y1RU		Pedestrian a Computer Si ATC Procedu C Programm 3D Modeling Railway Line Titan Simular	nd Cycling Transmulations in Me res and Activitiong Language in AutoCAD s Reconstruction	chanic es
14Y1OP 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV 16Y1RE 21Y1SI	Operating Parametric Computer Corporate Assessme Designing Operation, Control an ATC Simul	System al and Multicriterial Graphics Information System nt of Transport Structur Roads in Civil 3D I Construction and Main d Electronic Vehicle S	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2 12Y1PU 21Y1RZ	Personnel Management Computer Aid of Transportation P. Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II Organization Disposition of Rail Human Resources Management	e ce	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA 12Y1RU 17Y1ST		Pedestrian a Computer Si ATC Procedu C Programm 3D Modeling Railway Line Titan Simular Sociology of	nd Cycling Trans nulations in Me res and Activition ng Language in AutoCAD is Reconstruction	n ces
14Y10P 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV 16Y1RE 21Y1SI	Operating Parametric Computer Corporate Assessme Designing Operation, Control an ATC Simul Transporta	System al and Multicriterial Graphics Information System nt of Transport Structur Roads in Civil 3D I Construction and Main d Electronic Vehicle S	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2 12Y1PU 21Y1RZ 20Y1SC	Personnel Management Computer Aid of Transportation P. Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II Organization Disposition of Rail Human Resources Management Sensors and Actuators	e ce	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA 12Y1RU 17Y1ST 17Y1SL		Pedestrian a Computer Si ATC Procedu C Programm 3D Modeling Railway Line Titan Simular Sociology of	nd Cycling Trans mulations in Me res and Activition ng Language in AutoCAD s Reconstructio ion Human Resour ement and Main	chanic es
14Y10P 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV 16Y1RE 21Y1SI 11Y1SI	Operating Parametric Computer Corporate Assessme Designing Operation, Control an ATC Simul Transporta Strategy as	System al and Multicriterial Graphics Information System nt of Transport Structur Roads in Civil 3D I Construction and Main d Electronic Vehicle S ator tion Software Engineer	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2 12Y1PU 21Y1RZ 20Y1SC 16Y1KS	Personnel Management Computer Aid of Transportation P. Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II Organization Disposition of Rail Human Resources Management Sensors and Actuators Quality and Reliability of Vehic	e	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA 12Y1RU 17Y1ST 17Y1SL 12Y1SU		Pedestrian a Computer Sir ATC Procedu C Programm 3D Modeling Railway Line Titan Simular Sociology of Road Manag	nd Cycling Trans mulations in Me res and Activition ng Language in AutoCAD is Reconstruction ion Human Resour ement and Main	chanic es
14Y10P 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV 16Y1PV 16Y1RE 21Y1SI 11Y1SI 16Y1SO 23Y1TP	Operating Parametric Computer Corporate Assessme Designing Operation, Control an ATC Simul Transporta Strategy at	System al and Multicriterial Graphics Information System nt of Transport Structur Roads in Civil 3D I Construction and Main d Electronic Vehicle S ator tion Software Engineer nd innovation in mobil	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2 12Y1PU 21Y1RZ 20Y1SC 16Y1KS 17Y1SK	Personnel Management Computer Aid of Transportation P. Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II Organization Disposition of Rail Human Resources Management Sensors and Actuators Quality and Reliability of Vehic Urban and Regional Rail Transpor	e	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA 12Y1RU 17Y1ST 17Y1SL 12Y1SU 11Y1TG		Pedestrian a Computer Sin ATC Procedu C Programm 3D Modeling Railway Line Titan Simulat Sociology of Road Manag Graph Theor Aircraft Main	nd Cycling Trans mulations in Me res and Activitiong Language in AutoCAD is Reconstruction ion Human Resour ement and Main /	n ces ntenance
14Y10P 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV 16Y1RE 21Y1SI 11Y1SI 16Y1SO 23Y1TP 14Y1UP	Operating Parametric Computer Corporate Assessme Designing Operation, Control an ATC Simul Transporta Strategy ai Criminal Li Editing of	System al and Multicriterial Graphics Information System nt of Transport Structur Roads in Civil 3D I Construction and Main d Electronic Vehicle S ator tion Software Engineer nd innovation in mobil aw in IT and Transport	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2 12Y1PU 21Y1RZ 20Y1SC 16Y1KS 17Y1SK 14Y1TI	Personnel Management Computer Aid of Transportation P. Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II Organization Disposition of Rail Human Resources Management Sensors and Actuators Quality and Reliability of Vehic Urban and Regional Rail Transpor Creating Interactive Internet Ap Introduction of Rail Vehicles	e ce	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA 12Y1RU 17Y1ST 17Y1SL 12Y1SU 11Y1TG 21Y1UL		Pedestrian a Computer Sii ATC Procedt C Programm 3D Modeling Railway Line Titan Simulai Sociology of Road Manag Graph Theor Aircraft Main Public Transp	nd Cycling Trans mulations in Me res and Activition ng Language in AutoCAD is Reconstruction ion Human Resour ement and Main	n ces intenance
14Y10P 11Y1PV 14Y1PG 14Y1PI 12Y1PD 12Y1C1 16Y1PV 16Y1RE	Operating Parametric Computer Corporate Assessme Designing Operation, Control an ATC Simul Transporta Strategy ai Criminal Li Editing of	System al and Multicriterial Graphics Information System Int of Transport Structur Roads in Civil 3D I Construction and Main d Electronic Vehicle S ator tion Software Engineer Ind innovation in mobil aw in IT and Transport Theses in MS Word In and Cooperation	17Y1PM 14Y1P2 14Y1PZ 20Y1PK 12Y1C2 12Y1PU 21Y1RZ 20Y1SC 16Y1KS 17Y1SK 14Y1TI 18Y1UK	Personnel Management Computer Aid of Transportation P. Advanced Data Processing in Spre Product Quality Management Proc Designing Roads in Civil 3D II Organization Disposition of Rail Human Resources Management Sensors and Actuators Quality and Reliability of Vehic Urban and Regional Rail Transpor Creating Interactive Internet Ap	e ce	12Y1PC 18Y1PS 21Y1PC 14Y1PJ 14Y1PA 12Y1RU 17Y1ST 17Y1SL 12Y1SU 11Y1TG 21Y1UL 12Y1VR		Pedestrian a Computer Sii ATC Procedt C Programm 3D Modeling Railway Line Titan Simulai Sociology of Road Manag Graph Theor Aircraft Main Public Transp	nd Cycling Transmulations in Me res and Activition In Language in AutoCAD is Reconstruction In Memory In Memory In Cities and In Cities and In Railroad Veting In Memory In Memory In Railroad Veting In Memory In Memory In Memory In Memory In Railroad Veting In Memory In	n ces ntenance

14Y1ZJ	Fundamentals of programming in J	12Y1ZU	Principles of Urbanism	15Y1ZV	East-West dichotomy: Prelude to
16Y1ZL	Vehicle Testing, Legislation and			•	

List of courses of this pass:

Code	Name of the course	Completion	Credits
00Y1XB	Active participation in a scientific project, workshop, short-term trip abroad	KZ	2
11CAL1	Calculus 1	Z,ZK	7
Sequence of real r	numbers and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integrals and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integrals and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integrals are integrals and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integrals are integrals and its limit. Basic properties of mappings. Function of one real variable, its limit and derivative. Indefinite integral, Newton integrals are integrals are integrals.		ral, improper
11CAL2	Calculus 2	Z,ZK	5
	ar differential equations and their systems, differential calculus of functions of several real variables. Riemann integral in Rn. Line and		
11EMO	Electromagnetic Field and Optics Electric field. Electric current. Magnetic field. Electromagnetic field. Optics. Basics of solid-state physics.	Z,ZK	4
11FYZ	Physics Kinematics, dynamics, Newton's laws, force fields, mechanics of continuum, thermodynamics, introduction to electrostatics and electrostatics and electrostatics.	Z,ZK ctric current.	5
11GIE	Geometry	KZ	3
Differential geom	etry of curves - parameterization, the arc of the curve, torsion and curvature, Frenet's trihedron. Kinematics - a curve as a trajectory acceleration of a particle moving on a curved path.	of the motion, the v	elocity, and
11LA	Linear Algebra	Z,ZK	3
	ear combinations, linear independence, dimension, basis, coordinates). Matrices and operations. Systems of linear equations and the their applications. Scalar product. Similarity of matrices (eigenvalues and eigenvectors). Quadratic forms and their classifica	eir solvability. Deter	minants and
11MSP	Modeling of Systems and Processes	Z,ZK	4
	stem, external and internal system description, continuous and discrete system, mathematics as a tool, examples of formulation of differ nlinear system, stationary and non-stationary system, causality. Convolutional integral. Laplace and Z transformations. Transfer functi Discretization of continuous systems. System interconnection.		-
11SCFZ	Seminar of Physics	Z	0
	Solving problems on kinematics, particle dynamics, dynamics of particle systems and rigid body. Continuum mechanics, thermoc	<u>-</u>	
11SEMO	Seminar of Electromagnetic Field and Optics Solving problems on electric and magnetic field, electromagnetic field, optics and basics of solid-state physics.	Z	0
11SSF	Secondary School Physics Course Basics of kinematics, dynamics, thermodynamics, electric field and magnetic field.	Z	0
11STAT	Statistics	Z,ZK	4
	ility Descriptive statistics Population and sample, limit theorem Point estimate, construction and properties Interval estimates Parame Regression and correlation analysis	1 '	netric tests
11X31L	Project 1 LED	Z	2
11X32L	Project 2 LED	Z	2
11X33L	Project 3 LED	Z	2
11Y1BK	Error Detection Codes for Interlocking Systems	KZ	2
Safe communicati	on and methods for its assuring. Safety codes linear codes, cyclic codes, BCH codes, Reed-Solomon codes. Transmission channels, of probability of undetected error. Design and assessment of detection codes; requirements of the European standard EN 501		ssion errors,
11Y1PV	Parametrical and Multicriterial Programming	KZ	2
Solution to the pro	blem of linear programming with a parameter in objective function, on right sides and in the matrix of coeficients of linear constraints. C	omputation of effici	ent solution.
11Y1SI Basic concepts of	Transportation Software Engineering software engineering, ranging from domain analysis, requirement analysis and software architectures to analyses, design and implementations.	KZ entation using forma	2 Il techniques
	and practical usuage.	1	
11Y1TG	Graph Theory	KZ	2
•	nd terminology of graph theory, graph representation. Problems of graph theory, problem instance. Graph search algorithms, trees, merian path, bipartite graph matching, flow networks, circulations, critical path method, traveling salesman problem. Problem of existence for their solving. Computational complexity, dealing with NP-complete problems, heuristic approach.		
11Y1ZM	Foundation of MATLAB Programming	KZ	2
To explain the prin	ciple of algorithmization, flow charts, description of MATLAB environment and its settings, MATLAB help, mathematical operators, ma control flow, inputs and outputs, graphics, optimization and program code debugging.	trices and elements	operations,
12MDE	Transport Models and Transport Excesses	Z,ZK	3
Parameters of the	traffic flow and methods for their measurement. Models of the traffic flow, communications load, line and urban systems. Theory of q		s. Quality of
transport and its	assessment. Statistical characteristics of transport. Transport excesses, their analysis, the causes, identify and minimize the consequences safety and fluency.	uences. Improving o	of transport
12PPOK	Designing Roads, Highways and Motorways	KZ	3
= = =	ownership, maintenance, management and categorization of roads and highways. Curve and transition curve. Sinuosity and standar r stopping and overtaking. Road body - shapes and proportions, bottom and superstructure. Drainage and components of roads. Safe intersections.	-	
12X31L	Project 1 LED	Z	2
12X32L	Project 2 LED	Z	2
12X33L	Project 3 LED	Z	2
12/100L	1 TOJOGE O ELD		

12Y1AE General ecology -			
General ecology -	Applied Ecology	KZ	2
	ecological concepts and principles, ecosystem, ecological factors, energy flow through the ecosystem. Application of knowledge with		
ecology. Landsca	ape ecology - origin and historical development. Landscape definition and classification. Success. Traffic constructions in the country:	side. Landscape a	and nature
10)/101	protection. Applied ecology.	147	
12Y1C1	Designing Roads in Civil 3D I	KZ	2
	oted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software. Students go througl uilding, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calculation. The		-
particular linear b	explanation of the traffic building design in the real-life profession.	course also inclu	ides a basic
12Y1C2	Designing Roads in Civil 3D II	KZ	2
	voted to the traffic buildings design field, specifically the design of roads as such, by the means of a 3D software. Students go through	I	
	uilding, from the initial situation, over the longitudinal section, to the model and work sections and the cubic capacity calculation. The		_
	improved and developed. Students learn to design intersections.		
12Y1DS	Project Documentation in Practice	KZ	2
Project documenta	ation creating. Project documentation types. Support materials for project documentation creating. Building permit obtaining process.	Budget and pricing	ng. Practical
	creation of some project documentation parts.		1 -
12Y1HD	Traffic Noise	KZ	2
	on, basic terms, quantities. Basics of physiological acoustic, noise impacts on human body. Acoustic legislation, standarts, regulation of urban acoustic, noise transmission, soundproofing. Types of noise sources in area. Determination of acoustic situation in the area		
arca, principies	computing and measurement of transport noise. Acoustic studies, measuring protocol.	or interest. Wethe	odology of
12Y1KN	Combined Transportation	KZ	2
	ort strategy and legislation. Load units. Means of transport in combined transport. Combined transport systems. Transshipping areas	I .	I .
12Y1KP	Communication and Promotion of Transport Projects	KZ	2
Fundamentals of	Public Relations and the power of public opinion. Work and tasks of PR department and press spokesperson. Communication with the	I	1
networks and bey	ond. Communication strategy of transport projects. Systematic goodwill building. Crisis situations in communication and preparation	for crisis commun	nication. The
	influence of political marketing and political PR on transport projects. Lobbing.		
12Y1PC	Pedestrian and Cycling Transport	KZ	2
	ans. Pedestrian crossings. Modifications for blind, dim-sighted and disabled people. Design of cycle routes network. Ways of cycle route	-	-
for cyclists. Separ	ation of cyclists from other transport modes. Cycle tracks and its design - one way streets, reserved traffic lanes, bus stops, crossing	s with other trans	port modes,
40)/4.DD	crossroads. Traffic signs and road marking for cyclists.	1/7	1 0
12Y1PD	Assessment of Transport Structures	KZ	2
	sport structures, the EIA process. Multicriteria assessment methods, risk analysis, SWOT analysis. Landscape character, possibilities of on the landscape. Rating fragmentation and landscape connectivity in the preparation of linear structures. Practical examples of ass	=	
ransport structures	the environment.	essment of traine	o bullulings of
12Y1PU	Organization Disposition of Railway Stations	KZ	2
-	on. Passenger transport equipment. Freight transport equipment. Branch lines and railway traffic inside industrial company areas. Zor	I	1
-	ve stations. Technology of work in railway station with regard to its disposition. Railway station documentations in the Czech Republic		-
12Y1RU	Railway Lines Reconstruction	KZ	2
Keeping railway lir	ne operational, maintaining lines and stations, geometrical alignment of railway line, vehicles for railway superstructure and substruct	ure maintenance	, scheduling
	and organising possesions, preparation of railway lines reconstruction and maintenance, process of ralway line reconstruction	on.	
12Y1SU	Road Management and Maintenance	KZ	2
-	ith ownership of roads in the Czech Republic and the administration of the road at the state and county level. It is presented develop		
medium and long-te	erm strategy of the Ministry of Transport. Maintenance of roads winter and summer, its requirements, specifics, possibilities and repair	methods are dis	cussed in the
10V1VD	classroom as well as investment activity in highway engineering.	V7	1 2
12Y1VR	Public Transport in Cities and Regions political pillars of public transport. Accessibility of public transport. Transport demand management and directional coordination of lin	KZ	2
	arameters and transport variations. Types of lines according to their routing and basic operating parameters. Time coordination of line		
Zaolo oporaling p	Organization of tram operation in Prague. Tram safety.	zo. Oporanoria, ne	
12Y1ZU	Principles of Urbanism	KZ	2
-	of city and settlement building. Functional components and their mutual relations (working, living, recreation, transportation). Spacial	1	1
	Types of towns or cities with a certain prevailing function, forms of their development. Brief overview of land-use planning.		
12ZTS	Railway Lines and Stations	Z,ZK	4
Rail transport. Ra	ilway track geometry parameters. Route layout of railway lines. Railway line construction - railway substructure and superstructure. S	patial layout of ra	ailway lines.
	Railway control systems in relation to infrastructure. Operating and carriage points. Railway lines net and category. Traction in rail t		
12ZYDI	Introduction to Transportation Engineering	Z,ZK	2
Role of transportati	on in land-use planning. Basic terms in transportation engineering. Traffic survey and traffic prognosis. Introduction to topic of roads, p	ublic mass transp	ort. Negative
	impacts of transportation to environment and safety.		
14ASD	Algorithm and Data Structures	KZ	3
-	te problems, design a theoretical solution to a given problem and write the resulting algorithm using flowcharts, practice reading algorithms, and the problem		-
and use basic book	ean algebra to construct constraints in algorithms. Students will be introduced to the basics of the Python programming language - v will learn to work with variables of basic data types (integer, floating point and string) and the list data structure in their progra		g, loops, tries
14DATS	Database Systems	KZ	2
	batabase Systems, conceptual model, relational data model, the principles of normal forms, relational database design, security an	1	1
	queries, relational algebra, SQL language, client / server, multilayer architectures, distributed database systems. Access to data via		.,
	Digital Support for Designing of Roads and Highways	Z	0
14DPK	Seminars possibilities of technical processing problems focused on designing of roads and highways.	_	1
14DPK			T -
	Digital Support for Railway Lines	l Z	0
14DPK 14DZT	Digital Support for Railway Lines Seminars possibilities of technical processing problems solved in the field of railway lines.	Z	0
14DZT	Seminars possibilities of technical processing problems solved in the field of railway lines.	Z KZ	0
14DZT 14KSP		KZ	2
14DZT 14KSP "CAD systems" ter	Seminars possibilities of technical processing problems solved in the field of railway lines. Constructing with Computer Aid	KZ k rules in graphic	2 applications

			1
14PGP	Program Resources	Z	2
	ninded of some aspects of Pythom programming, learn basic concepts and constructs from object-oriented programming and their in	•	
will also tr	y out the basics of working with data libraries in Python, namely NumPy, Pandas, Matplotlib, and practice with examples of smaller a	and larger data siz	es.
14PRG	Programming	KZ	2
The Course Progr	amming builds on and fully extends the course 14ASD (Algorithmization and Data Structures). The knowledge of the Python prograr	mming language is	expanded
here so that the par	ticipant gains skills and can apply them to solve various follow-up tasks. Main topics: lists, multidimensional arrays, sorting and searc	ching, tuples, sets,	dictionaries,
	working with date and time, regular expressions, functions and procedures, working with files (CSV, JSON, XML).		_
14X31L	Project 1 LED	Z	2
14X32L	Project 2 LED	Z	2
14X33L	Project 3 LED	Z	2
14Y1AV	Animation and Visualization	KZ	2
	tions and modeling of NURBS, Patch objects, selection of objects (according to filter and properties). 3D Studio MAX systems and Spa	1	
	s, rendering filters, Motion blur, advanced animations, Motion panel. Modeling for morphing and animation, bone formation, animation		
14Y1BE	Barrierless Transport	KZ	2
	less accessible public transportation in terms of architectural barriers and also for transportation-technological point of view. Students	1	1
	nment roads, railway stations, public transport stops, terminal buildings, vehicles, public transport, information and orientation systems		
of barrieriess enviro	Theoretical knowledge will be supplemented by practical examples.	and transportation	r tecrinology.
14Y1BM	Biometric Methods	KZ	2
	rms, authentication methods, principles and performance measurement of biometric systems, overview of biometric technologies, ha	1	1
	nethod, 2D and 3D face recognition, vein patterns on the wrist, ear biometrics, fingerprint recognition, skin spectroscopy, behavioral i		•
Telina recognition ii	in transport applications, safety and risks of biometric technologies.	memous, me use t	of bioinettics
4.43/41.134/		1/7	
14Y1HW	Computer Hardware	KZ	2
Computer archite	cture, basics of logical circuits design and their realization using FPGA. In detail, description of computer architecture and separate	parts designing - c	controllers,
40/4145	arithmetic and logical units, I/O subsystem.	147	
14Y1MP	Modeling Complex Assemblies and Models in Parametric Modeller	KZ	2
Assemblies prog	gramming - tools and methodology of working subassemblies and assemblies, sheet metal parts modelling, welded assemblies, pipe	elines, and distribut	tion lines.
	Photorealistic output rendering - physical and material properties, lighting sources. MKP - visual example.		
14Y1OJ	Object - oriented programming in JAVA	KZ	2
	Encapsulation. Classes. Attributes. Access modifiers. Methods and overloading. Special methods (constructors, getters / setters). Ba	-	
	nce. Polymorphism. Statics, constants, interfaces, abstract classes, enum, packages, exceptions, collections, generics, lambda expre		
14Y1OP	Operating System	KZ	2
	tallation GNU/Linux OS. X-window system. Rights management - users and groups, ACL rights. Filesystems and attributes. Program	•	
runlevels. Basic c	console programs / commands. Config files. SW management, package systems. Programs in graphic shell - text, spreadsheet, graph	hic editors, sound,	video and
	communication. Services management. Safe and secure configuration of OS. Remote administration.		
14Y1P2	Computer Aid of Transportation Projecting 2	KZ	2
Over down of CAN or		•	
	oplication for transportation projecting aid. AutoCAD environment possibilities of basic tasks automatizing (programming, scripting, dat		
	ates, relation to databases). Work in projecting group, external references. Basic tasks for cummunication projecting (clotoidic transitio		
modification (attribu	ates, relation to databases). Work in projecting group, external references. Basic tasks for cummunication projecting (clotoidic transitio section). Basics of 3D modelling.	n curve, cross-and	l longitudinal
modification (attribution)	stes, relation to databases). Work in projecting group, external references. Basic tasks for cummunication projecting (clotoidic transitio section). Basics of 3D modelling. 3D Modeling in AutoCAD	n curve, cross-and	I longitudinal
modification (attribution)	tes, relation to databases). Work in projecting group, external references. Basic tasks for cummunication projecting (clotoidic transitio section). Basics of 3D modelling. 3D Modeling in AutoCAD arametric modeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, object	n curve, cross-and	I longitudinal
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modification (attributed modification (attributed modification (attributed modification (attributed modification and selectors.) 14Y1PG Basic formats of control of the second modern and selectors. 14Y1PJ C programming language of the second modification and selectors.	Ites, relation to databases). Work in projecting group, external references. Basic tasks for cummunication projecting (clotoidic transition section). Basics of 3D modelling. 3D Modeling in AutoCAD arametric modeller (AutoCAD) environment, scenes rendering, creation of planar and volumetric objects, user setup creation, object connected with external database. Basic definition of work with lights, materials and reflexes. Models presentation. Computer Graphics traphic and possibilities of their editing and mutual conversion. Use of individual types according to character of work. Work with editive level scope) using layers, DPI, colors. Basics of digital photography, scanning and computer technology like monitors and graphic Corporate Information System n-knowledge, components of information system, syntatic and semantic sense of data, structure of corporate information system, particularly activated information system, particularly activated information system, information system security, data protection, safety politics. C Programming Language guage. Preprocessor, basics of the C language (data types, syntax, commands), functions, pointes, dynamical memory allocation, strict implementations of abstract data types (FIFO, LIFO, list), programming techniques (sorting, searching, recursion), using bitwise of Advanced Data Processing in Spreadsheets familiar with principles of working in a spreadsheet. Graphic layout of the table appearance, formatting of numbers, insertion of formaticetion. Working with large spreadsheets, filters, advanced filters, database functions. Pivot tables and charts, conditional formatting, seatection. Working with large spreadsheets, filters, advanced filters, database functions. Pivot tables and charts, conditional formatting, seated on. Working with large spreadsheets, filters, advanced filters, database functions. Pivot tables and charts, conditional formatting, seated on. PIPP language syntax, and functions. Analysis of finished scripts and demonstration of solutions. You fi	KZ data creation, wor KZ data creation, wor KZ ing programs (with its cards. KZ articular information finformation system KZ ing, files, structures prerators. KZ ulas and functions, solution finding, solut	longitudinal 2 k with data 2 in the user 2 in system moperation, 2 including liver, macros, 2 programmed 2 and theses, 2 ds, menu, 2 S properties imples.
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14Y1WG	Webdesign	KZ	2
	n the basics of HTTP communication, URL and addressing, HTML5 markup language, advanced CSS3 techniques, accessible and u		
Otadonio viii iodii	webdesign, content management systems, web server installation + configuration directives. The subject matter will be trained on e		COPOLICITO
14Y1ZJ	Fundamentals of programming in JAVA	KZ	2
	Java SE Platform. IDE Installation and First Project. Comments. Variables and Type System. Operators. User Input and Parsing. Cha		
	ematical Methods. Terms. Relational Operators and Switches. Cycles for, while, foreach. Field - declaration, initialization, methods for		
Criair and Maire	parameters, return value, recursion. Program creation.	iola work. 7 tooli. 1	dilotiono,
14Y1ZM	Fundamentals of parametric and adaptive modeling	KZ	2
	roducts and parts creation. Sketch drawing by help of geometric relations, parametric dimensions, creation of adaptive models from 2		
basics of work at p	from and to another systems. Fundamentals of assemblies creation.	D sketeries. Impor	t and export
14ZDAL	Data processing in air transport	KZ	2
	processing and analysis tools. Practical part of the training - introduction to the working environment, applied examples of data processing and analysis tools.		
	ods of presentation of the results. Seminar papers on open data. Consultation hours for seminar papers. Seminar paper submission a		o, advanced
15DPLG	Transportation Psychology	Z	2
	pgy and its basic concepts. Information intake, decision-making and behaviour. Performance. Engineering psychology and vehicle cons	_	
	el route and traffic conditions, accidents and traffic incidents. Selection and training of the staff. Work and leisure. Age as a factor in tr		icai aspecis
15JL2A	Foreign language - English 2 (for LED)	KZ	2
	nical vocabulary. Selection of conversation topics and professional topics based on students´ level and their focus at Faculty of Transpo		
	I communication skills, ability to give feedback, summarization of a technical text, presentation structure, technical style and its usage		
15JL3A			
	Foreign language - English 3 (for LED)	KZ	2
	nical vocabulary. Selection of conversation topics and professional topics based on students´ level and their focus at Faculty of Transpo I communication skills, ability to give feedback, summarization of a technical text, presentation structure, technical style and its usage		
15JL4A	Foreign language - English 4 (for LED)	ZK	2
	nical vocabulary. Selection of conversation topics and professional topics based on students' level and their focus at Faculty of Transpo		
	d communication skills, ability to give feedback, summarization of a technical text, presentation structure, technical style and its usage	e, language of man	
15JZ1A	Foreign Language - English 1		3
Grammatical Struct	tures and Style. Selection of conversation topics relating to transportation sciences. Extending vocabulary, developing perceptive and co		Elementary
	stylistics forms. Oral and written presentation of original research. Academic text principles and reading comprehension. Principles		
15X31L	Project 1 LED	Z	2
15X32L	Project 2 LED	Z	2
15X33L	Project 3 LED	Z	2
15Y1BO	Work Safety and Health Protection in Transportation	KZ	2
	lative, definition of terms, risks and possible health damage, working conditions and health protection with focus on transportation. H		ogrammes,
· ·	health insurance of home and foreign business trips, statistics, working practice.		,
15Y1DZ	History of Railway	KZ	2
	vays, steam railways, railway network development in the 2nd half of 19th century, regional railways epoch, railways of the "First Rep		ion, World
	way development in the 2nd half of 20th century, high-speed railway origins, railway lines closing, important long-distance train connecti		
-	railway accidents, railway junctions. Excursions and projections.	-	
15Y1EH	European Integration within Historical Context	KZ	2
	formation of new states. Europe and the powers, League of Nations. European policy in the 1920s. Fascism, nacism, communism. Li		nciples and
goals. Europe after	er Hitler's getting to power, system of bilateral agreements. Decline of the LN. Rearrangement of powers during WWII. Cold war and i	s consequences for	or Europe.
	New quality of French-German relationship - a driving power of starting European integration.		
15Y1FD	French Area Studies and Transportation	KZ	2
	bly and regions, transport infrastructure. Paris and its sights, city public transport. Road traffic, motorways, railway traffic, TGV, air tra		
	nch society and culture. Current political system. System of education, studying in France. Selected authors of French literature. Fren		0,
15Y1HD	History of City Mass Transport	KZ	2
	s transport in the world, development of tram, bus and trolley-bus systems. History of transport networks in the world, current trends		
	ince systems. History of city transport in Prague and Brno. History of tram, bus and trolley-bus operation systems in the Czech Repul	•	
15Y1HE	Work Hygiene and Ergonomics in Traffic	KZ	2
	of occupational hygiene and ergonomics, and their application in transport. Working environment factors, and the influence of these		
ŭ	ction of working conditions that do not damage public health. Mutual links: man-machine-environment. Adaptation of technology to pro-		
	Practical examples from the field of transportation; relevant legislature.		
15Y1HL	History of Civil Aviation	KZ	2
	ן הואסוץ סו כוועון איז אומנוסוז g, development of aircrafts lighter than air. Beginnings of aircrafts heavier than air. Czechoslovak aviation pioneers. Development of a		
	amous aviators. Helicopters. CSA airplanes. Development of aircrafts in Czechoslovakia between the years 1945-1989. Classic era o	-	
world dirports. I t	aviation. Modern era of civil aviation. Airline companies. Supersonic flying.	aviation. Colden	SIG OF CIVII
15Y1MK	Modern History in Context: Every Day Life and Transport	KZ	2
TOT TIVIT	Historical overview of modern history of every day life, science, technology and transport in a wider context.	NZ.	
15Y1NE		KZ	2
	German in the Economy and Society and social issues of German speaking countries and of the EU. Reading and listening of texts. Lexical, grammatical and semantic ar		
Recent economic	selected topics.	alysis of texts. Dis	cussion on
45\/47\/	<u>'</u>	1/7	
15Y1ZV	East-West dichotomy: Prelude to the Cold War	KZ	2
	evolution of the "West" and "East" from the 1500s. Focus on the history in the period between 1850 had 1950. Milestones and continu	=	
in the end of 19th	century and the beginning of the 20th century. Revolutions, the causes and consequences. Scientific and technological progress, the	causes and cons	equences.
401144	Economic and financial history. Social changes. Discussions on texts, sources.	177	
16LLA1	Aircraft 1	KZ	3
Aircraπ structural a	nd conceptual design types - definitions and basic knowledge of the problem. Development of requirements, aircraft definitions and capacitations are designed to accordance to the problem.	_	art loadings.
4611.65	Systems of primary and secondary airframe structure. Airframe and propulsion unit. Lectures are devoted to aeroplane topic		
16LLA2	Aircraft 2	Z,ZK	2
		,	
Manufacturers resp	ponsibility, responsibilities of operator and professional supervising. Legislation in area of airworthiness. International and national star structures. Aeroelasticity. Inherent and operational reliability of aircraft structure. Fatigue strength. Aircraft structure lifetime presu	dards. Static solidi	

16UDOP	Introduction into Vehicles	Z	2
Vehicles and trans	sportation systems. Functionality and setup. Movement and drive principles. Engines and their characteristics. Rail, road, air and wate	r transport. Alterna	tive means
	of transport. Lifting equipment and conveyors. Legislation.		
16X31L	Project 1 LED	Z	2
16X32L	Project 2 LED	Z	2
16X33L	Project 3 LED	Z	2
16Y1EN	Energy Requirements of Vehicles	KZ	2
	e driving inertial of the vehicles. Types of energy - kinetic, static, heat, chemical and others. Ways of energy change into kinetic energy		
,	drive, steam engine, air engine. Energy accumulation means, accumulator, flywheel, fuel cell. Energy recuperation. WTW anal	-	.,
16Y1IS	Interactive simulators and simulations	KZ	2
	ry and application of computing equipment. Creating computing models. Mechanical and dynamic systems and their mathematical me		
	lation of vehicle dynamics, on-land carriage in particular. Virtual reality systems. Practical exercise with simulation software and intera		
16Y1KS	Quality and Reliability of Vehicles	KZ	2
_	pility theory in design, development, production and operation of vehicles. Definition and possible approach to quality and reliability. Ki		
-	Analysis), QFD (Quality Function Deployment), DFx (Design for Assamly, Manufacturying, Quality, Services) and other methods u		
	Knowledge-based systems of quality and reliability, data collection.	·	
16Y1PV	Operation, Construction and Maintenance of Vehicles	KZ	2
	e production. Vehicle maintenance. Vehicle diagnostics. Maintenence and repair plans. Engine maintenance and emission measureme		
	General principles of engine diagnostics.		
16Y1RE	Control and Electronic Vehicle Systems	KZ	2
	ots of regulation. Tools for analytical solution, linear system description. Basic types of a regulator (PID), properties, advantages, disadva		
	e control. Electric drive. Vehicle communication bus (CAN, LIN, FlexRay, ISObus, KWP2000 protocole etc.). Vehicle electronic control,		
,	comfort systems.	· ·	
16Y1SO	Strategy and innovation in mobility	KZ	2
	novation, definition. Innovation strategy. Innovation life cycle and ecosystem, main sources and funding opportunities. Successful inno		
	iation. Sprint method and its use. Innovative business model - main patterns and examples, design, strategy, processes and outlook (I		- 1
	of use). Creating an innovation strategy. Customer and value map, design and testing.		
16Y1VT	Development in Railroad Vehicles	KZ	2
Railroad vehicle	s traction. Railroad vehicle parametres regulation. Control and driving of railroad vehicles. Importance in heavy duty and personal tra-	nsportation. Critical	situation
	assesment. New materials in design. International standardization.		
16Y1ZG	Introduction into Applied Computer Graphics	KZ	2
	s, division and applications with emphasis on transport, including development and research. Colours, colour perception, colour sche		
and 3D generati	on, elementary algorithms for graphic data workout. Visualisation principles and tasks, technics, graphics and visualisation HW basics	s. Introduction to 2	D and 3D
	graphics software.		
16Y1ZL	Vehicle Testing, Legislation and Construction	KZ	2
	otorbike costruction, aggregate computing, driving resistance, build and parameters of traction, constructional arrangement of personal control of the contr		motorbikes,
	islation in the EU and in the world, technical legislation creation, testing methods, vehicle tests, accelerated tests, mathematical mode		
17TEDL	Transport Technology and Logistics	KZ	3
	asport technology and logistics, particular steps of transport planning, line planning, timetabling, planning in pasanger and freight tran		
-	nodus, technologic factors of the side of operator and client, organisation of city transport, logistic technologies and their aplication usi		
17TGA	Graph Theory and its Applications in Transport	Z,ZK	4
-	f graph theory, paths in graphs, flows in networks, location problems, design problems on graphs, optimum routing, use of graphs in c	_	
17X31L	Project 1 LED	Z	2
17X32L	Project 2 LED	Z	2
17X33L	Project 3 LED	Z	2
17Y1EV	Public Sector Economy	KZ	2
Economic and fina	ncial theory of public sector, public choice theory, externalites, decisions about public finance allocation, economic assesment of public	lic projects (CBA, I	MCA, CEA),
tax system of the C	R, state budget, management of public projects a their economic efficiency assessment, way of elaboration of PPP projects, funding from	om EU funds, progi	am HDM-4.
17Y1LL	Logistics of Passenger and Freight Air Transport	KZ	2
Logistics airline pa	ssenger and cargo. Aircraft and airport terminals for passenger and cargo transport. Airlines in terms of logistics systems. Aerial trans	sport process pass	engers and
	air cargo. Information systems in air transport. Global distribution systems.		
17Y1MD	Marketing in Transportation	KZ	2
General principles	of marketing applied to transport issues, marketing tools suitable for transport as a service, specifics of public passenger transport a	nd the resulting dif	ferences in
	the application of marketing.		
17Y1OF	Personal Finance	KZ	2
	(budget, financing of basic living needs), debt (loans and credits, payment instruments, interest and fees, debt trap), financing of house		
consumer loans, re	financing), savings and investments (investment horizon, return, risk, investment strategy), insurance (insurance types, suitability and	adequacy), securir	g the future
	(retirement savings and insurance).		
17Y1PM	Personnel Management	KZ	. 2
	ces, work group, man as personality, planning, choice, evaluation and education of human sources, work adaptation, teamwork, inter		
17Y1SK	Urban and Regional Rail Transport Systems	KZ	2
_	transport demand, modal-split, distribution of passenger flows on public regional transport lines. Optimization of line management, lines.	_	-
evaluation of th	e timetable. Vehicle circulation creation. Optimizing driver shifts and arranging them in turnus. Effects of barrier-free and public transp	ort preferences. Th	e role of
4=>// 2:	marketing.		
17Y1SL	Sociology of Human Resources	KZ	2
numan resources	and their importance, work group as a special kind of social group, communication, personal management, modern management, hum of the organization.	an resources plant	ııng, culture

47V4CT	Titos Circulation	1/7	_
17Y1ST	Titan Simulation	KZ	2
_	gement game simulating the business decisions. Lets 2-8 student groups to produce and compete in the market with the same produce		
determine the quar	ntity and capacity of production, plan budgets for marketing, research and development. They become familiar with the consequences	of their decisions	by the form
	of financial corporate reports and they use this information for other business decisions.		
18MTY	Materials Science and Engineering	Z,ZK	3
Basic course of ma	iterials science and engineering explains mechanical properties of structural materials based on their bonding forces and microstructu	re. However the ma	ain attention
is paid to metals as	s the most important engineering materials, also other major classes of materials are presented, namely ceramics, polymers and com	posites. Attention	is also paid
	to degradation processes in materials, to defectoscopy and to main mechanical tests.		
18PZP	Elasticity and Strength	Z,ZK	3
Tension and compr	ession. Bending of beam. Shear stress in bending of beam. Design and analysis of cross section of beam. Design of riveted, bolted a	nd welded joints o	f structures.
	Analysis of deflection curve of beams. Torsion of circular cross sections. Combined loading. Stability.		
18SAT	Structural Analysis	Z,ZK	4
General system of	of forces in plane and space. Calculation of reactions of bodies and structures. Assessment of internal forces on statically determinate	•	le girders.
=	vork. Kinematic method for calculation of reactions of statically determinate systems. Determination of axial forces in truss constructions.	· · · · · · · · · · · · · · · · · · ·	-
·	of planar shapes. Fiber polygons and chains.		
18SPP	Seminary from Elasticity and Strength	Z	0
	tice. Tension and compression. Bending of beam. Shear stress during bending of beam. Design and analysis of cross section of beam	_	_
Exceleige for pract	of beam. Torsion of circle cross section. Combined loading. Stability of compressed bar and buckling.	i. 7 triaryolo or dollo	otion ourvo
18SS		Z	0
	Seminary from Structural Analysis	-	
	ise. General system of forces. Reactions of mass objects and compound systems. Internal forces on statically determinate beam and	-	
or principle or virtu	ual works for calculation of reactions of staticaly determinate systems. Determination of axial forces in truss construction - method of j Geometry of cross sections. Plane fiber polygons.	oints and method	or sections.
100TD			
18STD	Seminary from Technical Documentation	. Z	0
Technical standa	ards, international standardization, technical drawings, representation of technical objects, technical diagrams and charts, dimensional	l and geometrical	accuracy,
	arrangement of drawing sheets.		
18TED	Technical Documentation	KZ	2
Technical standa	ards, international standardization, technical drawings, representation of technical objects, technical diagrams and charts, dimensiona	I and geometrical	accuracy,
	arrangement of drawing sheets.		
18X31L	Project 1 LED	Z	2
18X32L	Project 2 LED	Z	2
18X33L	Project 3 LED	Z	2
18Y1AM	Anatomy, Mobility and Safety of Man	KZ	2
	Anatomy, Mobility and Safety of Man Anatomical structure and growth of bones. Articular joint. Remodelling of bone tissue. Anatomical structure of muscles. Blood circulation		
-	of muscular-skeletal system. Injury of human organs and musculo-skeletal system during traffic accidents. Mobility of ill and injured n	-	
and biomoonamoo	joint prostheses. Protective means and traffic safety regulations.	ian and mo troutin	lone manan
10V1EM		V7	2
18Y1EM	Experimental Methods in Mechanics	KZ	2 Design of
The purpose and r	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive	testing of materials	s. Design of
The purpose and r	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive cedures and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement. Fa	testing of materials	s. Design of
The purpose and reexperimental production	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive cedures and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement. Fa Instrumented hardness testing. Introduction to electron microscopy. Errors in measurement.	testing of materials tigue and lifetime p	s. Design of prediction.
The purpose and rexperimental production 18Y1MT	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive cedures and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement. Fa Instrumented hardness testing. Introduction to electron microscopy. Errors in measurement. Engineering Materials	testing of materials tigue and lifetime p	s. Design of prediction.
The purpose and rexperimental production 18Y1MT Systematic overview	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive of experimental methods. Destructive of experimenta	testing of materials tigue and lifetime p KZ I composites, atter	s. Design of prediction.
The purpose and rexperimental production 18Y1MT Systematic overvies to biole	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive redures and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement. Fa Instrumented hardness testing. Introduction to electron microscopy. Errors in measurement. Engineering Materials ew of main classes of materials used in technical design. In addition to main classes of materials, i. e. metals, ceramics, polymers and ogical materials and to biomimetics. Integral approach to material selection process is also demonstrated based on so called Ashby's	testing of materials tigue and lifetime p KZ I composites, atter selection charts.	s. Design of prediction. 2 Intion is paid
The purpose and rexperimental production and the experimental purpose and respectively. The purpose and respectively are experimental production and the exper	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive reduces and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement. Fa Instrumented hardness testing. Introduction to electron microscopy. Errors in measurement. Engineering Materials ew of main classes of materials used in technical design. In addition to main classes of materials, i. e. metals, ceramics, polymers and ogical materials and to biomimetics. Integral approach to material selection process is also demonstrated based on so called Ashby's Computer Simulations in Mechanics	testing of materials tigue and lifetime position KZ I composites, atters selection charts.	s. Design of prediction. 2 nation is paid
The purpose and rexperimental production of the experimental p	Experimental Methods in Mechanics role of experimental mechanics. Sensors for mechanical testing. Overview of experimental methods. Destructive and non-destructive reduces and sample preparation. Tensile and bending tests. Electrical resistance strain gages. Optical based strain measurement. Fa Instrumented hardness testing. Introduction to electron microscopy. Errors in measurement. Engineering Materials ew of main classes of materials used in technical design. In addition to main classes of materials, i. e. metals, ceramics, polymers and ogical materials and to biomimetics. Integral approach to material selection process is also demonstrated based on so called Ashby's Computer Simulations in Mechanics rview of tools for stress analysis of structures. Numerical methods in mechanics, finite element method. Geometric model development	KZ composites, atter selection charts. KZ nt and adaptation of	s. Design of prediction. 2 ntion is paid 2 of geometry
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		·	1
20Y1EA	Environmental Aspects of Transport	KZ	2
State of the atmosp	ohere, weather observation network, weather in transportation, road meteorology. Weather forecasting, data assimilation, probabilistic	forecasts, forecas	t evaluation.
Air quality, main	n pollutants and their effects, atmospheric chemistry, traffic emissions. Greenhouse gasses, carbon cycle, a role of energy and transp	ortation in climate	change.
20Y1EK	Qualification in Electrical Engineering	KZ	2
-	e with measurements in laboratories, electrical equipment, power supply, electrical installation of low voltage, electric shock hazard,		1
	allowed currents, electrical equipment protection against short circuit and overload protection, control and revision, first aid, legislati	•	•
voltago, maximum	in relation to health and safety and electrical engineering.	ori, staridards arid	regulations
2074170		V7	
20Y1KP	Communication and presentation skills	KZ	2
	es and their fulfillment, current communication networks, work with various sources, formal requirements of emails and final theses, be	,, ,,	
teamwork, emot	tional intelligence, manipulation and way of working with it, coping with stressful situations, formal requirements of presentations, wa	ys of communication	on during
	presentation, presentation skills, presentation skills in online environment.		
20Y1LN	Location and Navigation	KZ	2
Description and e	examples of road networks, localization on the network. Routing algorithms, their properties and implementation. Description and exa	mples of datasets	for finding
	transport connections, routing algorithms, their properties and implementation.		
20Y1OI	Fare Collection and Information Systems	KZ	2
	/stems in public transport and their components (on-board units, validators, turnstiles,). Information systems and their components		1
	nels) and operators (cycles, location or current delay of vehicles,). The issue of tariff systems. Other examples of clearance syst		ics, maps,
· .			
20Y1OK	Road Lighting	KZ	2
	tities and terms, street lighting components (luminaires, control cabinets for street lighting, street lighting cables), characteristics of lumi	•	•
light distribution),	standards, measurement of illuminance and luminance in road lighting, tunnels, conceptual approach to street lighting design, lightir	ng calculations in D	DIALux and
	Relux, street lighting control systems.		
20Y1PK	Product Quality Management Processes	KZ	2
	of organization management. Management systems and international standards; quality management systems. Quality products, pro		A framework
	stems management, management principles. Principles of process management, monitoring and measurement systems management. U	· · · · · · · · · · · · · · · · · · ·	
	for systems management. Process management principles. Metrology and testing. Product certification.		
201/400		1/7	
20Y1SC	Sensors and Actuators	KZ	2
rinciples of sensor	rs and actuators. Basics of measuring theory and actuating influence. The respective technologies and construction principles. Sensors o		ro-magnetic,
	state (temperature, humidity), chemical and particle flow values. Electrical, pneumatic and hydraulic actuators and solid phase el		
21EMIL	Air Transport Economy	Z,ZK	5
The course focus	ses on the fundamentals of economics, providing students with an understanding of accounting principles and role of financial statem	ents. In the secon	d part, the
course builds on th	ne general knowledge acquired and applies it to the environment of air transport economics. The basic principle is the Holloway mode	el, which structures	knowledge
	about demand, price and yield on the one hand, and supply, costs and expenses on the other.		
21LEIS	Aerodromes	Z,ZK	3
	ns. Applicability. Airport design. Reference code. Declared distances of runways (RWY). Taxiways and aprons. Clearway. Stopway. Ma		
	arkers. Visual aids for denoting obstacles. Obstacle restriction, removal. Visual aids for navigation, lights, approach lighting systems.	-	
iviai kii iys. Siyi is. ivi	arkers. Visual alus for derioting obstacles. Obstacle restriction, removal. Visual alus for havigation, lights, approach lighting systems. V	risuai appi vaci i sic	pe illulcator
	ayatama Punyay lighta Tayiyay lighta Vigual aida for donating ahataalaa		•
211 225	systems. Runway lights. Taxiway lights. Visual aids for denoting obstacles.		
21LGCE	Air Navigation	Z,ZK	3
		1	-
	Air Navigation	1	-
	Air Navigation parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigati	1	-
Earth - its shape, p	Air Navigation parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigati services routes and their design.	on satellite system	ns. Air traffic
Earth - its shape, p	Air Navigation parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigation services routes and their design. Aviation English 1 Familiarity with the terminology used in civil aviation in the general context and emphasizing the ability to receive information only in the general context.	on satellite system Z n English.	ns. Air traffic
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Earth - its shape, p 21LGL1 21LGL2	Air Navigation parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigation services routes and their design. Aviation English 1 Familiarity with the terminology used in civil aviation in the general context and emphasizing the ability to receive information only in the Sphere of aircraft construction, principles of flight, aircraft engines, instruments and systems.	Z n English. KZ	s. Air traffic
21LGL1 21LGL2 21LGVP	Air Navigation parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigation services routes and their design. Aviation English 1 Familiarity with the terminology used in civil aviation in the general context and emphasizing the ability to receive information only in the sphere of aircraft construction, principles of flight, aircraft engines, instruments and systems. Legislation and Operational Regulations	Z n English. KZ ZK	2 2
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21LGL1 21LGL2 21LGVP Introduction into ar 7030, 8168	Air Navigation parameters and properties. Aeronautical charts and their use. Measuring time. Dead reckoning. Radionavigation aids. Global navigation services routes and their design. Aviation English 1 Familiarity with the terminology used in civil aviation in the general context and emphasizing the ability to receive information only in Aviation English 2 Terminology in the sphere of aircraft construction, principles of flight, aircraft engines, instruments and systems. Legislation and Operational Regulations Viation regulations. The scope of international and national organizations in civil aviation. Analysis and interpretation of the ICAO Analysis and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decisions of the Executive Commission Regulation (EU) and the Decision Regulation (EU) and t	Z n English. KZ ZK nexes 1-19, ICAO I	2 2 4 4 4 4 4 4 4 5 5 6 6 6 6 6 6 6 6 6 6 6
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21SBL3	Bachelor Thesis Seminar 3 hic design of the thesis. Data collection and presentation, basic statistical reasoning, validation of results and designs. Achieving the	Z	
T Offilal and grap	evaluation of hypothesis tests. Preparation of the presentation, principles of presentation of the thesis.	objectives of the ti	icsis ariu
21SLD	Seminar of Air Transport	Z	0
_	ons, terminology, basic rules. VFR / IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio na	vigation. Weight, b	
performance. Flig	ht planning, optimization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic ma	nagement, ground	l handling,
	security. Air crew. Airlines and economics. Space technologies.		
21SYLP	Airport Security	KZ	2
	on security and unlawful acts against the civil aviation. Description of threats, risks, causes and goals of Security. Overview of nationa		-
	evance to airport security. Security control devices. Operational efficiency factors and related variables. Basic use of queueing theory		
21X31L	Project 1 LED	Z	2
21X32L	Project 2 LED	Z	2
21X33L	Project 3 LED	Z	2
21Y1AM	Aeronautical Information Management (AIM)	KZ	2
	c overview of AIS and AIM. Transition from AIS to AIM. Regulatory base. Provision of AIS/AIM in the Czech Rep. AIP (Aeronautical In		
lile Czecii Rep. A	IRAC System. NOTAM messages.PIB (Pre-flight Information Bulletin). AIC (Aeoronautical Inf. Circulars). Aeronautical Charts. EAD (Eu (Quality Mng. System). ADQ (Aeronautical Data Quality). AIXM (Aeronautical Inf. Exchnage Format).	Topella AlS Dalab	ase). QIVIS
21Y1BS	Unmanned aircraft systems 1	KZ	2
	n Development. Aircraft design. Legislation in force in the Czech Republic. Planning and execution of the flight. Airspace division. Ope		_
	procedures. Practical flights.		
21Y1LJ	Aeronautical Radio and Flight Instruments	KZ	2
	story of aircraft instrumentation, aerometric instrumentation, Earth magnetism, aircraft electric equipment, gyroscopic instrumentation		
other aircra	oft equipment, engine instrumentation, warning and recording systems, instrumentation operational requirements, radiocommunicatio	n and radionaviga	tion.
21Y1LS	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 control. His	story of ATS
	at USA and Czechoslovakia. ATS - Model of financing. Training System of Air Traffic Controllers. Future development of ATS		
21Y1MP	Matlab for project-oriented study	KZ	2
1	bus is focused on the problem-solving during bachelor's thesis preparation and it is based on students' requests. Individual exercises		- 1
<u> </u>	les, based on actual students' needs and suggestions. The subject will have a flexible form, which is expected to bring an improveme		
21Y1OH	Airline Business and Operations s a comprehensive view of the commercial, operational and transportation activities of air transport companies. It focuses on the organiz	KZ	2
1	heir strategy, economic and operational indicators. It introduces students in detail to operational processes and the essentials of transp		
various aspects of t	a basic view of the economic aspects of air transport.	ortation processes	s. It provides
21Y1PC	ATC Procedures and Activities	KZ	2
_	procedures, basics of communication and phraseology, aircraft identification, spacing and traffic coordination. In addition, the course of		
the airpor	ts and low visibility operational procedures. Students will during the course learn basic safety management applications applied acro	ss the infrastructu	re.
21Y1RZ	Human Resources Management	KZ	2
	numan resources in the organization and related disciplines file. Substance, importance and challenges of human resources manage		
environment of hun	nan resource management. Human resource planning. Search, recruitment and selection of employees. Motivation, evaluation and ren	nuneration of staff.	Positioning,
247/461	dismissal and redundancies of employees. Education of employees. Planning career management. ATC Simulator	V7	2
21Y1SI Familiarization	ATC SITURATOR	KZ	2 Practical
	ng on basic vectoring, early application of vertical separation, EST and REV message passing. Practical exercises in the APPROACH		
	departure management procedures, conflict resolution.	3	
21Y1UL	Aircraft Maintenance	KZ	2
	and technical operations. Maintenance and work processes. Defects search methods, status check diagnostic tools. Selection and qua	lification of aviation	n personnel.
Basic documentat	ion for maintenance. Optimization of time maintenance intervals. Regulation no. 1321/2014 Part 145. Human factors of aircraft mainte	enance. Regulation	of director
	EASA for aircraft maintenance. Seminars will be focused on practical application.		
21ZALD	Basics of Air Transport	KZ	2
I -	terminology, basic rules. VFR/IFR. Basics of aerodynamics. Propulsion of aircraft. Aircraft design. Basics of navigation, radio navigation.	-	
i light planning, opt	imization of speed and heights, minimum fuel. Limitations of operation, maintenance, service life of aircraft. Traffic management, ground Airlines and economics. Space technologies.	na nanuling, secul	ity. All CfeW.
21ZT	ATM Systems	ZK	2
	oduces classical and modern facilities, systems and technologies designated for ATS. Student obtains knowledge of technical princip		'
	communication, navigation and surveillance aviation systems are concerned.		
21ZYT1	Principles of Flight 1	Z,ZK	3
Aerodynamic drag,	relation between drag and speed, streamline, boundary layer, formula of continuity, formula of Bernoulli, lift and drag, air flow and pro		
attack, reactions of	wing in air flow, lift and drag of a wing and an aircraft, coefficient of lift and drag, critical angle of attack, wing with final span, induced	drag, interference	, devices for
	lift and drag increase.		
21ZYT2	Principles of Flight 2	Z,ZK	3
1	amic longitudinal stability, neutral point, location of centre of gravity, static directional & properties and stability, dynamic directional & amp; roll (lateral), roll (vary interaction, trimming, speed of sound. Mach number, compressibility, shock wayes, critical	=	
(iorigituulfiai), ya	w (directional) & (lateral), roll/yaw interaction, trimming, speed of sound, Mach number, compressibility, shock waves, critical heating, operating limitations, manoeuvring envelope, gust-load diagram.	wacii iluilibel, ael	ouynaniic
22SELN	Air Accident Investigation	ZK	2
	gislation (ICAO, EU, Czechia) related to air accident investigation. Obligations arising from legislative requirements for individual States		
	ess. Air accident site (inspector's equipment, site security, personal protection, initial activities at the site, sketch, evidence, etc.). Aircr		
	Final report (formalities, substantive content, contribution).		
22X31L	Project 1 LED	Z	2
22X32L	Project 2 LED	Z	2
22X33L	Project 3 LED	Z	2
•	· · · · · · · · · · · · · · · · · · ·	•	

23X31L	Project 1 LED	Z	2
23X32L	Project 2 LED	Z	2
23X33L	Project 3 LED	Z	2
23Y1EH	Electronics and hardware in security of transportation	KZ	2
Types and parame	eters of signals. Passive circuits, properties, basic measurements. Passive filters, semiconductors. Operational amplifiers, basic circu	its, parameters. A	ctive filters.
Power supplies. Log	gic circuits. AD converters. Connection of analog and digital parts. Basic blocks of digital signal processing. Measurement processing. D in electronics.	esign and fabricat	ion methods
23Y1KB	Cyber security in transportation	KZ	2
Basic concepts of	security and cyber security, legal status in the field of cyber security, virtual cyberspace and communities, taxonomy of crimes in cyberspace	erspace, social imp	acts, social
engineerin	ng, cyber attack technology, information security, cyber attacks on telematics systems, security of systems with artificial intelligence, r	norms and standar	rds.
23Y1KM	Crisis Management	KZ	2
Theory and legal fra	ame of crisis management with direction to Rescue system (IZS). After introduction to safety domain, there are terms and knowledge of	on: theory and pos	ition of crisis
manag	gement and its targets; IZS-crisis management-crisis planning; and basic legislation. Practical part is concentrated to responsibility m	atrix compilation.	
23Y1KO	Quantum Physics and Optoelectronics	KZ	2
	Ground of quantum physics. Application of quantum physics in practice. Optoelectronics. Production of optoelectronics compor		
23Y1KY	Cybernality	KZ	2
Juridical aspects of	behavior on the computer network and computer systems. Cybernetic crime technology. Theory basis and models. Cyberterrorism. Inf	oware and connec	ted aspects.
23Y1MK	Crisis Situation Management in Critical Infrastructure	KZ	2
Determination of c	ritical infrastructute elements on all levels, their protection systems, responsibilities of particular agencies of the state administration	and the self-gover	nment, and
their	responsibilities to anounce particular safety provisions. Physical and cyber protection of critical infrastructure with special attention to	the soft targets.	
23Y1MU	Emergency Events Management Solution in Transport Infrastructure	KZ	2
Basic solutions of e	mergency events with emphasis of the transport infrastructure events and their solution management. Knowledge in the emergency plants are the contractions of the transport infrastructure events and their solution management.	anning and specia	l procedures
	in liquidation work within the transport infrastructure.		
23Y1OK	Protection of Critical Objects and Infrastructures	KZ	2
Types of technologi	cal systems, critical item, risks and their courses, criticality, vulnerability, connectivity, dependability, resilience, failure, protection, safe	ty of critical object	s and critical
	infrastructures.		1
23Y1TP	Criminal Law in IT and Transportation	KZ	2
Introduction of cri	minal law into legal order, conception of culpability and criminal delict, consequency of other legal standards. international treaty and	criminal law, inves	stigation of
	crime, specific indicia of criminal court cases, practical examples.		1
23Y1VS	Negotiation and Cooperation	KZ	2
	r negotiation. The influence of personality traits on the negotiations. Negotiation and commanding. Teamwork. Variants teams. Inform		
Principles of negoti	ation, the essence of negotiation, the differences in negotiation in business and in crisis situations, the principle of "win both", specific	cations and bidding	g, the role of
T) / 4	trust.	-	
TV-1	Physical Education	Z	1
TV-2	Physical Education	Z	1
TVKLV	Physical Education Course	Z	0
TVKZV	Physical Education Course	Z	0

For updated information see http://bilakniha.cvut.cz/en/FF.html Generated: day 2025-10-25, time 07:45.