Recomended pass through the study plan

Name of the pass: Master Full-Time IS (CS) from 2025/26

Faculty/Institute/Others:

Department:

Pass through the study plan: Master Full-Time IS (CS) from 2024/25

Branch of study guranteed by the department: Welcome page

Guarantor of the study branch:

Program of study: Intelligent Transport Systems

Type of study: Follow-up master 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) Tutors, authors and guarantors (gar.)	Completion	Credits	Scope	Semester	Role
16DITS	Vehicles within ITS Jan Leistner, Filip Kotas, David Lehet, Jaroslav Machan	Z,ZK	4	2P+2C	Z	Z
20GINS	Geographical, information, localization and navigation systems Pavel Hrubeš, Petr Bureš, Zuzana Purkrábková, František Kekula Pavel Hrubeš	Z,ZK	6	3P+3C	Z	Z
11MAI	ITS Mathematical Tools Jan P ikryl Jan P ikryl (Gar.)	Z,ZK	4	2P+2C	Z	Z
20TSJ	Telematic systems and their design Pavel Hrubeš, Martin Langr Martin Langr	Z,ZK	6	3P+2C	Z	ZP
15JIA1	Foreign Language - English 1 Markéta Musilová, Dana Boušová, Jitka He manová, Marie Michlová, Lenka Monková, Peter Morpuss, Eva Rezlerová	Z	0	0P+2C	Z	Z
15JIF1	Foreign Language - French 1 Irena Veselková	Z	0	0P+2C	Z	Z
15JIN1	Foreign Language - German 1 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	0	0P+2C	Z	V
15JIR1	Foreign Language - Russian 1 Marie Michlová	Z	0	0P+2C	Z	V
15JIS1	Foreign Language - Spanish 1 Nina Hricsina Puškinová	Z	0	0P+2C	Z	V
23TBSS	Technology and Security of Sensor Networks	KZ	2	2P+0C	Z	V
X2-NP-IS-CS-20/21	Projekty Mgr. prezen ní IS (CS) od 2020/21 11XN1S,12XN1S, (see the list of groups below)	Min. cours. 4 Max. cours. 4	Min/Max 27/27			ZP
1S-NP-IS-CS-V-20/21	1. sem. Mgr. prezen ní IS (CS) výb r p edm tu od 2020/21 12TDP,16ESDP, (see the list of groups below)	Min. cours. 1 Max. cours. 1	Min/Max 3/3			Z

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
20BITS	Safety and reliability of ITS Systems Vladimír Faltus, Tomáš Tichý	KZ	3	2P+1C	L	Z
14CITS	C-ITS Systems Zden k Lokaj, Tomáš Zelinka, Miroslav Vaniš Zden k Lokaj (Gar.)	Z,ZK	6	3P+3C	L	Z

14PPRP	Computer Aided Project Management Marek Kalika Marek Kalika (Gar.)	KZ	2	0P+2C	L	Z
14PD	Data processing Martin Šrotý , Miroslav Vaniš, Michal Je ábek Martin Šrotý Martin Šrotý (Gar.)	Z,ZK	6	2P+4C	L	Z
14PAM	Programming and modelling Vít Fábera, Marek Kalika, Tomáš Brandejský, Martin Fiala Vít Fábera Vít Fábera (Gar.)	Z,ZK	4	2P+2C	L	Z
15JIA2	Foreign Language - English 2 Eva Rezlerová	Z	0	0P+2C	L	ZP
15JIF2	Foreign Language - French 2 Irena Veselková	Z	0	0P+2C	L	Z
15JIN2	Foreign Language - German 2 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	0	0P+2C	L	V
15JIR2	Foreign Language - Russian 2 Marie Michlová	Z	0	0P+2C	L	V
15JIS2	Foreign Language - Spanish 2 Nina Hricsina Puškinová	Z	0	0P+2C	L	V
		Min. cours.				
VO ND 10 00 00/04	Projekty Mgr. prezen ní IS (CS) od 2020/21	4	Min/Max			
X2-NP-IS-CS-20/21	11XN1S,12XN1S, (see the list of groups below)	Max. cours.	27/27			ZP
		4				
		Min. cours.				
22 117 12 22 17 22 12 1	2. sem. Mgr. prezen ní IS (CS) výb r p edm tu od 2020/21	1	Min/Max			
2S-NP-IS-CS-V-20/21	14MIM,16SHMI, (see the list of groups below)	Max. cours.	3/3			Z
		1				

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
15JIA3	Foreign Language - English 3 Markéta Musilová, Dana Boušová, Jitka He manová, Marie Michlová, Lenka Monková, Peter Morpuss, Eva Rezlerová, Markéta Vojanová	Z	0	0P+2C	Z	ZP
15JIF3	Foreign Language - French 3 Irena Veselková	Z	0	0P+2C	Z	Z
15JIN3	Foreign Language - German 3 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	0	0P+2C	Z	V
15JIR3	Foreign Language - Russian 3 Marie Michlová	Z	0	0P+2C	Z	V
15JIS3	Foreign Language - Spanish 3 Nina Hricsina Puškinová	Z	0	0P+2C	Z	V
20AIMI	Application of ITS in Urban Engineering Ji í R ži ka, Tomáš Tichý, Josef Kocourek, Dagmar Ko árková, Josef Filip Tomáš Tichý	Z,ZK	6	3P+3C	Z	V
20HEI	Evaluation and Economics of ITS František Kopecký František Kopecký	KZ	3	2P+1C	Z	V
11MMAD	Mathematical Methods for Data Analysis Pavla Pecherková, Tetiana Reznychenko, Evženie Uglickich, Ivan Nagy Pavla Pecherková Ivan Nagy (Gar.)	Z,ZK	6	3P+3C	Z	
20SYIN	System Engineering Zuzana B linová, Veronika VI ková Zuzana B linová	Z,ZK	6	4P+2C	Z	
X2-NP-IS-CS-20/21	Projekty Mgr. prezen ní IS (CS) od 2020/21 11XN1S,12XN1S, (see the list of groups below)	Min. cours. 4 Max. cours. 4	Min/Max 27/27			ZP

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
15JIA4	Foreign Language - English 4 Eva Rezlerová	Z	0	0P+2C	L	Z
15JIF4	Foreign Language - French 4 Irena Veselková	Z	0	0P+2C	L	Z

15JIN4	Foreign Language - German 4 Eva Rezlerová, Martina Navrátilová, Jana Štikarová	Z	0	0P+2C	L	ZP
15JIR4	Foreign Language - Russian 4 Marie Michlová	Z	0	0P+2C	L	V
15JIS4	Foreign Language - Spanish 4 Nina Hricsina Puškinová	Z	0	0P+2C	L	V
		Min. cours.				
V2 ND 10 00 20/24	Projekty Mgr. prezen ní IS (CS) od 2020/21	4	Min/Max			75
X2-NP-IS-CS-20/21	11XN1S,12XN1S, (see the list of groups below)	Max. cours.	27/27			ZP
		4				

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

Kód		Name of the group of group (for specifical	of courses and tion see here o	codes of members of this r below the list of courses)	Com	pletion	Credi	ts Scope	Semester	Rol
1S-NP-IS	S-CS-V-20/21	1. sem. Mgr. prezer	n ní IS (CS) výl	orpedm tu od 2020/21		cours. 1 cours.	Min/M 3/3	ax		z
						1				
12TDP	Traffic Flow	Theory	16ESDP	Electronic systems in modern veh		20MZZ		Modern techn	iques of safety	cont
					Min.	cours.				
						1	Min/M	ax		
2S-NP-IS	S-CS-V-20/21	2. sem. Mgr. prezer	n ní IS (CS) výl	orpedm tu od 2020/21	Max	cours.	3/3			Z
					IVIGA		0,0			
						1				
14MIM	Microsimul	ation Models	16SHMI	Simulation and HMI	,	20ITSR		ITS - R		
					Min.	cours.				
						4	Min/M	ax		
X2-NP-I	S-CS-20/21	Projekty Mo	gr. prezen ní IS	S (CS) od 2020/21						ZF
			J 1	(00) 04 2020/21	May	COLUEC	27/27	7	1	
		, , ,	, , , , ,	(00) 00 1010/1	Max	cours.	27/27	7		
				7 (00) 00 2020/21	Max	cours.	27/27	7		
11XN1S	Master pro	ject 1 for study progr	12XN1S	Master project 1 for study progr	Max				t 1 for study pro	ogr
15XN1S					Max	4 14XN1S 17XN1S		Master project	t 1 for study pro	
15XN1S	Master pro	ject 1 for study progr	12XN1S	Master project 1 for study progr	Max	4		Master project	, ,	ogr
15XN1S 18XN1S	Master pro	ject 1 for study progr ject 1 for study progr	12XN1S 16XN1S	Master project 1 for study progr Master project 1 for study progr	Max	4 14XN1S 17XN1S		Master project Master project Master project	t 1 for study pro	ogr ogr
15XN1S 18XN1S 22XN1S	Master pro Master pro Master pro	ject 1 for study progr ject 1 for study progr ject 1 for study progr	12XN1S 16XN1S 20XN1S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr	Max	4 14XN1S 17XN1S 21XN1S		Master project Master project Master project Master project	t 1 for study pro	ogr ogr
15XN1S 18XN1S 22XN1S 14XN2S 17XN2S	Master pro Master pro Master pro Master pro	ject 1 for study progr ject 1 for study progr ject 1 for study progr ject 1 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S 18XN2S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S		Master project Master project Master project Master project Master project	t 1 for study pro t 1 for study pro t 2 for study pro	ogr ogr ogr
15XN1S 18XN1S 22XN1S 14XN2S 17XN2S 21XN2S	Master pro Master pro Master pro Master pro Master pro	ject 1 for study progr ject 2 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr Master project 2 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S 11XN3S		Master project	t 1 for study pro t 1 for study pro t 2 for study pro t 2 for study pro	ogr ogr ogr ogr
15XN1S 18XN1S 22XN1S 14XN2S 17XN2S 21XN2S	Master pro Master pro Master pro Master pro Master pro Master pro	ject 1 for study progr ject 2 for study progr ject 2 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S 18XN2S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr Master project 2 for study progr Master project 2 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S		Master project	t 1 for study pro t 1 for study pro t 2 for study pro t 2 for study pro t 2 for study pro t 2 for study pro	ogr ogr ogr ogr ogr ogr
15XN1S 18XN1S 22XN1S 14XN2S 17XN2S 21XN2S 12XN3S 16XN3S	Master pro Master pro Master pro Master pro Master pro Master pro Master pro	ject 1 for study progr ject 2 for study progr ject 2 for study progr ject 2 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S 18XN2S 22XN2S 14XN3S 17XN3S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S 11XN3S 15XN3S 18XN3S		Master project	t 1 for study prot t 1 for study prot t 2 for study prot t 2 for study prot t 2 for study prot t 3 for study prot	ogr ogr ogr ogr ogr ogr ogr ogr
15XN1S 18XN1S 22XN1S 14XN2S 17XN2S 21XN2S 12XN3S 16XN3S	Master pro Master pro Master pro Master pro Master pro Master pro Master pro Master pro	ject 1 for study progr ject 2 for study progr ject 3 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S 18XN2S 22XN2S 14XN3S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr Master project 3 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S 11XN3S 15XN3S		Master project	t 1 for study pro t 1 for study pro t 2 for study pro t 2 for study pro t 2 for study pro t 3 for study pro t 3 for study pro t 3 for study pro	ogr
15XN1S 18XN1S 22XN1S 14XN2S 17XN2S 21XN2S 12XN3S 16XN3S 20XN3S	Master pro Master pro Master pro Master pro Master pro Master pro Master pro Master pro Master pro	ject 1 for study progr ject 2 for study progr ject 3 for study progr ject 3 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S 18XN2S 22XN2S 14XN3S 17XN3S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr Master project 3 for study progr Master project 3 for study progr Master project 3 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S 11XN3S 15XN3S 18XN3S		Master project	t 1 for study prot t 1 for study prot t 2 for study prot t 3 for study prot	ogr
15XN1S 18XN1S 22XN1S 14XN2S 14XN2S 21XN2S 21XN2S 12XN3S 16XN3S 20XN3S 11XN4S	Master pro Master pro	ject 1 for study progr ject 2 for study progr ject 2 for study progr ject 2 for study progr ject 3 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S 18XN2S 22XN2S 14XN3S 17XN3S 21XN3S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr Master project 3 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S 11XN3S 15XN3S 18XN3S 22XN3S		Master project	t 1 for study prot t 1 for study prot t 2 for study prot t 3 for study prot	ogr
11XN1S 15XN1S 18XN1S 22XN1S 14XN2S 17XN2S 21XN2S 12XN3S 16XN3S 20XN3S 11XN4S 15XN4S 18XN4S	Master pro	ject 1 for study progr ject 2 for study progr ject 2 for study progr ject 2 for study progr ject 3 for study progr ject 4 for study progr	12XN1S 16XN1S 20XN1S 11XN2S 15XN2S 18XN2S 22XN2S 14XN3S 17XN3S 21XN3S 12XN4S	Master project 1 for study progr Master project 1 for study progr Master project 1 for study progr Master project 2 for study progr Master project 3 for study progr Master project 4 for study progr	Max	4 14XN1S 17XN1S 21XN1S 12XN2S 16XN2S 20XN2S 11XN3S 15XN3S 18XN3S 22XN3S 14XN4S		Master project	t 1 for study prot t 1 for study prot t 2 for study prot t 3 for study prot t 4 for study prot t 4 for study prot t 4 for study prot	ogr

List of courses of this pass:

Code	Name of the course	Completion	Credits
11MAI	ITS Mathematical Tools	Z,ZK	4
Series, Fourier S	eries. Discrete Fourier Transform. Segmentation of signals, windows, localization. Short-term Fourier Transform. From Fourier Analys	is to PDE. Fundan	nentals of
N	umerical Mathematics. Numerical solutions to ODEs and PDEs. Continuous traffic flow models described by PDE. Car-following mod	els as ODEs.	
11MMAD	Mathematical Methods for Data Analysis	Z,ZK	6
Stocastic	modelling, estimation, prediction, filtration, control, methods of data analysis: k-means, DBSCAN, naive Bayes, decision trees, supp	ort vector machine	e.
11XN1S	Master project 1 for study programme IS	Z	5
11XN2S	Master project 2 for study programme IS	Z	6
11XN3S	Master project 3 for study programme IS	Z	6
11XN4S	Master project 4 for study programme IS	Z	10

	Traffic Flow Theory	Z,ZK	3
12TDP	ted human problems. Basic traffic parameters and their measurement. Estimation of quality of services. Theoretical fundamentals and	,	-
-	ic, statistical and microscopic models. Theory of shock waves, queuing theory and special theory of traffic phenomena. Relation betw		
	flow management.		
12XN1S	Master project 1 for study programme IS	Z	5
12XN2S		<u>Z</u>	6
	Master project 2 for study programme IS		_
12XN3S	Master project 3 for study programme IS	Z	6
12XN4S	Master project 4 for study programme IS	Z	10
14CITS	C-ITS Systems	Z,ZK	6
•	of C-ITS systems architecture, description of use-cases - urban and rural applications, principles of C-ITS funcionality with focus on or	• •	
/I) and C-ITS secu	rity architecture. Status quo and modern trends of wireless telecommunication solutions ITS-G5 and LTE-V and description of its pro	perties and spe	cifics. Cours
	will also cover signal processing.		
14MIM	Microsimulation Models	KZ	3
_	of traffic modeling and simulation will be broaded by the application of traffic control algorithms to traffic microsimulation models use		
cample, the propos	al of algorithms for actuated signal control, pedestrian preference, dynamic network routing, road line traffic control, crossing security e	quipment, and P	T preference
	Algorithms will be designed, applied, and tested by students themselves.		
14PAM	Programming and modelling	Z,ZK	4
	ramming, dynamic memory allocation, inheritage, generic programming, STL, abstract data types, programming techniques, recursio		-
ırammars, paralism	in nature and in real systems, paralel computer systems, paralel programming, discrete simulation, models of processes, model typ	es As-Is a To-Be	e, acquisition
	of analytical sources for modelling, BPMN language, SW Bizagi, model creation and life cycle.		
14PD	Data processing	Z,ZK	6
	bout tools for data processing and analysis, using practical examples to try out the most common options used in data processing, ir	-	-
esenting the result	is of analyses. In advanced methods, students will also perform specific analysis using Bayesian networks. Students will then indepe	ndently perform	data analy
	on data from existing open systems.		
14PPRP	Computer Aided Project Management	KZ	2
	ct? The basic terms a concepts of project management. Life cycle of the project and its phased approach. Analysis and specification	•	
definition, stages	s, objectives and measurability. Risk events and risk planning. Project change management during implementation. Preparation of the	project outline	(activities,
	restrictions, assignments, calendars etc.) Project planning and optimization - time, resources.		
14XN1S	Master project 1 for study programme IS	Z	5
14XN2S	Master project 2 for study programme IS	Z	6
14XN3S	Master project 3 for study programme IS	Z	6
14XN4S	Master project 4 for study programme IS	Z	10
	. , , , , ,	<u>Z</u>	0
15JIA1	Foreign Language - English 1 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communication		
		a a taal far aatiu	
language in pres	entations within students' specialization field both in verbal and written forms. Language laboratory environment used alternatively a	s a tool for activ	e learning
	(Programmes - English Connections, English Library, the Internet).		
15JIA2	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2	Z	0
15JIA2 Vork on specialised	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communication	Z on skills. Active (0 use of forei
15JIA2 Vork on specialised	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communicativations within students' specialization field both in verbal and written form. Language laboratory environment used alternatively as a tool for	Z on skills. Active (0 use of forei
15JIA2 Vork on specialised inguage in presenta	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communicativations within students' specialization field both in verbal and written form. Language laboratory environment used alternatively as a tool formulation - English Connections, English Library, the Internet).	Z on skills. Active or ractive learning	0 use of forei (Programm
15JIA2 Vork on specialised inguage in presenta	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communicativations within students' specialization field both in verbal and written form. Language laboratory environment used alternatively as a tool for - English Connections, English Library, the Internet). Foreign Language - English 3	Z on skills. Active or active learning Z	0 use of forei (Programm
15JIA2 Vork on specialised anguage in presenta	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communicative tions within students' specialization field both in verbal and written form. Language laboratory environment used alternatively as a tool for - English Connections, English Library, the Internet). Foreign Language - English 3 - expert technical discourse and style. Analysis of expert texts and their production. Preparation for overseas work engagement. Opt	Z on skills. Active or active learning Z	0 use of forei (Programm
15JIA2 //ork on specialised inguage in presenta 15JIA3 Presentation skills	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communicative systems of the structure of higher command. Formal language in the structure of higher command. Formal language. Improvement of communicative systems within students' specialization field both in verbal and written form. Language laboratory environment used alternatively as a tool for English Connections, English Library, the Internet). Foreign Language - English 3 - expert technical discourse and style. Analysis of expert texts and their production. Preparation for overseas work engagement. Opt FCE, CAE.	Z on skills. Active or active learning Z ional courses for	0 use of forei (Programm 0 r certificate
15JIA2 /ork on specialised inguage in presenta 15JIA3 Presentation skills	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communicative systems of the structure of higher command. Formal language. Improvement of communicative systems of the structure of higher command. Formal language. Improvement of communicative systems of the structure of higher command. Formal language is a tool for a support to the structure of higher command. For eight should be supported by the structure of the structure of the structure of higher command. For eight should be supported by the structure of higher command. Formal language is a structure of the structure of higher command. Formal language is a structure of the structu	Z on skills. Active or active learning Z ional courses for	0 use of forei (Programm 0 certificate
15JIA2 /ork on specialised nguage in presenta 15JIA3 Presentation skills	(Programmes - English Connections, English Library, the Internet). Foreign Language - English 2 texts and technical terminology. Lexical-grammatical structures of higher command. Formal language. Improvement of communicative titions within students' specialization field both in verbal and written form. Language laboratory environment used alternatively as a tool for - English Connections, English Library, the Internet). Foreign Language - English 3 - expert technical discourse and style. Analysis of expert texts and their production. Preparation for overseas work engagement. Opt FCE, CAE. Foreign Language - English 4 - expert technical discourse and style. Analysis of expert texts and their production. Preparation for overseas work engagement. Opt	Z on skills. Active or active learning Z ional courses for	0 use of forei (Programm 0 certificate
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17XN1S				10
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of ITS. Subsequently, the basic principles of system and application creation in the technical field are discussed, defining the penetration of the technical solution into the e	20BITS ne basic concepts of safety a vestigation of acceptability and 20GINS e subject is specialized in protentroduces students to geogra	nd reliability in the job and application. Basic schema and types of diagnostic systems including reliability diagnostics of and reliability prediction, traffic crity and sensitivity analysis. Neural Networks and other optimization algorithms and ETA, traffic including operator testing on simulator and in real-world situatiation Geographical, information, localization and navigation systems lems of work with applications of geographic information systems with special attention to the specialization in the field of train the properties of other GIS related technologies such as problem mapping, webmap, etc. Evaluation and Economics of ITS	technical equipme FMEA failure analy Z,ZK ansport and telecom zation methods, and	ysis. HMI 6 nmunicati d a numb

20ITSR	ITS - R	Z,ZK	3
The introduction i	s devoted to description of the architecture and interface of the system with the ITS-R concept, the communication interface of	of the system, principles of	of ensuring
functional and secu	rity features are defined. The principles of ERTMS / ETCS application level 3, UGTMS, CBTC are discussed in detail. Current at	nd future communication	technologie
	are described.		
20MZZ	Modern techniques of safety control of moving railway vehicles	Z,ZK	3
	concepts, ETCS architecture and interface descriptions, ERTMS system level, infrastructure and mobile part of the system, lin	•	
operating and appli	cation modes of the system, infrastructure orientation, interface (DMI), integration of the ETCS mobile part into the driving ve	hicle, GSM-R functional s	specification
	testing and legislation.		1
20SYIN	System Engineering	Z,ZK	6
•	definition in engineering tasks, specification of selected system types against related tools of system analysis and design, re	**	•
engineering tasks,	definition of system strategy, connection to science-based methodological basics of transport, strategic thinking processes, si	trategic management sys	tem, conte
00701	of sustainable development.	7.71	
20TSJ	Telematic systems and their design	Z,ZK	6
	ed analysis of individual existing telematics systems in modes of transport, such as toll systems, vehicle weighing, fleet mana-	 	· ·
20XN1S	Master project 1 for study programme IS	Z	5
20XN2S	Master project 2 for study programme IS	Z	6
20XN3S	Master project 3 for study programme IS	Z	6
20XN4S	Master project 4 for study programme IS	Z	10
21XN1S	Master project 1 for study programme IS	Z	5
21XN2S	Master project 2 for study programme IS	Z	6
21XN3S	Master project 3 for study programme IS	Z	6
21XN4S	Master project 4 for study programme IS	Z	10
22XN1S	Master project 1 for study programme IS	Z	5
22XN2S	Master project 2 for study programme IS	Z	6
22XN3S	Master project 3 for study programme IS	Z	6
22XN4S	Master project 4 for study programme IS	Z	10
23TBSS	Technology and Security of Sensor Networks	KZ	2
The course focus	Iechnology and Security of Sensor Networks les on the safety of data collection in new areas of sensor networks. Principles of sensor networks, sensors of electrical and r sor connection, communication technology for sensor networks, SigFox, LoRa, NB-IoT, IoT technology and SmartCity. Trends	non-electric quantities, int	

For updated information see http://bilakniha.cvut.cz/en/FF.html Generated: day 2025-06-06, time 17:21.