## Recomended pass through the study plan

# Name of the pass: Bachelor branch Knowledge Engineering, in Czech, 2018-2020

Faculty/Institute/Others: Department: Pass through the study plan: Bachelor branch Knowledge Engineering, in Czech, 2018-2020 Branch of study guranteed by the department: Welcome page Guarantor of the study branch: Program of study: Informatics, valid until 2024

Type of study: Bachelor full-time

Note on the pass: P edm t EMP je ekvivalentní staršímu p edm tu EPD. Platí obousm rná zastupitelnost. Oba p edm ty lze zapsat dohromady nejvýše dvakrát.#

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 assessment, Z - assessment, ZK - examination, L - summer semester, Z - winter semester

#### Number of semester: 1

Number of Series						
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
BI-CAO	Digital and Analog Circuits Martin Kohlík	Z,ZK	5	2P+2C	Z	PP
BI-MLO	Mathematical Logic Kate ina Trlifajová Kate ina Trlifajová Kate ina Trlifajová (Gar.)	Z,ZK	5	2P+1C	Z	PP
BI-PA1	Programming and Algorithmics 1 Ladislav Vagner	Z,ZK	6	2P+2R+2C	Z	PP
BI-PS1	Programming in Shell 1 Zden k Muziká	KZ	5	2P+2C	Z	PP
BI-ZMA	Elements of Calculus Ivo Petr Ivo Petr Tomáš Kalvoda (Gar.)	Z,ZK	6	3P+2C	Z	PP
BI-PAI	Law and Informatics Zden k Ku era	ZK	3	2P	Z	PO
BI-PT.2015	Povinná t lesná výchova bakalá ského programu Informatika, verze 2015 TV1, TVV, (see the list of groups below)	Min. cours. 2	Min/Max 0/			PT

Number of seme	ster: 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
BI-DBS	Database Systems Ji í Hunka	Z,ZK	6	2P+2R+1L	Z,L	PP
BI-LIN	Linear Algebra Daniel Dombek Daniel Dombek (Gar.)	Z,ZK	7	4P+2C	L	PP
BI-PA2	Programming and Algorithmics 2 Ladislav Vagner	Z,ZK	7	2P+1R+2C	L	PP
BI-SAP	Computer Structure and Architecture Hana Kubátová	Z,ZK	6	2P+1R+2C	L	PP
BI-PT.2015	Povinná t lesná výchova bakalá ského programu Informatika, verze 2015 TV1,TVV, (see the list of groups below)	Min. cours. 2	Min/Max 0/			PT
BI-V.2017	ist volitelné p edm ty bakalá ského programu Bl, verze 2017 BI-ALO,BI-AVI.21, (see the list of groups below)	Min. cours. 0	Min/Max 0/			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
BI-AG1	Algorithms and Graphs 1 <i>Dušan Knop</i>	Z,ZK	6	2P+2C	Z	PP
BI-AAG	Automata and Grammars Jan Janoušek	Z,ZK	6	2P+2C	Z	PP
BI-ZDM	Elements of Discrete Mathematics Jan Legerský, Ji ina Scholtzová Ji ina Scholtzová Josef Kolá (Gar.)	Z,ZK	5	2P+2C	Z	PP
BI-PJV	Programming in Java Jan Blizni enko, Miroslav Balík, Ji í Borský, Jan Zimolka Miroslav Balík Miroslav Balík (Gar.)	Z,ZK	4	2P+2C	Z,L	PO
BI-ZNS	Knowledge-based Systems Marcel Ji ina Marcel Ji ina Marcel Ji ina (Gar.)	Z,ZK	5	2P+2C	Z	PO
BI-V.2017	ist volitelné p edm ty bakalá ského programu Bl, verze 2017 Bl-ALO,Bl-AVI.21, (see the list of groups below)	Min. cours. 0	Min/Max 0/			V

Number of se	emester: 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
BI-BEZ	Security Ji í Dostál	Z,ZK	6	2P+2C	L	PP
BI-OSY	Operating Systems Ladislav Vagner	Z,ZK	5	2P+1R+1L	L	PP
BI-PSI	Computer Networks Jan Fest	Z,ZK	5	2P+1R+1C	L	PP
BI-SI1.2	Software Engineering I Ji í Mlejnek, Zden k Rybola Zden k Rybola Ji í Mlejnek (Gar.)	Z,ZK	5	2P+1C	Z,L	PP
BI-VWM	Searching the Web and Multimedia Databases Tomáš Skopal	Z,ZK	5	2P+1C	L	PO
BI-ZUM	Artificial Intelligence Fundamentals Pavel Surynek Pavel Surynek Pavel Surynek (Gar.)	Z,ZK	4	2P+2C	L	PO

Number of sem	nester: 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
BI-BPR	Bachelor project Zden k Muziká Zden k Muziká Zden k Muziká (Gar.)	Z	2		Z,L	PP
BI-PST	Probability and Statistics Petr Novák	Z,ZK	5	2P+1R+1C	Z	PP
BI-BIG	DB Technologies for Big Data Josef Gattermayer, Jan Matoušek, Monika Borkovcová Jan Matoušek Monika Borkovcová (Gar.)	KZ	4	2P+2C	Z	PO
BI-VZD	Data Mining Daniel Vašata, Karel Klouda, Alexander Kovalenko, Ond ej Tichý Daniel Vašata Pavel Kordík (Gar.)	Z,ZK	4	2P+2C	L,Z	PO
BI-EMP	Economics and Management Principles David Buchtela, Petra Pavlí ková David Buchtela David Buchtela (Gar.)	KZ	4	2P+2C	Z,L	PE
BI-V.2017	ist volitelné p edm ty bakalá ského programu Bl, verze 2017 BI-ALO,BI-AVI.21, (see the list of groups below)	Min. cours. 0	Min/Max 0/			V

Number of seme	ster: 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
BI-BAP	Bachelor Thesis Zden k Muziká Zden k Muziká (Gar.)	Z	14		L,Z	PP
BI-DPR	Document., Presentation, Rhetorics Ond ej Guth, Alena Libánská, Petra Pavlí ková, Dana Vynikarová Ond ej Guth Dana Vynikarová (Gar.)	КZ	4	2P+2C	Z,L	PP
BI-PV-EM.2015	Povinn volitelné ekonomicko manažerské p edm ty bc. programu Informatika, ver. 2015 BI-DAN,FI-VEZ, (see the list of groups below)	Min. cours. 1	Min/Max 4/12			VE

		Max. cours.			
		3			
		Min. cours.			
BI-ZKA	Zkouška z angli tiny 2009	1	Min/Max		PJ
DI-ZNA	BI-ANG1,BIE-EEC, (see the list of groups below)	Max. cours.	2/4		PJ
		1			
BI-PV-HU.2015	Povinn volitelné humanitní p edm ty bakalá ského programu	Min. cours.	Min/Max		
Ы-РУ-ПО.2015	Informatika, verze 2015 FI-FIL,BI-HMI, (see the list of groups below)	1	2/6		VH
BI-V.2017	ist volitelné p edm ty bakalá ského programu BI, verze	Min. cours.	Min/Max		V
	<b>2017</b> BI-ALO,BI-AVI.21, (see the list of groups below)	0	0/		V

### 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 specification	f courses a on see her	and codes of members of this e or below the list of courses)	Com	ompletion Credits Sco			Semester	Role				
BI-PT.2				ského programu Informatika,	1	cours. 2				PT				
TV1	Physical E	ducation	TVV	Physical education		TVV0		Physical educ	ation					
TV2	Physical E	ducation	TVKLV	Physical Education Course		TVKZV		Physical Educ	cation Course					
	BI-PV-EM.2015 Povinn volitelné ekonomicko manažerské p edm ty bc. programu Informatika, ver. 2015				Povinn volitelné ekonomicko manažerské p edm ty bc.		Povinn volitelné ekonomicko manažerské p edm ty bc.			cours.				
	1.2015	Povinn volitelné el progra	mu Informa	o manažerské p edm ty bc. atika, ver. 2015	Max.	cours. 3	Min/M 4/12			VE				
		Povinn volitelné el progra	konomicko mu Informa	o manažerské p edm ty bc. atika, ver. 2015 economic-managerial course from		cours.	4/12		kets	VE				
BI-DAN BI-MEK	Taxes for n	progra	mu Informa	atika, ver. 2015		cours. 3	4/12	2		VE				
BI-DAN	Taxes for n Macroecor	program non-Economists	mu Informa	economic-managerial course from		<b>COURS.</b> <b>3</b> BI-FTR.1	4/12	Financial Mar		VE				

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FI-FIL	Philosophy		BI-HMI	History of Mathematics and Infor	•	FI-HTE	History of Technology and		nology and E	conom
FI-HPZ	Humanities	subject from a study	FI-MPL	Managerial Psychology		BI-EHD	In	troduction to	European Ec	onomi
FI-KSA	Cultural and Social Anthropology		BI-KSA	Cultural and Social Anthropology		FI-ULI	In	troduction to	Linguistics fo	r
FI-GNO	Introduction	to Gnoseology								

BI-V.	2017	ist volitelné p ed	m tv bakalá	ského programu BI, verze	Min.	cours.	Min/M	ax		v
DI-V.	2017		2017	p g,		0	0/			v
BI-ALO	Algebra an	d Logic	BI-AVI.21	Algorithms visually		BI-A2L		English langu	age, preparati	on fo
BI-APJ	Aplication	Programming in Java	NI-AFP	Applied Functional Programming		BIE-ZUM	1	Artificial Intelli	gence Fundar	nen
BI-BLE	Blender		NI-DSP	Database Systems in Practes		BI-STO		Storage and F	ilesystems	
NI-DZO	Digital Ima	ge Processing	NI-DDM	Distributed Data Mining		BI-EP1		Effective prog	amming 1	
BI-EP2	Efficient Pr	ogramming 2	BI-EJA	Enterprise Java		BI-FMU		Financial and	Management	Account
BI-HAM	HW accele	rated network traffic m	BI-ARD	Interactive applications on Ardu		NI-IAM		Internet and M	lultimedia	
BIE-IMA2	Introductio	n to Mathematics 2	BI-CS2	C# language and data access		BI-CS3		Language C#	- design of we	eb appl
BI-SQL.1	Language	SQL, advanced	BI-QAP	Quantum algorithms and programm	ni	NI-LSM		Statistical Mod	lelling Lab	
NI-MPL	Manageria	l Psychology	NI-MSI	Mathematical Structures in Compu		BI-MPP.2	21	Methods of int	erfacing perip	hera
BI-MIT	Mikrotik teo	chnologies	NI-MOP	Modern Object-Oriented Programm	ni	BI-MVT.2	21	Modern Visua	lisation Techn	ologie
BI-MMP	Multimedia	team project	NI-OLI	Linux Drivers		BI-ACM		Programming	Practices 1	
BI-ACM2	Programmi	ing Practices 2	BI-ACM3	Programming Practices 3		BI-ACM4		Programming	Practices 4	
BI-AND.21	Programmi	ing for the Android Oper	BI-CS1	Programming in C#		BI-PJV		Programming	in Java	
BI-PJS.1	JavaScript	Programming	BI-KOT	Programing in Kotlin		NI-PSL		Programming	in Scala	
BI-PMA	Programmi	ing in Mathematica	BI-PHP.1	Programing in PHP		BI-PS2		Programming	in shell 2	
NI-PDD	Data Prepr	ocessing	BI-PKM	Introduction to mathematics		NI-REV		Reverse Engir	neering	
BI-SCE1	Computer	Engineering Seminar I	BI-SCE2	Computer Engineering Seminar II		BI-ST1		Network Tech	nology 1	
BI-ST2	Network Te	echnology 2	BI-ST3	Network Technology 3		BI-ST4		Network Tech	nology 4	
BI-SOJ	Machine O	riented Languages	BI-SVZ	Machine vision and image process		NI-SYP		Parsing and C	ompilers	
BI-GIT	Version co	ntrol system GIT	TV1	Physical Education		TVV		Physical educ	ation	
TVV0	Physical ed	ducation	TV2	Physical Education		TV2K1		Physical Educ	ation 2	
TVKZV	Physical E	ducation Course	TVKLV	Physical Education Course		BI-TS1		Theoretical Se	eminar I	
BI-TS2	Theoretica	I Seminar II	BI-TS3	Theoretical Seminar III		BI-TS4		Theoretical Se	eminar IV	
BI-TDA	Test driven	architecture	NI-TSP	Testing and Reliability		BI-CCN		Compiler Con	struction	
BI-TEX	TeX and Ty	pography	BI-ULI	Introduction to Linux		BI-OPT		Introduction to	Optical Netw	orks
NI-VCC	Virtualizati	on and Cloud Computi	BI-VHS	Virtual game worlds		BI-VR1		Virtual reality		
BI-VR2	Virtual real	ity II	BI-VAK.21	Selected Applications of Combina		BI-VMM		Selected Math	ematical Meth	nods
NI-VYC	Computabi	lity	BI-ZS10	Bachelor internship abroad for 1		BI-ZS20		Bachelor inter	nship abroad	for 2
BI-ZS30	Bachelor in	nternship abroad for 3	BI-ZIVS	Intelligent Embedded System Fund	ł	BI-ZPI		Process engin	eering	

BI-ZNF	1	PHP Frame	ework Nette - basics	BI-ZRS	Basics of System Control		BI-IOS		Fundamentals	of iOS Applic	ation
BI-ZWU	1	Introduction	n to Web and User Int	BI-3DT.1	3D Printing						
						Min.	cours.				
	BI-ZKA Zkouška z angli, tiny 2009			1 Min/		ax					
	DI-ZRP	`	Ζκοι	uška z angli	tiny 2009	Max	ax. cours. 2/4		rs. 2/4		PJ
							1				
			nguage Examination wit	BIE-EEC	English language external certif		<b>BI-ANG</b>		English Langu	, iage Internal (	Certi
					English language external certif		BLANG		English Langu	l Iage Internal (	Certi

# List of courses of this pass:

Code	Name of the course	Completion	Credits
BI-3DT.1	3D Printing	KZ	4
active part in the	English language, preparation for the B2 level exam course corresponds to the preparation for the English exam at the B2 level. Requirements for course credit. Academic Achievement language instructionMeet the requirements for writing assignments - Summary, Abstract, Argumentation PaperSucceed in both th tess rate set at 70%80% and over in BOTH tests means ORAL EXAM ONLY (no written part). Requirements will be specified by ind	ne midterm and the	e final term
	class of the term.		
and regular gramm Knowledge acqu	Automata and Grammars duced to basic theoretical and implementation principles of the following topics: construction, use and mutual transformations of finite hars, translation finite automata, construction and use of pushdown automata, hierarchy of formal languages, Relationships between for ired through the module is applicable in designs of algorithms for searching in text, data compression, simple parsing and translation,	rmal languages an and design of digi	d automata tal circuits.
BI-ACM	Programming Practices 1 This course is presented in Czech.	KZ	5
BI-ACM2	Programming Practices 2 This course is presented in Czech.	KZ	5
BI-ACM3	Programming Practices 3 This course is presented in Czech.	KZ	5
BI-ACM4	Programming Practices 4 This course is presented in Czech.	KZ	5
develops the know	Algorithms and Graphs 1 ers the basics of efficient algorithm design, data structures, and graph theory, belonging to the core knowledge of every computing cu wledge from the course BI-DML.21, in which students acquire the knowledge and skills in combinatorics necessary for evaluating the prithms. The course also follows up knowledge from BI-MA1.21, the practical usage of asymptotic mathematics, in particular, the asym	time and space co	
BI-ALO	Algebra and Logic The course extends and deepens the study of topics touched upon in the basic course in logic.	Z,ZK	4
BI-AND.21	Programming for the Android Operating System This course is presented in Czech.	KZ	4
BI-ANG	English Language, Internal Certificate Course information and teaching materials can be found at https://moodle-vyuka.cvut.cz/course/search.php?search=BI-AN	ZK	2
BI-ANG1	English Language Examination without Preparatory Courses	Z,ZK	2
BI-APJ	Aplication Programming in Java This course is presented in Czech. Advanced technologies in Java.	Z,ZK	4
kits and control v	Interactive applications on Arduino gned for students of first grade of bachelor study as introduction to embedded systems. Students will learn how to design simple applicat aried peripherals with help of available libraries. The goal of the subject is to show varied software approaches to control embedded s ay of a PC. Thanks to possible control on higher (objective) layer, this platform is frequently used for artist performance and therefore	systems, i.e. to see	the results
	Software Engineering students.		
•	Algorithms visually ements other algorithm courses at FIT. It brings knowledge about particular important algorithms from different fields of the computer so ted in BI-AG1 and BI-AG2. A wide scope of covered subject is made possible due to using visualization bz Algovision (www.algovision.org& that make understanding the principles of algorithms easy.		
BI-BAP	Bachelor Thesis	Z	14
BI-BEZ	Security	Z,ZK	6
Students understar	nd the mathematical fundamentals of cryptography and have an overview of current cryptographic algorithms and applications: symmetric s. They also learn the fundamentals of secure programming and IT security, the fundamentals of designing and using modern cryptos They are able to use properly and securely cryptographic primitives and systems that are based on these primitives.	and asymmetric cry	
BI-BIG	DB Technologies for Big Data This course is presented in Czech.	KZ	4
BI-BLE The course exter	Blender hds knowledge of opensource program Blender from BI-MGA (Multimedia and Graphics Applications) course. It is intended for those i	Z,ZK	4 aphics and
	offers a complete and practically oriented introduction to Blender environment. Students may continue to BI-PGA (Programming grap	-	-
BI-BPR	Bachelor project	Z	2

	Digital and Analog Circuita	771	F
BI-CAO	Digital and Analog Circuits	Z,ZK	5
	fundamental understanding of technologies underlying electronic digital systems. They understand the basic theoretical models and		
transistors, gates, c	sircuits, and conductors. They are able to design simple circuits and evaluate circuit parameters. They understand the differences betw	veen analog and di	gital modes
	of electronic devices.		
BI-CCN	Compiler Construction	Z,ZK	5
This is an introdu	uctory class on compiler construction for bachelor students in computer science. The goal of the class is to introduce basic principles	1 1	udents to
	nd the design and implementation of programming languages. Seeing and actually understanding self-compilation is the overarching	-	
BI-CS1	Programming in C#	KZ	4
		1 1	
-	urse is to introduce .NET Framework as a multi-language development platform. Then, programming language C#, its fundamental co		
	s, loops, definitions and calls of functions will be discussed. Attention is focused on the object oriented programming in C# - class def		0,
constructors, meth	ods, properties, static members, Garbage Collector, inheritance and polymorphism, collections, delegates, and generics. Debugging	and exception pro-	cessing, as
	well as work with files are emphasized.		
BI-CS2	C# language and data access	KZ	4
The C# language	and data access course objective is to introduce students several data access technologies - database, XML, NoSQL - on the Micros	oft platform. The s	tudents will
aet to know object	s used to retrieve data - Connection, Command, Data Reader and DataAdapter v ADO.NET. Next, they will learn to use current tech	nologies such as L	INQ - a set
• ,	rying and updating data, integrated directly with the .NET platform languages, which enable LINQ use with Objects, XML and SQL (I	•	
-	). Another objective is the Entity Framework - an object-relational mapper that enables .NET developers to work with relational data u	-	
	f the course introduces Code First, Database First, Model First approaches. The students will also get to know the Conceptual Mode		-
(Ortivi). This part of	(XML description).	, otorage model al	iu mapping
BI-CS3	Language C# - design of web applications	KZ	4
The students will be	e introduced to current technologies in web application development on the .NET platform. They will acquire a comprehensive overview of	of the development	possibilities
	on thisplatform. They will learn to create WebAPI and to use it by client programs.		
BI-DAN	Taxes for non-Economists	Z,ZK	4
	cial insurance contributions, are obligatory payments paid by people or institutions to public budgets. This is the way how a significant	1 1	-
-	ns who pays which taxes or who bears the tax burden. The course introduces students to the tax theory and policy fundamentals and		
of income, consult	nption, and wealth. The course provides practical information on calculations of tax liabilities of both citizens and institutions as well a	S Information abou	t important
	taxpayers' formal duties towards public administration.	1	
BI-DBS	Database Systems	Z,ZK	6
Students are intre	oduced to the database engine architecture and typical user roles. They are briefly introduced to various database models. They lear	n to design small d	atabases
(including integrity	constraints) using a conceptual model and implement them in a relational database engine. They get a hands-on experience with the	SQL language, as	well as with
its theoretical found	ation - the relational database model. They learn the principles of normalizing a relational database schema. They understand the funda	mental concepts of	transaction
	lling parallel user access to a single data source, as well as recovering a database engine from a failure. They are briefly introduced		
	ases with respect to speed of access to large quantities of data. This introductory-level course does not cover: Administration of data		-
	optimizing database applications, distributed database systems, data stores.		agging and
		1/7	
BI-DPR	Document., Presentation, Rhetorics	KZ	4
This subject is aime	d to the professional communication and writing of the scientific texts (bachelor's and diploma thesis). Students will learn to create and p	repare interactive pr	resentations
	and presenting before an audience. Students will also learn to write technical reports and scientific texts.		
BI-EHD	Introduction to European Economic History	Z,ZK	3
	This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).	1 7 1	
BI-EJA	Enterprise Java	Z,ZK	4
		1 · · 1	
The course is on a	dvanced technologies in the Java programming language. The focus is on technologies for development of enterprise information sy	stems which are co	onnected to
	a database and are accessed through the web interface.	· · · · · · · · · · · · · · · · · · ·	
BI-EMP	Economics and Management Principles	KZ	4
This course is ain	ned to fundamental problems of business economy. The course makes students familiar with a life cycle of business, specifically with	fields: enterprise for	oundation,
enterprise putting in	nto state economic environment (CR), management of property and capital structure, business transaction records keeping during a	n accounting perior	d, a relation
	between business production and costs, evaluation of enterprise financial health and business rehabilitation or terminatior	1.	
BI-EP1	Effective programming 1	Z	4
	The course is taught in Czech.	· – ·	
		V7	4
BI-EP2	Efficient Programming 2	KZ	. 4
Continuation of Ef	ficient Programming 1. Students will practice implementation of algorithms by solving typical problems. Various ways of solving indivi	dual problems are	aiscussea,
	with the aim to choose the best one and avoid implementation errors.		
BI-FMU	Financial and Management Accounting	Z,ZK	5
The aim of the cou	rse is explanation of basic terms in the theory of accounting, the principles of balancing the property amounts and liabilities in the pa	rticular accounting	operations,
operations in acco	unts and accounting statements including opening and closing of bookkeeping. The course provides students with a legal modification	on of bookkeeping,	description
	ations based on current methods of double-entry bookkeeping for enterprising subjects in the Czech Republic. Principles of manage		
	Business Inteligence moduls in Business information systems.	0	
DI ETD 1		774	F
BI-FTR.1	Financial Markets	Z,ZK	5
	This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).	1	
BI-GIT	Version control system GIT	KZ	2
Students will be inf	troduced to basic principles of version control systems. These principles will be then shown on DCVS Git both theoretically and pract	ically. In this partice	ular system
even the in	mplementation details will be shown. Students will be challenged to use Git as users, project managers, team leaders as well as Git	server administrato	rs.
BI-HAM	HW accelerated network traffic monitoring	KZ	4
	duces students to modern and widely used technologies and principles in the area of network infrastructure and traffic monitoring. The	1 1	
	mandatory skills to network operators (planning and development of resources and infrastructure) and security analysts alike (as a s	-	-
ioi analysis). The g	oals of the course are to acquaint students with the modern trends and cornerstone principles in the area of monitoring network traff	ic on a naruware a	nu sonware
<b>_</b>	level and to develop their practical abilities in this field.		_
BI-HMI	History of Mathematics and Informatics	Z,ZK	3
	This course is presented in Czech.		
BI-IOS	Fundamentals of iOS Application Development for iPhone and iPad	KZ	4
-	This course is presented in Czech.	· I	
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with morear of bole print code. Last has not lead, form is subside for recently of DEI. 2/Deam Spatial Capaging.         Z         Z           BH-SGA         Cultural and Social Anthropology         Z         Z           The one-sensetier ocurse aims to sequent abunds with the basits of social and cultural entropology interval         Sequence (Code)         J	I ne language is fu		0 0	
Bi-KSA         Cultural and Social Anthropology         ZK         2           Bi-KSA         Construction of the social sector of the density of			-	ctional way
The one sensets "sense aims to sequent advertes with the basics of social and subma attripoptings" as activation dealing with the deverse if the words - adverges form the outries is sensets for out "self" advertes in the sensets of the outries is provided in Creat.  BH-LIN Linear Algebra Li	BI-KSA			2
BirLIN         Linear Algebra         Z,ZK         7           The course is bught in Carch. Students understing the meterical counders on sights and mathematical principles of sourm marks periadism and using severes. They understand the end-descent period cound.         New Yes         A           BH-MK         Macroeconomics Context of Dimensional and using severes. They understand the end-descent period cound.         ZZK         4           BH-MK         Macroeconomics Context of Dimensional and using severes. They understand the end-descent period end-cound is an English water. The yunderstand the end-descent period counders.         ZZK         4           BH-MIK         Macroeconomics a presented in Casch. However, that is an English water. The yunderstand the severe end water severe provides STPs. The sublem team to be to use and create the and because of the resource solutions (B1001 / 4703).         ZZK         4           BH-MIK         This course is presented in Casch. However, that is an English water. The period water severe provides STPs. The sublem team to be to and create the and because of the resource solutions (B1001 / 4703).         ZZK         5           BH-MID         Mathematical provides of the mathematical provides of them			I I	
BH-LIN         Linear Algebra         ZZK         7           The course is support for Cach. Student sudestated the horizont and mathematical principles of baraner and/support and cache systems of lower and/support and cache systems and cache systems of lower and/support and cache systems and systems and cache systems and systems and systems and cache systems and s	anthropological res	earch from our "exotic" cultures (topics: kinship, religion, social exclusion, migration, globalization, , material culture, language, health	h, history, death, et	tc) will be
The cause is hugh in Caref. Statuents understand the tensorical function of signers and mathematical principles of insum rotoks of spetra sources and			· · · · · ·	
among components are only lines: They have the base methods for operang with matches and insere spaces. They are able to perform matic, operations and dove system of lines: equations: They can able to many the method methods and perform the component of the more diverting and emocracineting and emotion demonstration and emotion and emotions and emotions and emotions and emotions and emotions and emocracinetic and emocracinetic and emocracinetic and emotions and emotions. The comore seminary is tacget in the cardin in Amore and and and emotions and emotions and emotions and emotions. Herefore, and emotions and emo		5	I ' I	-
expansion. They can apply these mathematics promptes to soving proceeding in 2.0 °CD analytic geometry. They understand the enco-executing and enci-contenting codes. BH-MEK Macroeconomic Context of Domestic and World Economy ZZK 4 BH-ME Traceautes in presented in Cenet. BH-ME KING Fundamentals of Microeconomics ZZK 4 BH-ME To course is the presented in Cenet. BH-ME KING Fundamentals of Microeconomics XZK 4 The course is presented in Cenet. However, there is an English variant is the program Informatics (B1601 / 4753). BH-ME To course an impact the activation of the subject transition is presented in Cenet. BH-ME To course animating of the subject transition of the subject transition is presented in Cenet. BH-ME Microeconomic of the subject transition of the subject transition is presented in Cenet. BH-ME Microeconomic of the subject transition is presented in Cenet. BH-ME Microeconomic of the subject transition is presented in Cenet. BH-ME Microeconomic of the subject transition of the subject transition is presented in Cenet. BH-ME Microeconomic of the subject transition is presented in Cenet. BH-ME Microeconomic of the subject transition is presented in Cenet. BH-ME Microeconomic of the subject transition of the subjec	-			
This course is presented in Czech.         Image: Course is presented in Czech.           BI-MIX         Fourdamentals of Microseconomics         ZZK         4           The course is presented in Czech. However, there is an English variant in the program Informatics (81801 / 1773).         KZ         3           BI-MIT         Microseconomics         KZ         3           The main modulation of the subject stands in the introduction of the Subject requires the preduct incredition and stands and notice and credit exist of the motive of the USI model.         KZ         5           BI-MID         Microseconomics of the subject requires the preduct incredition of the subject requires the preduction of non-subject regulation of the subject requires the preduction of non-subject incredition of the subject requires the preduction of non-subject incredition of the subject requires the preduction of non-subject regulation of the subject requires the preduction of non-subject incredition of the subject requires the preduction of non-subject regulation of the subject requires the preduction of non-subject regulation of the subject requires the preduction of non-subject regulation of the subject requires the preduction of non-subject regulation of the subject regulatin the non-subject regulation of the subject regulation of the subj				
EI-MIK         Fundamentals of Microsencomics         Z.ZK         4           BI-MIT         Miketorik technologies         KZ         3           BI-MIT         Miketorik technologies         KZ         3           BI-MIT         Miketorik technologies         KZ         3           BI-MIT         Bi-MIT         Bi-MIT         KZ         3           BI-MIT         Bi-MIT         Bi-MIT         Bi-MIT         KZ         3           BI-MID         Mikrolik technologies of the subjet attack         and technologies of the subjet attack         and technologies         C         2         4         5           BI-MID         Mathematical Logic         Z.ZK         4         5 <t< td=""><td>BI-MEK</td><td>Macroeconomic Context of Domestic and World Economy</td><td>Z,ZK</td><td>4</td></t<>	BI-MEK	Macroeconomic Context of Domestic and World Economy	Z,ZK	4
BH-MIT         Mitroxit kechonologies         KZ         3           BH-MIT         Mitroxit kechonologies         KZ         3           The main molecular of the subject stands in the introduction of the RoueOS generating system and some network Mitroxit schenologies with are commonly used by the small and to out-main schenologies of the astriculation of the subject regulars be previous knowledge of elementary computer networks concepts ite protocols (Some Mitroxit State and Point out-main schenologies of the astriculation of the Subject regulars in the previous knowledge of elementary computer networks concepts ite protocols some and encode to an endot schenologies of the astriculation of the SI model.           BH-MIP         Muthermatical Logic         ZZK         5           BH-MIP21         Methods of interfacing peripheral devices         ZZK         5           BH-MIP21         Methods of interfacing peripheral devices is focus on technologies of seleced how interfacing and protocol devices.         ZZK         5           BH-MIP21         Modern Visualisation Technologies         ZZK         5           BH-MIP21         Modern Visualisation Technologies of seleced how intuit and sugnetaria bus URS. The course in focus as the previous devices and the principes, result Afrance and the principes, result Afrance and the principes and the princips and the principes and the princips and the principes and the		This course is presented in Czech.		
BI-MIT         Mikrolik technologies         KZ         3           Terma monitorine of the subject statem how to use and rescue the activity device intervet within an economy used by the small and middle internet serves provides (SPs). The student statem how to use and ecrete the activity current of the optical background within a technologies of the distribution of the subject marges the provides howedge of demonstry current entervets concepts like protocols and technologies of the distribution of the SI model.         Statement of the SI model.         Statement SI model (SS Statement SI St	BI-MIK		Z,ZK	4
middle intervet service providers (ISPa). The subceter layer and create the architectures of the network solutions which are based on the metallic, optical or viewless links and to work and transport isy of the CSI model.  BI-MLO BI-MLO Constrained to the subset equivalence of the subset equivalence of the other than the provide solutions of the subset equivalence of the provides of the subset equivalence	BI-MIT		KZ	3
and hero valaministrate and practically deploy teem. The successful completion of this subject requires the protocols browledge of elementary computer networks concepts like protocols and technologies of the data-like, networks and transport layer of the OSI model.           BI-MLD         Mathematical Logic         Z,ZK         5           BI-MMP         Multimedia team project         KZ         4           The course is prosented in Czech.         KZ         4           The course is prosented in Czech.         KZZ         4           The course is prosented in concepts in terms of the project in the course is prosented in Czech.         KZZ         4           File course is course	The main motivation	on of the subject stands in the introduction of the RouterOS operating system and some network Mikrotik technologies which are con	nmonly used by the	e small and
Bi-MLO         Mathematical Logic         Z,ZK         5           Bi-MMP         Multimedia team project         KZ         4           Bi-MMP         Multimedia team project         KZ         4           Bi-MMP         Methods of interfacing peripheral devices is broaden on techniques based on Universal serial bus (UBB). The course in tocoste is broaden on techniques based on Universal serial bus (UBB). The course in tocoste on methods for interfacing peripheral devices is to a protectively oriented. Sudents gain experience with implementation of herent parts of USB devices, Linux and Windows and the project and the course is to give an overview of anti-adjate and the protection and the event parts of USB devices.         S           Bi-MVT21         Modern Visualisation Technologies and their project and APA or a stated devices.         Z,ZK         5           Bi-OPT         Introduction to Optical Networks         Z,ZK         4           Bi-OPT         Introduction to Optical Networks         Z,ZK         5           Bi-OPT         Introduction to Optical Networks         Z,ZK         5           Students get basic overview of optical networking technologies notacion utilization. In a notacion utilization on transmission and oncive and and protective diver componets doord memilies. (hits-general data memory technologies namely frequentilization on transmission systems. The course will dedopreted optical networks technology and on their solutions. The ocurse will include the hatory of optical communications. an overview of apatical methods to intemotical systems. The course i		,		
BI-MLO         Mathematical Logic         Z,ZK         5           BI-MMP         Multimedia team project         KZ         4           BI-MMP         Multimedia team project         KZ         4           BI-MMP         Methods of interfacing peripheral devices is transmittering of the project interfacing peripheral devices is toused on technoliques based on UNexess series USB, The ocurse on technoliques based on UNexess series USB devices. Linux and Windows devices is to used on methods for interfacing of the project and devices is toused on technoliques based on USB devices. Linux and Windows devices is to get an overview of modern visualization technologies         Z,ZK         5           BI-MVT21         Modern Visualisation Technologies         Z,ZK         5           Bi-OPT         Introduction to Optical Networks         and proceedinal visualization technologies and teep ranciple, namely lacendaria and superied residuation technologies and teep ranciple. The ocurse of the ocurse is to get an overview of modern weak transmittering the module size interface of the research and the regulations on project and visualization technologies and teep ranciple. The ocurse is the device of the ocurse is the device of the research and the regulation on terminal technologies and teep ranciple. The ocurse is the device of the ocurse of the ocurse is the device of the ocurse is the device of the ocurse is the device of the ocurse of the ocurse is the device of the ocurse of the ocu	and now to adminis		etworks concepts III	ke protocols
The course seminary is taught in Czech.           BirMMP         Multimedia team project This course is presented in Czech.         KZ         4           Bi-MDP21         Methods of interfacing peripheral devices         Z,ZK         5           The course is focused on methods for interfacing of peripheral devices is back and busients at serial bus (USB). The course includes both PC side and peripheral devices is back and peripheral devices is back and busients in technologies         Z,ZK         5           BI-MVT21         Modern Visualization technologies and their principles, namely technologies related to virtual and augmented reality, visualization technologies and their principles, namely technologies related to virtual and augmented reality, visualization technologies and their principles, namely technologies related to virtual and augmented reality, visualization technologies and their applications in practice. Solveral features devices, thread technologies, ander yis the devices with device and peripheral devices in practice. Solveral features devices and an energinary of applications. The course will also been and and their applications, and on energinary of technologies and and peripheral devices.         Z,ZK         4           Bi-OPT         Introduction to Optical Networks         Z,ZK         4           Diverse seminary is many of their applications, and onerginary and an onerview of optical network infrastructures, on paceske components and on methods their applications.         Z,ZK         5           Bi-OSY         Operating Systems         C,ZK         5           States and the	BI-MLO		Z.7K	5
This accurse is presented in Czech.           BH-MPP21         Methods of initerationage optimiseral devices is bocased on techniques and busices, lance and peripheral devices. Interfacing operinperint and accurse is bocased on techniques and busices, Linux and Windows drivers simple application development, and APIs of selected devices.         Z_ZK         5           BH-MP21         Modern Nucleisation Technologies         Z_ZK         5           BH-OPT         Introduction technologies on an overview of modern visualization rectino. Severing and busices data with an adjust and augmented reality, visualization on high resolution devices (a sum of the application). Scientific data visualization, and 3D model scanning.         Z_ZK         4           BH-OPT         Introduction to Optical Networks         Z_ZK         5           BH-OPT         Introduction to Optical Networks         Z_ZK         5           Buderns get basic overview of optical networking technology with the emphases to practical Willization in Internet technologies and the excurse will allow core will also core will		The course seminary is taught in Czech.		
The course is focused on methods for interfacing of perpheral devices. Interfacing of main perpendent evices is to cause on technicing use based on Universal serial base (USB). The course is includes both PC side and perpheral devices side. Labs are practically orderophysical experiments with implementation of relevant parts of USB devices. Lucus and Windows drivers, simple application development, and API of selected devices.           BI-MVT21         Modern Visualization technologies are their principles, namely technologies related to virtual and augmented reality, visualization on high resolution displays (e.g., SAGE and video mapping) and their applications in partice. Several lectures deal with the content creation for the mentioned technologies, namely facation and product substances and severation substances. And BD model scarming.         C.Z.K         4           BI-OPT         Introduction to Optical Networks         Z.Z.K         4           Sudents get basic overview of optical networking technologies on practical utilization in interest and in network infrastructures, on possible problems with deployment of passive components (potical literation of passive components (potical literation of passive components (potical literation of the methods) and on their solutions. The course will actude the history of potical components and amplifiers, history of passive components (potical literation will also be paid to new applications, such as the accurate time on interest. Untrastate frequency principles and neight with a solution of the methods will also cover the most up-odate topics presented at pretime research conferences, such as ECOC or OFC. Attention will also be paid to methods and productions, such as solutions, thread solutions, thread solutions, thread solutions, thread solutions, thread solutions, thread solution, thread solution, thread solution and deadobace.         <	BI-MMP		KZ	4
Includes both PC side and peripheral devices side. Labs are practically oriented. Students gain experience with implementation of relevant parts of USB devices. Linux and Windows drivers: simple application development, and APIs of selected devices.           BI-MVT21         Modern Visualization Technologies         Z,ZK         5           The goal of the course is to give an overview of modern visualization technologies, namely technologies related to virtual and agemented reality, visualization and their sequication sign partice. Several lectures deal with the content creation for the mentioned technologies, namely technolog	BI-MPP.21	Methods of interfacing peripheral devices	Z,ZK	5
BH-WT21         Modern Visualization technologies         Z.ZK         5           The goal of the course is to give an overview of modern visualization, schenific data visualization, and 3D model scannag.         Z.ZK         5           Bi-OPT         Introduction displays (e.g., SAGE and video mapping) and their applications, in practice. Several lectures deal with the content creation for the mentioned technologies, namely finate and procedural visualization, scientific data visualization, and 3D model scannag.         Z,ZK         4           Bi-OPT         Introduction to Optical Networks         Z,ZK         4           Sudents got basic overview of optical networking technology with the emphasis on practical ultization in Internet and in network infrastructures, on possible problems with deployment of optical network technology and on their solutions. The course will include the history of optical communications, an overview of passive components (optical situations and on measurement of them parameters. Students will also cover the most up-to date topics presented at premium research conferences, such as ECCC or OFC. Attention will also be paid.         Z,ZK         5           Students understand the classical theory of operating systems (OS) in addition to the knowledge got spin and an onessurement of their parameters. Students will be obten will network information in Shell 1". They get a soild knowledge of OS wereness, not classical theory of operating systems (OS) in addition to the knowledge got spin and implement simple multithreaded applications.         5           Bi-OPA1         Programming and Algorithmics 1         Z,ZK         6 <t< td=""><td></td><td></td><td>· ,</td><td></td></t<>			· ,	
BI-MVT.21         Modern V(sualisation Technologies         Z,ZK         5           The goal of the course is to give ownewer of modern visualization technologies, namely fechnologies ratiated to virtual and sugmented ratity, visualization or methodogies namely fechnologies ratiated to virtual and sugmented ratity, visualization or methodogies namely fechnologies ratiated to virtual and sugmented ratity, visualization or methodogies namely finance of the methodogies of the methodogies namely finance of the methodogies namely finance of the methodogies of the methodogies namely finance of the methodo inplement simple multithreade applications. Such as the course will applications and were applications and were applications and were applications. They understand the problems of near conditions, thread scheduling, resource allocation and deadlocks, the technologies of the management of thread methodo programming in the finance of the nomelade of the methodo in the nowledge of OS harmed applications. They understand the problems of near conditions, thread scheduling, resource alloca	includes both PC s		3 devices, Linux an	id Windows
The goal of the course is to give an overview of modern visualization technologies and their principles, namely technologies, related to virtual and augmented reality, visualization on high resolution displays (e.g., SAGE and visualization, and their principles, analy technologies, namely tractal and procedural visualization, silentific data visualization, and 3D model scanning.  BI-OPT Introduction to Optical Networks C, Z,K 4  Students get basic overview of optical networking technology with the emphasis on practical utilization in Internet and in network infrastructures, on possible problems with deployment of optical network technology and on their solutions. The course will include the history of optical communications, an overview of passive components (optical Networks and anylifers, high-speed coherent transmission systems). The course will also cover the most up-to-date topics presented at premium research conferences, such as ECCC or OFC. Attention will also be paid to new applications, such as the accurate time on Internet, utrastable frequency transfer, or sensor networks. The labs will focus on real work with potential components of the analytical components of the analytical components of the available or estimate the real asks from practice. BI-OSY Students understand the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They get a solid knowledge of OS kernets, processes and threads implementations. They understand the classical theory of passe components of addition to the knowledge gained in the module "Programming in Shell 1". They get a solid knowledge of OS kernets, processes and threads implementations. They understand the classical theory of passe components of adjoint thread appleticators. BI-PA1 Programming and Algorithmics 1 Z,ZK 6 Students with the ability to formulate algorithms for sole adjoint the the knowledge programming in Shell 1". They get a solid knowledge array, set, has the attracture, proteines and the th	BI-MV/T 21		7.7K	5
BI-OPT         Introduction displays (e.g., SAGE and video mapping) and their applications in practice. Several lectures deal with the content creation for the methode exanning.         Z,ZK         4           Students get basic overview of optical networking technology with the emphasis on practical utilization in Internet and in network infrastructures, on possible problems with delphyment of optical network technology and on their solutions. The course will alloo due to history of optical communications, an overview of optical networking technology with the emphasis on practical utilization in Internet and amplifiers, high-speed coherent transmission systems). The course will also cover the most up-to-date topics presented at prenum research conferences, such as ECOC Or CPC. Attention will also be paid to new applications, such as the accurate time on Internet, utrastable frequency transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. Students will solve real tasks from practice.         Z,ZK         5           BI-OSY         Operating Systems         Z,ZK         5           Students understand the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They get a solid knowledge of OS kernels, processes and thread scheduling, resource allocation and deadcocks, the echniques of the management of virtual memory. principles and architectures of disks, RAD and file systems. They are able to design and implement simple multifreaded cobe, the resource allocation. The deadcocks, the echniques of the management of virtual memory. principles and architectures of disks, RAD and file systems. They are able to design and implement simple multifreaded cobe, therenether as bolicita on therese cobe data in the praco		•		-
BI-OPT         Introduction to Optical Networks         Z,ZK         4           Students get basic overview of optical networking technology with the emphasis on practical utilization in Internet and in network infrastructures, on possible problems with deployment of optical network technology and on their solutions. The course will alloce the internet of optical network infrastructures, on possible problems with deployment of optical network technology and on their solutions. The course will alloce to FC. Attention will also be paid to new applications, such as the accurate time on Internet, utiratable frequency transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. Students will solve real tasks from practice.         BI-OSY         Qperating Systems         Z,ZK         5           Students understand the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1'. They get a solid knowledge of OS kernets, processes and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dealocks, the techniques of the management of virtual memory. principiles and architectures of disks, RAD and file systems. They are able to design and implement simple multitreaded applications.           BI-PA1         Programming and Algorithmics 1         Z,ZK         F           Students know the instruments of object-oriented programming and tasks compared work and tasks to secure the ability to formulate algorithms for solving basic problems and write them in the C language. They understand the systems, compared solutions, expressions, statements, functions, concept of recursion. They learn the asable uschement from from adia gai	-		-	
Students get basic overview of optical networking technology with the emphasis on practical utilization in Interret and in network infrastructures, on possible problems with deployment of optical network technology and on their solutions. The course will include the history of optical communications, an overview of pastive components (picial switches and amplifiers, high-speed coherent transmission systems). The course will also cover the most up-to-date topics presented at premium research conferences, such as ECOC or OFC. Attention will also be paid to new applications, such as the accurate time on Interret, ultrastable frequency transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. Students will solve real tasks from practice. BI-OSY Operating Systems (QS) in addition to the knowledge gained in the module "Programming in Shell 1". They get a solid knowledge of QS kernels, processes and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and deadlocks, the techniques of the management of virtual memory, principles and architectures of disks, RAD and file systems. They are able to design and implement simplementations, and manipulating with inked iss. BI-PA1 Programming and Algorithmics 1 ZZK 6 Students gain the ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searching, sorting, and manipulating with linked iss. BI-PA2 Programming and area be to use them for spacelying and implement implement implement simple array, set, table). They can implement finde structures. They learn these setsuits using the programming in Case 1 With linked iss. BI-PH1 Case A Man goal of the course is presented in Czech. However, there is an Englis				
of optical network technology and on their solutions. The course will include the history of optical communications, an overview of passive components (optical fibres, multiplexors, diageosino components), and an overview of active course will also cover the most up-to-date topics presented at premium research conferences, such as ECOC or OFC. Attention will also be paid to new applications, such as the accurate time on Internet, ultrastable frequency transfer, or sensor networks. The tabs will locus on real work with optical components and on measurement of their parameters. Students will solve real tasks torm practice.  BI-OSY BI-DSY Operating Systems CZK 5 Students understand the classical theory of operating systems (The knowledge gained in the module 'Programming in Shell 1''. They get a stolle knowledge of OS kernels, processes and threads implementations. They understand the knowledge gained in the module 'Programming in Shell 1''. They get a stolle knowledge of Students understand the dassical theory of operating systems (The Vargaramming in Shell 1''. They get a stolle knowledge of Students understand the advised to a dass, RAID and file systems. They are a table to design and implement simple multithreaded applications. BI-PA1 Programming and Algorithmics 1 CZK 6 Students under table to formulate algorithms for searching, sorting, and manipulating with linked lists. BI-PA2 Students know the instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable arx), set, table). They can implement linked structures. They learn tables use them for specifying and implementing abstract data types (stack, queue, enlargeable arx), set, table). They can implement linked structures. They learn these skills using the programming in galague 2t+. Although this is not a module of programming in C++, students are introduced to table to BE-WSW. Although and do not have required knowledge to register for BIE-TWA. 1. They should register for	-		I ' I	-
dispersion compensators, and others), and an overview of active components (optical switches and amplifiers, high-speed coherent transmission systems). The course will also cover the most up-to-date topics presented at premium research conferences, such as ECOC or OFC. Attention will also be paid to new applications, such as the accurate time on Internet, ultrastable frequency transfer, or sensor networks. The labs will locus on real work with optical components and on measurement of their parameters. Students will solve real tasks trom practice. BI-OSY Operating Systems (OS) in addition to the knowledge gained in the ondue "Programming in Shell 1". They get a solid knowledge of OS kernels, processes and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and deadlocks, the techniques of the management of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple multithreaded applications. BI-PA1 Programming and Algorithmics 1 Z, ZK 6 Students gain the ability to formulate algorithms for solving basic problems and withe them in the C language. They understand data types (simple, structure, pointers), expressions, statements, functions, concept of recursion. They learn to analyse simple cases of algorithmics 2 Z, ZK 7 Students know the instruments of object-oriented programming and area ble to use them for specifying and Implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn the set skill using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates). BI-PH2 Case. However, there is an English variant in the program informatics (B1801 / 4753). BI-PH2 Na course is presented in C2ech. However, there is an English variant in the program linformatics (B1801 / 4753). BI-PH2 Na	-			
the most up-to-date topics presented at premium research conferences, such as ECCC or OFC. Attention will also be paid to new applications, such as the accurate time on Internet, ultrastable frequency transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. Students will solve real tasks from practice.           BI-OSY         Opperating Systems (S) in addition to the knowledge gained in the module "Programming in Shell 1". They get as solid knowledge of OS kernels, processes and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and deadlocks, the techniques of the management of virtual memory, principles and architectures of disks, RAID and file systems (SIGE and and the systems, They are able to design and implement simple multithreaded applications.           BI-PA1         Programming and Algorithmics 1         ZZK         6           Students understand the classical theory of operating Systems (OS) and dilion on the knowledge able to design and implement simple multithreaded applications, such as the ability to formulate algorithms for solving basic problems and write them in the Clanguage. They understand data types (simple, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They known fundamental algorithms for searching, sorting, and mapulating basic proforms and and are able to use them for specifying and implementing abstract data types (strack, uewe, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates).				-
Ifom practice.         Image: Constraint of the image: Constraint of the image: Constraint of the image: Constraint of the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They get a solid knowledge of the management of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple multithreaded applications.         States and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and deadlocks, the techniques of the management of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple multithreaded applications.           BI-PA1         Programming and Algorithmics 1         Z,ZK         6           Students understand the ablity to formulate algorithms for solving basic problems and write them in the C language. They understand data types (single, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithm is to reach understand the instruments of object-oriented programming and Algorithmics 2         Z,ZK         7           BI-PA2         Programming and Algorithmics 2         Z,ZK         3           BI-PA1         Law and Informatics         Z,K         3           BI-PA1         Law and Informatics         Z,K         3           BI-PA1         Programming in PHP         KZ         4           The course is taught in Czech. Mower, there is an English variant in the program				li also cover
BI-OSY         Operating Systems         Z,ZK         5           Students understand the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They get a solid knowledge of OS kernels, processes and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and deadlocks, the techniques of the management of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple multithreaded applications.         EVENTS         G           BI-PA1         Programming and Algorithmics 1         Z,ZK         6           Students gain the ability to formulate algorithms for solving basis problems and write them in the C language. They understand data types (stack, queue, enlargeable array, set, table). They can implement is object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ fleatures needed to achieve the main objective (operator overloading, templates).         ZK         3           BI-PA1         Law and Informatics         Implementing use of all the course is a nitroduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in PHP.         KZ         4           Main goal of the course is an introduction to JHP rogramming in CH+. Istugates of study.         Implementing abstrat of study.         Implement	une most up-to-date	e topics presented at premium research conferences, such as ECOC or OFC. Attention will also be paid to new applications, such as		
Students understand the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They get a solid knowledge of OS kernels, processes and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and deadlocks, the techniques of the management of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple multithreaded applications.         BI-PA1       Programming and Algorithmics 1       Z,ZK       6         Students gain the ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyses simple cases of algorithm complexity. They know fundamental algorithms for solving basic problems and write them in the C language. They understand data types (simple, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyses of logorithmics 2       Z,ZK       7         BI-PA2       Programming and Algorithmics 2       Z,ZK       7         Students know the instruments of object-oriented programming and ana ble to use them for operator overloading, templates).       Z,ZK       7         BI-PA1       Law and Informatics       ZK       3         BI-PA1       Law and Informatics       ZK       4         This course is presented in Czech. However, there is an English variant in the program lindermatics (B1801 / 4753).       KZ       4         BI-PHP		ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters.	the accurate time	on Internet,
kernels, processes and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and deadlocks, the techniques of the management of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple multithreaded applications.         BI-PA1       Programming and Algorithmics 1       Z,ZK       6         Students gain the ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searching, sorting, and miplementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming in and anguage C++. Although this is not a module of programming in C++, students array, set, table). They can implement linked structures. They learn these skills using the programming in PHP       Z/K       7         BI-PA1       Programing in OH       Z/K       3         BI-PA1       Law and Informatics       Z/K       3         BI-PA1       Programing in PHP       KZ       4         This course is presented in C2ech. However, there is an English variant in the program kill learn also best practices and will use tool that eases development in PHP. The course is an introduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in Javascript. The course is recommended for students of BIE-WSI-WIP Programming in Aday and do not h	ultrastable freque	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice.	the accurate time Students will solve	on Internet, real tasks
BI-PA1       Programming and Algorithmics 1       Z,ZK       6         Students gain the ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searching, sorting, and manipulating with linked lists.       BI-PA2       Programming and Algorithmics 2       Z,ZK       7         Students know the instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates).       ZK       3         BI-PAI       Law and Informatics       ZK       3         This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       KZ       4         BI-PHP.1       Programming in PHP       KZ       4         The course is recommended for students of BIE-WSI-WI2015 branch of study and to not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       Z       4         BI-PJS.1       JavaScript Programming       KZ       4         Main goal of the course is an introduction to Javascr	ultrastable freque BI-OSY	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems	the accurate time Students will solve	on Internet, real tasks 5
Students gain the ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, structured, pointers), expressions, statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searching, sorting, and manipulating with linked lists.         BI-PA2       Programming and Algorithmics 2       Z,ZK       7         Students know the instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates).       ZK       3         BI-PAI       Law and Informatics       ZK       4         This course is presented in Czech. However, there is an English variant in the program linformatics (B1801 / 4753).       KZ       4         BI-PH2.1       Programming n PHP       KZ       4         The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       4         BI-PJS.1       JavaScript Programming       KZ       4         Main goal of the course is an introduction to have required knowledge to register for this course in their 3rd semester of study.       2       4     <	ultrastable freque BI-OSY Students understa	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They	the accurate time Students will solve Z,ZK get a solid knowle	on Internet, real tasks 5 dge of OS
statements, functions, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searching, sorting, and manipulating with linked lists.         BI-PA2       Programming and Algorithmics 2       Z,ZK       7         Students know the instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates).       ZK       3         BI-PAI       Law and Informatics       ZK       3         BI-PHP.1       Programing in PHP       KZ       4         This course is presented for curse is an introduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       Z,ZK       4         BI-PJS.1       JavaScript Programming in Java       Z,ZK       4         Main goal of the course is an introduction to Javascript programming. Students will learn also best practices and will use tool that eases development in PHP. The course is net of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course is recommended for students of BIE-WSI	ultrastable freque BI-OSY Students understa kernels, process	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They ses and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu	on Internet, real tasks 5 dge of OS es of the
with linked lists.       Z,ZK       Z,ZK       7         Students know the instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates).       Z/K       3         BI-PAI       Law and Informatics       Z/K       3         BI-PHP.1       Programming in PHP       KZ       4         The course is taught in Czech Main goal of the course is an introduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course is in introduction to PHP - language and technology. Students will use tool that eases development in Javascript. The course is a introduction to avascript Programming       KZ       4         BI-PJS.1       JavaScript Programming       KZ       4         Main goal of the course is an introduction to have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       Z       4         BI-PJS.1       JavaScript Programming       KZ       4         Main goal of the course is an introduction to alavascript programming. Students wi	ultrastable freque BI-OSY Students understa kernels, process managemen BI-PA1	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They sees and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead nt of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu tithreaded applicati Z,ZK	on Internet, real tasks 5 dge of OS es of the ons. 6
BI-PA2         Programming and Algorithmics 2         Z,ZK         7           Students know the instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates).         ZK         3           BI-PAI         Law and Informatics         ZK         3           This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).         KZ         4           The course is taught in Czech Main goal of the course is an introduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA. 1. They should register for this course in their 3rd semester of study.         KZ         4           BI-PJS.1         JavaScript Programming         KZ         4           Main goal of the course is an introduction to Hve required knowledge to register for BIE-TWA.1. They should register for this course in their 4th semester of study.         Z,ZK         4           BI-PJS.1         JavaScript Programming in Java         Z,ZK         4           This course is presented in Czech. However, there is an English variant in	Ultrastable freque BI-OSY Students understa kernels, process managemel BI-PA1 Students gain the a	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They sees and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead nt of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, structure)	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu tithreaded applicati Z,ZK ctured, pointers), et	on Internet, real tasks dge of OS es of the ons. 6 xpressions,
Students know the instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, queue, enlargeable array, set, table). They can implement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in C++, students are introduced with all C++ features needed to achieve the main objective (operator overloading, templates).       ZK       3         BI-PAI       Law and Informatics       ZK       4         This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       KZ       4         The course is taught in Czech Main goal of the course is an introduction to PHP - Inguage and technology. Students will learn also best practices and will use tool that eases development in PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       KZ       4         BI-PJS.1       JavaScript Programming       KZ       4         Main goal of the course is an introduction to Javascript programming. Students will learn also best practices and will use tool that eases development in Javascript. The course is their 4th semester of study.       4         BI-PJV       Programming in Java       Z,ZK       4         Main goal of the course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       4       4         BI-PJV       Programming in Java<	Ultrastable freque BI-OSY Students understa kernels, process managemel BI-PA1 Students gain the a	Incy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They sees and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead int of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, struct ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searchi	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu tithreaded applicati Z,ZK ctured, pointers), et	on Internet, real tasks dge of OS es of the ons. 6 xpressions,
with all C++ features needed to achieve the main objective (operator overloading, templates).         BI-PAI       Law and Informatics This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       ZK       3         BI-PHP.1       Programing in PHP       KZ       4         The course is taught in Czech. Main goal of the course is an introduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       KZ       4         BI-PJS.1       JavaScript Programming recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for this course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for bis course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for bis course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for bis course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for bis course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for bis course is resommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for bis course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for bis course is recommended for stu	Ultrastable freque BI-OSY Students understa kernels, process managemen BI-PA1 Students gain the statements, function	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They sees and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead nt of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, struct ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searchi with linked lists.	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu tithreaded applicati Z,ZK ctured, pointers), e ing, sorting, and ma	on Internet, real tasks 5 dge of OS es of the ons. 6 xpressions, anipulating
BI-PAI       Law and Informatics       ZK       3         This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       KZ       4         The course is taught in Czech Main goal of the course is an introduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       BI-PJS.1       KZ       4         Main goal of the course is an introduction to JavaScript Programming       KZ       4         Main goal of the course is an introduction to JavaScript Programming. Students will learn also best practices and will use tool that eases development in JavaScript. The course is recommended for study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 4th semester of study.         BI-PJV       Programming in Java       Z,ZK       4         This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       Z       4         BI-PJV       Programming in Java       Z,ZK       4         This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       Z       4         BI-PKM       Introduction to mathematica       Z       4         This cou	Ultrastable freque BI-OSY Students understa kernels, process managemen BI-PA1 Students gain the statements, function BI-PA2	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They sees and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead nt of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, struct ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searchi with linked lists. Programming and Algorithmics 2	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu tithreaded applicati Z,ZK ctured, pointers), ei ing, sorting, and ma	on Internet, real tasks 5 dge of OS es of the ons. 6 xpressions, anipulating 7
This course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).         BI-PHP.1       Programing in PHP       KZ       4         The course is taught in Czech Main goal of the course is an introduction to PHP - language and technology. Students will learn also best practices and will use tool that eases development in PHP. The course is recommended for students of BIE-WSI-W1.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       BI-PJS.1       KZ       4         Main goal of the course is an introduction to JavaScript Programming. Students will learn also best practices and will use tool that eases development in Javascript. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.       4         BI-PJS.1       JavaScript Programming       KZ       4         Main goal of the course is an introduction to Javascript programming. Students will learn also best practices and will use tool that eases development in Javascript. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3th semester of study.       4         BI-PJV       Programming in Java       Z,ZK       4         This course is presented in Czech. However, there is an English variant in the programming. Students will be working with modern technical and scientific software. Students w	Ultrastable freque BI-OSY Students understa kernels, process managemen BI-PA1 Students gain the a statements, function BI-PA2 Students know the	Incy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They sees and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead nt of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, struct ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searchi with linked lists. Programming and Algorithmics 2 e instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, colement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in programming in gauging and anguage C++. Although this is not a module of programming in the programming in gauging is not a module of programming in plement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in planet is programming in gauging is programming in gauging is programming in planet is programming in gauging is programming in	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu tithreaded applicati Z,ZK ctured, pointers), e ing, sorting, and ma Z,ZK queue, enlargeable	on Internet, real tasks 5 dge of OS es of the ons. 6 xpressions, anipulating 7 array, set,
BI-PJV       Z,ZK       4         BI-PKM       Introduction to mathematics This course is presented in Czech.       Students will learn how to use different programming styles (functional programming, rule-based programming, to,), how to create dynamic interactive applications and visualisations, data processing and presentations.       Z,ZK       4	Ultrastable freque BI-OSY Students understa kernels, process managemen BI-PA1 Students gain the statements, function BI-PA2 Students know the table). They can imp	ncy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They ses and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead nt of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, struct ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searchi with linked lists. Programming and Algorithmics 2 e instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, or plement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in with all C++ features needed to achieve the main objective (operator overloading, templates).	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu iithreaded applicati Z,ZK ctured, pointers), ei ng, sorting, and ma Z,ZK ueue, enlargeable n C++, students are	on Internet, real tasks 5 dge of OS es of the ons. 6 xpressions, anipulating 7 array, set, e introduced
development in PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 3rd semester of study.         BI-PJS.1       JavaScript Programming       KZ       4         Main goal of the course is an introduction to Javascript programming. Students will learn also best practices and will use tool that eases development in Javascript. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for BIE-TWA.1. They should register for this course in their 4th semester of study.         BI-PJV       Programming in Java       Z,ZK       4         Main course is presented in Czech. However, there is an English variant in the program Informatics (B1801 / 4753).       Z       4         BI-PKM       Introduction to mathematics       Z       4         Students will be working with modern technical and scientific software. Students will learn how to use different programming styles (functional programming, rule-based programming, etc.), how to create dynamic interactive applications and visualisations, data processing and presentations.       Z,ZK       4         BI-PRP       Law and business       Z,ZK       4	Ultrastable freque BI-OSY Students understa kernels, process managemen BI-PA1 Students gain the statements, function BI-PA2 Students know the table). They can imp	Incy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice. Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They ses and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead int of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, struct ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for searchi with linked lists. Programming and Algorithmics 2 e instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, or plement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in with all C++ features needed to achieve the main objective (operator overloading, templates). Law and Informatics	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu iithreaded applicati Z,ZK ctured, pointers), ei ng, sorting, and ma Z,ZK ueue, enlargeable n C++, students are	on Internet, real tasks 5 dge of OS es of the ons. 6 xpressions, anipulating 7 array, set, e introduced
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Students will be working with modern technical and scientific software. Students will learn how to use different programming styles (functional programming, rule-based programming, etc.), how to create dynamic interactive applications and visualisations, data processing and presentations.         BI-PRP       Law and business       Z,ZK       4	ultrastable freque BI-OSY Students understa kernels, process managemen BI-PA1 Students gain the statements, function BI-PA2 Students know the table). They can imp BI-PAI BI-PHP.1 The course is ta development in BI-PJS.1 Main goal of the recommended for states BI-PJV	Incy transfer, or sensor networks. The labs will focus on real work with optical components and on measurement of their parameters. from practice.  Operating Systems and the classical theory of operating systems (OS) in addition to the knowledge gained in the module "Programming in Shell 1". They ses and threads implementations. They understand the problems of race conditions, thread scheduling, resource allocation and dead at of virtual memory, principles and architectures of disks, RAID and file systems. They are able to design and implement simple mult Programming and Algorithmics 1 ability to formulate algorithms for solving basic problems and write them in the C language. They understand data types (simple, struc ons, concept of recursion. They learn to analyse simple cases of algorithm complexity. They know fundamental algorithms for search with linked lists. Programming and Algorithmics 2 e instruments of object-oriented programming and are able to use them for specifying and implementing abstract data types (stack, or plement linked structures. They learn these skills using the programming language C++. Although this is not a module of programming in with all C++ features needed to achieve the main objective (operator overloading, templates). Law and Informatics This course is presented in Czech. However, there is an English variant in the program linformatics (B1801 / 4753). PHP. The course is recommended for students of BIE-WSI-WI.2015 branch of study and do not have required knowledge to register for this course in their 3rd semester of study. JavaScript Programming Course is an introduction to Javascript programming. Students will learn also best practices a free programming in Java This course is presented in Czech. However, there is an English variant in the program linformatics (B1801 / 4753). Introduction to mathematics	the accurate time Students will solve Z,ZK get a solid knowle locks, the techniqu tithreaded applicati Z,ZK ctured, pointers), ex ng, sorting, and ma Z,ZK queue, enlargeable n C++, students are ZK KZ and will use tool tha for BIE-TWA.1. The in Javascript. The nis course in their 4 Z,ZK	on Internet, real tasks 5 dge of OS es of the ons. 6 xpressions, anipulating 7 array, set, a introduced 3 4 at eases ey should 4 course is th semester 4
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BI-PRR	Project management	KZ	4
BI-PS1	This course is presented in Czech. Programming in Shell 1	KZ	5
	knowledgeable users of common Unix-like operating systems. They understand the fundamental principles of the operating systems		
threads, access rig	hts, memory management, network interfaces). They gain the knowledge of advanced users, with hands-on experience of the shell, process various text data.	basic commands,	and filters to
BI-PS2	Programming in shell 2	Z,ZK	4
Students gain a ge	eneral overview of available scripting languages, their syntax, semantics, programming style, data structures, pros and cons. In additi into shell and some other particular scripting languages and will get practical experience with shell script programming.	on, they gain a de	eper insight
BI-PSI	Computer Networks	Z,ZK	5
	nd the basic common techniques, protocols, technologies, and algorithms necessary to communicate in computer networks. The topic of the ISO OSI model. They also get a basic understanding of communication media, security, and network administration. Students network application and configure a simple network.		
BI-PST	Probability and Statistics	Z,ZK	5
	arn the basics of probabilistic thinking, the ability to synthesize prior and posterior information and learn to work with random variable	-	
	ndom variable distributions and solve applied probabilistic problems in informatics and computer science. Using the statistical inducti nown distributional parameters from random sample characteristics. They will also be introduced to the methods of determining the s	-	-
	more random variables.		
BI-QAP	Quantum algorithms and programming	KZ	5
	ing students hands-on experience with quantum computers and their programming. We focus on fundaments of quantum mechanics, c		
-	jorithms showing advantages and limitations of quantum computing. During tutorials students work in open-source software developi ge. Knowledge of linear algebra at the level of BI-LA1 and BI-LA2 (or BI-LIN) is necessary. Previous completion of BI-MA2 or BI-VMM		
	might be an advantage. No previous knowledge of physics is assumed.		, <b>,</b>
BI-SAP	Computer Structure and Architecture	Z,ZK	6
	and basic digital computer units and their structures, functions, and hardware implementation: ALU, control unit, memory system, inpute a studente gain practical experience with the design and implementation of the logic of a simple processor using medara digital design.		•
	s, students gain practical experience with the design and implementation of the logic of a simple processor using modern digital desi of digital computer construction principles, how a computer performs its operations, what is machine code, and what are its connect languages.		
BI-SCE1	Computer Engineering Seminar I	Z	4
	mputer Engineering is a (s)elective course for students who want to deal with deeper topics of digital design, reliability and resistance to		
	dividually within the subject. Each student or group of students solves some interesting topic with the selected supervisor. Part of the professional literature and/or work in K N laboratories. The capacity of the subject is limited by the possibilities of the seminar teache	-	
	semester.		
BI-SCE2	Computer Engineering Seminar II	Z	4
	mputer Engineering is a (s)elective course for students who want to deal with deeper topics of digital design, reliability and resistance to dividually within the subject. Each student or group of students solves some interesting topic with the selected supervisor. Part of the		
	professional literature and/or work in K N laboratories. The capacity of the subject is limited by the possibilities of the seminar teache	-	
	semester.		
BI-SEP	World Economy and Business	Z,ZK	4
	sented in Czech. The course introduces students of technical university to the international business. It does that predominantly by c world economy. Students get to know about different religions and cultures, necessary for doing business in diverse societies as well as		
, ,	nomic development, which are needed for the right investment decision. Seminars help to improve on the knowledge in the form of d		
	readings. It is advised to take bachelor level of this course BIE-SEP as a prerequisite.		1
BI-SI1.2	Software Engineering I	Z,ZK	5
	he methods of analysis and design of large software systems, which are typically designed and implemented in teams. They get prace and design of a large-scale software project that is to be developed within the concurrent BI-SP1 module. They get skill to use CASI		
	solving software-related problems. They get overview of object-oriented analysis, design, architecture, validation, verification, and tes		g
BI-SOJ	Machine Oriented Languages	Z,ZK	4
	irse will gain an ability to create their own programs in the assembly language of the most common PC platform focusing on optimal us ration of software with hardware. Next, there will be discussed x86 specifics of the majority of OSes from the application point of view li		
and enicient coope	This knowledge will be used during reverse engineering, optimization, and evaluation of code security.	iked to higher leve	er languages.
BI-SQL.1	Language SQL, advanced	KZ	4
	knowledge obtained in BI-DBS. Students become familiar with advanced relational and non-relational features of SQL language. In page 2014	-	-
	queries, OLAP support, object-relational constructions. Part of the course is dedicated to practical database optimization from the point of exes, clusters, index-organized tables, and materialized views. as well as from the point of view query optimization. Execution plan ar		
	ed. Lectures will usually discuss SQL standard, but many features will be demonstrated on Oracle DBMS. Seminars are based on Oracle DBMS. Seminars are based on Oracle DBMS. Seminars are based on Oracle DBMS.	•	0
BI-ST1	Network Technology 1	Z	3
The subject is or	iented to providing the students basic information and practical skills from the area of digital and IP networks. The subject is acredite	d under the Cisco	Netacad -
BI-ST2	CCNA1 - R&S Introduction to Networks. Network Technology 2	Z	3
	This course is presented in Czech.		5
BI-ST3	Network Technology 3	Z	3
	r enhance their knowledge acquired from previous BI-ST1 and BI-ST2 courses. Principles of routing and switching presented during E		
get further extend	ded in the course. Students will be able to start fine-tune protocols' settings to gain certain advantages like increased efficiency, pred simple topology, security, etc.	ctability, extension	n beyond a
BI-ST4	Network Technology 4	Z	3
Students will furth	er enhance their knowledge already acquired from previous BI-ST1, BI-ST2, and BI-ST3 courses. Principles of routing and switching	-	BI-ST1 and
-	ot further extended in BI-ST3. Students were able to start fine-tune protocols' settings to gain certain advantages like increased effici		
	topology, security, etc. This module teaches students to configure and fine-tune Wide Area Networks and to experience a completely e Access) which radically differs from well-known Ethernet (broadcast) type of networks. Students will also manage router and switch		-

recoveries, and emergency procedures. Also the security aspect is treated; students will learn possible intra- and inter-network attacks and the mitigatio network running.	n ways while main	taining the
	771/	4
BI-STO Storage and Filesystems	Z,ZK	•
The student will learn principles and current solutions of storage systems architecture. The module explains principles of data store, protection, and archiv	/ing, as so as stora	age scaling,
load balancing and high availability.		
BI-SVZ Machine vision and image processing	Z,ZK	5
Camera systems are becoming a common part of life by being universally available. Related to this phenomenon is the need to process and evaluate in	nage information. T	The course
introduces students to different types of camera systems and a variety of methods for image and video processing. The course is focused on practical use	of camera systems	s for solving
problems of practice that the graduates may encounter.		
BI-TDA Test driven architecture	KZ	4
The course is focused on practical examples of how to develop, test, and deploy software with tools like GitLab, Docker, Kubernetes, and more that are	e well known in the	e DevOps
world. This course has a strong connection on courses like BI(E)-SI1 and BI(E)-SI2. The main goal of this course is to learn by examples that occur	in the semester p	roject.
BI-TEX TeX and Typography	Z,ZK	4
This course is presented in Czech. This course gives basics of programming in TeX (plain TeX, ConTeXt, LaTeX, OpTeX, LuaTeX). Te second part of the c	<i>'</i>	
rules.		typographic
	7	4
BI-TS1   Theoretical Seminar I	Z	4
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a classical		
are treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a w	ork with scientific	papers and
other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar.	T	
BI-TS2 Theoretical Seminar II	Z	4
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a classical		
are treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a w	ork with scientific	papers and
other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar.		
BI-TS3 Theoretical Seminar III	Z	4
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a classical	- 1	he students
are treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a w		
other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar.		
BI-TS4 Theoretical Seminar IV	Z	4
	—	•
Theoretical seminar is intended for students which want to come in deeper contact with contemporary theoretical computer science. It is mostly a classical set to the stress the latest research in the stress Theoretical computer science at the second set of the sec		
are treated individually and concern themselves with interesting topics from the latest research in the area. Therefore, an integral part of the course is a w	Ork with scientific	papers and
other scholarly literature. The capacity is limited by the the potentials of the teachers of the seminar.		
BI-ULI Introduction to Linux	Z	2
Students become familiar with the basics of the Linux operating system using e-learning form. They learn to work with the command line and become fa		commands
and techniques of a Unix-like system. Topics can be studied first theoretically and then practically verified in a virtual machine (ter	minal).	
BI-VAK.21 Selected Applications of Combinatorics	Z	3
The course aims to introduce students in an accessible form to various branches of theoretical computer science and combinatorics. In contrast to the ba	isic courses we ar	oproach the
issue from applications to theory. Together, we will first refresh the basic knowledge needed to design and analyze algorithms and introduce some basic		-
issue from applications to theory. Together, we will first refresh the basic knowledge needed to design and analyze algorithms and introduce some basic with the active participation of students, we will focus on solving popular and easily formulated problems from various areas of (not only theoretical) infor	data structures. Fu	urthermore,
with the active participation of students, we will focus on solving popular and easily formulated problems from various areas of (not only theoretical) infor	data structures. Fur matics. Areas from	urthermore, n which we
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interfaces, robot navigation and development tools. In labs, students program a set of basic task by using the robot simulator and real hardware to get practical experience with these

BI-ZMA	technologies.		
	Elements of Calculus	Z,ZK	6
	nowledge and understanding of the fundamentals of classical calculus so that they are able to apply mathematical way of thinking a chniques. They get skills to practically handle functions of one variable in solving the problems in informatics. They understand the lin		
	sums of sequences. They are able to estimate lower or upper bounds of values of real functions and to handle simple asymptotic ex		egrais and
BI-ZNF	PHP Framework Nette - basics	KZ	3
Students will gain th	e basics of PHP framework Nette. They will learn how to practically work with MVP architecture and various libraries of this Czech po	pular framework. T	he resulting
	knowledge should serve for the efficient creation of a web backend in PHP language.		
BI-ZNS	Knowledge-based Systems	Z,ZK	5
	e familiar with the systems based on knowledge (knowledge-based systems), which are systems that usetechniques of artificial inte ment, learning and reasoning from findingsand actions. The course introduces students to the philosophy and architecture of knowle		
	ision-makingand planning. The course assumes knowledge of set theory, probability theory, artificial neural networks, and evolutiona		
BI-ZPI	Process engineering	KZ	4
	undamentals of process engineering in this subject. Students will get necessary foundations for understanding formal principles of p	-	
	ised notations (UML, BPMN, BORM). The focus in this subject lies in training of practical skills of formalisation and modelling of busi e of process engineering for information systems development is discussed as well as its importance in the overall context of inform		
CASE 100IS. THE TOI	an enterprise.		strategy of
BI-ZRS	Basics of System Control	Z,ZK	4
The course gives a	an introduction to the field of automatic control. Students will gain knowledge in this rapidly evolving field of great future. We will focus	s our attention part	ticularly on
•	ing and physical systems. We will provide basic information from the feedback control of linear dynamical SISO systems, description		
-	c systems analysis and design verification, simple PID feedback, PSD, and fuzzy controllers. Students will learn the methods of creati inear dynamic systems analysis and design verification and simple PID feedback, PSD, and fuzzy controllers. Attention is also given		-
	s of stability in control systems, single and continuous adjustment of the controller parameters, and certain aspects of the industrial		
•	and digital controllers and PLC control.	·	
BI-ZS10	Bachelor internship abroad for 10 credits	Z	10
	once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific and/or re		
-	n of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the professio courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits corr		
	oreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be divided int	-	
	exceeds the academic year's dead-line.		
BI-ZS20	Bachelor internship abroad for 20 credits	Z	20
	once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific and/or re n of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the professic		
	courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits corr		
	oreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be divided int	-	
	exceeds the academic year's dead-line.	_	
BI-ZS30	Bachelor internship abroad for 30 credits once within his / her bachelor's study programme have a foreign internship at a foreign university or other foreign scientific and/or re	Z	30 Before the
	n of the FIT, or the vice-dean for study affairs assesses the professional content. The student must provide evidence of the professional content.		Delute the
	courses BI-ZS10, BI-ZS20, BI-ZS30 are used used for the evidence and evaluation of the internship in IS KOS. Every 10 credits corr		tent of the
employment with a f			
employment with a l	oreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be divided int	respond to 4 weeks	s of full-time
	oreign institution. The maximum number of credits a student can earn for one internship is 30 credits. This amount can be divided int exceeds the academic year's dead-line.	respond to 4 weeks o two subjects if th	s of full-time e internship
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FI-HTE	History of Technology and Economics	ZK	2
The course introdu	ces the scientific disciplines of history and technology, economic and social history of the Czech lands and Czechoslovakia in compared	arison with the de	velopment of
	the European region 19 to 21 century .		1
FI-KSA	Cultural and Social Anthropology	ZK	2
	course aims to acquaint students with the basics of social and cultural anthropology as a scientific discipline dealing with the diversity		
anthropological res	search from our "exotic" cultures (topics: kinship, religion, social exclusion, migration, globalization, , material culture, language, healt shown. The course is an interesting alternative to other humanities, taught at FIT.	n, history, death, e	etc) will be
FI-MPL		ZK	2
	Managerial Psychology		
FI-ULI	Introduction to Linguistics for Computer This course is presented in Czech.	ZK	2
FI-VEZ	economic-managerial course from a study abroad	7	4
	ject that has been studied abroad" is covered by the Humanities subject from a study abroad in Compulsory Humanities Module that	—	1 -
	The substitution is approved by the Vice-Dean for study affairs on behalf of the Dean at the request of the student.		ournoulum.
NI-AFP	Applied Functional Programming	KZ	5
	sented in Czech. Functional programming represents one of the traditional programming paradigms. Traditional and novel functional p		
	and the functional paradigm becomes an important construct of traditionally imperative languages (C++, C#, Java). As such, master		-
	necessary competence of a software engineer: the theory and especially the practice.		
NI-DDM	Distributed Data Mining	KZ	4
Course focuses on	state-of-the-art approaches for distributed data mining and parallelization of machine learning algorithms. Students will gain hands of	on experience with	h large scale
data processing fra	amework Apache Spark and with existing distributed DM / ML algorithms. They will learn principles of their parallel implementations a	nd will be capable	e to propose
	approaches to parallelize other algorithms. The course is prezented in czech language.		T .
NI-DSP	Database Systems in Practes	Z,ZK	4
	This course is presented in Czech.		
NI-DZO	Digital Image Processing	Z,ZK	4
	ents a comprehensive overview of modern methods for interactive editing of digital images and video. It mainly deals with practical alg		-
	e an interesting theoretical basis. Visually attractive applications provide better understanding of basic theoretical background that is als processing. This course will introduce algorithms solving the following practical applications: edge-aware editing, tone mapping, HDR		
	abstraction, hybrid images, gradient domain editing, seamless image stitching and cloning, digital photo-montage, color-to-gray conv		-
	gid-as-possible image deformation, free-form image registration, texture synthesis, interactive segmentation, colorization, painting, ac		
NI-IAM	Internet and Multimedia	Z,ZK	4
The NI-IAM cours	se is focused on principles and modern technologies for network transmissions of audiovisual (AV) signals. The syllabus includes acq	uisition of AV sigr	hals (input),
1.	signals (output), network communication protocols, device interfaces, codecs, data formats and stereoscopy. We will look at practical u		
	nissions. Within the labs, students will practically assemble AV transmission chains using HW and SW technologies and verify the effe		-
the quality and late	ncy of AV transmissions. Students will learn how to build Internet infrastructure for end-to-end AV transmissions from the recording the	e scene up to the	presentation
	for audience.		
NI-LSM	Statistical Modelling Lab	KZ	5
The subject is ori	Statistical Modelling Lab ented on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is p	ut on the effective	e use of the
The subject is ori	Statistical Modelling Lab ented on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is p on and its modeling using numpy and scipy. The second half of the semester is focused on the design of methods and algorithms, an	ut on the effective d analyses of thei	e use of the
The subject is orionavailable information	Statistical Modelling Lab ented on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is p on and its modeling using numpy and scipy. The second half of the semester is focused on the design of methods and algorithms, an At this point, the subject is on the border of own research and may result in the topic of final work (diploma or bachelor thesi	ut on the effective d analyses of thei s).	e use of the r properties.
The subject is orionavailable information	Statistical Modelling Lab ented on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is p on and its modeling using numpy and scipy. The second half of the semester is focused on the design of methods and algorithms, an	ut on the effective d analyses of thei s). KZ	e use of the r properties.
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The subject is oriavailable information NI-MOP Object-oriented pro- is used to build corr of object systems addition to deepen technologies in ter	Statistical Modelling Lab           ented on a single and multi-target tracking. The student both learns the existing methods and tries to implement them. The stress is p           on and its modeling using numpy and scipy. The second half of the semester is focused on the design of methods and algorithms, an           At this point, the subject is on the border of own research and may result in the topic of final work (diploma or bachelor thesi           Modern Object-Oriented Programming in Pharo           ogramming is currently one of the most widespread paradigms of software creation, especially enterprise information systems, where           plex modern applications. In this course, we build on the knowledge acquired in the course BI-OOP and aim to further deepen the skills           in modern pure object system Pharo (https://pharo.org). The course focuses on individual approach to students, their development no           ing object programming skills, which are generally applicable in other OO languages, students will also gain the opportunity to work or           ms of semestral work with the possibility of cooperation with practice and related bachelor, diploma, postgraduate our direct involvent	ut on the effective d analyses of thei s). KZ its ability to natura of design and imp eeds and areas of on interesting proj- nent in the Pharo	a use of the ir properties. 4 al abstraction plementation f interest. In ects and OO Consortium.
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NI-TSP	Testing and Reliability	Z,ZK	5
Students will gain I	nowledge about circuit testing and about methods for increasing reliability and security. They will get practical skills to be able to pre	pare a test set with	the help of
the intuitive path se	ensitization and to use an ATPG for automatic test generation. They will be able to design easily testable circuits and systems with bu	ilt-in-self-test equip	oment. They
	will be able to compute, analyze, and control the reliability and availability of the designed circuits.		
NI-VCC	Virtualization and Cloud Computing	Z,ZK	5
Students will gai	n knowledge of architectures of large computer systems that are used in data centers and computer infrastructure of companies and	organizations. The	ey will get
acquainted with vi	rtualization principles, tools and technologies that serve to facilitate and automate configuration, testing and monitoring, and to effici-	ently operate and o	ptimize the
	rameters of modern computer systems. Theoretically and practically, they will get acquainted with containerization as the most effect		
management of cor	mplex computer systems and with specific technologies of cloud systems. Finally, they will learn the principles and gain practical skills i	n the use of moderr	n integration
	and development tools (Continuous integration and development).		
NI-VYC	Computability	Z,ZK	4
	Classical theory of recursive functions and effective computability.		
TV1	Physical Education	Z	0
TV2	Physical Education	Z	0
TV2K1	Physical Education 2	Z	1
TVKLV	Physical Education Course	Z	0
TVKZV	Physical Education Course	Z	0
TVV	Physical education	Z	0
TVV0	Physical education	7	0

For updated information see <u>http://bilakniha.cvut.cz/en/FF.html</u> Generated: day 2024-05-18, time 12:20.